

Encounter of the fourth kind

At the SPS IPC Drives 2017 in Nuremberg (Germany), Sensor-Technik Wiedemann (STW) presents the first products of its 4th generation controllers for mobile machinery.

The ESX-4CS-GW is a programmable communications gateway due to its processor architecture, and is supported through the STW development environment Opensyde. At the same time, STW is introducing a new housing concept like for this controller.

This control unit is the first product of the fourth generation of control units at STW: As a communications gateway, it not only offers six CAN interfaces, but also a four-port Ethernet switch, a LIN, and a EIA-232 interface. With an additional 14 analog and digital inputs and outputs in the standard configuration, the ESX-4CS-GW is also able to take over small tasks for sensor-actuator management. For fast processing of the tasks, the fourth generation of the ESX control units features the Infineon Aurix processor, which works with 300 MHz using three 32-bit Tricore processor cores as the so-called "Triple-Tricore", each of which are independent from the other.

The product complies with the standards for conformity according to CE and E1 as well as the standards for the vehicle, agricultural and construction machine industry. Planning is underway for the certification for safety-orientated applications according to PLd (DIN EN ISO13489-1:2016-06) or SIL 2 (IEC 61508:2010).

Like the third generation, which is to be extended by the small control unit ESX-3CS, "C" and IEC 61131-3 languages are supported. The respective development environments for this are Codesys and Opensyde. With Opensyde, STW is to display its framework and toolset for the implementation, analysis, maintenance, and documentation of functions and programs in the control system for mobile machines at the Agritechnica 2017.

Opensyde is characterized above all by its openness: freely utilizable interfaces to programs such as those for the recording of requirements or the integration of third-party control units. With the product, realization of applications, which have to take functional safety into account is possible. The products can be found also at the SPS IPC Drives 2017 at the STW booth.



The controllers come with six CAN interfaces (Photo: STW)

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