Real-time communication in the Industrial IoT
State-of-the-art communication architectures with OPC UA TSN

At this year's Hannover Messe (Hall 9, Booth D33), the Ethernet POWERLINK Standardization Group (EPSG) will demonstrate how interface-free communication can provide seamless connectivity from the sensor layer to the ERP layer and into the cloud. The foundation has already been laid with the companion specification for OPC UA and POWERLINK.

The EPSG will also be showing how the open and standardized protocols POWERLINK, openSAFETY and OPC UA TSN come together to create open architectures for real-time communication in the Industrial IoT. The TSN Ethernet extension makes OPC UA deterministic. In combination with the openSAFETY protocol, it now meets all the requirements for safe line automation at the factory level. OPC UA provides semantic descriptions of information models and security mechanisms that facilitate the convergence of IT and OT.

At SPS IPC Drives, the EPSG will show how POWERLINK and openSAFETY combine with OPC UA TSN to create open architectures for real-time Industrial IoT communication.
Numerous new POWERLINK devices
Eleven new platforms and products certified

The number of products with a POWERLINK interface continues to grow. In the latest round of certification by the Ethernet POWERLINK Standardization Group (EPSG), eleven new platforms and products successfully passed all the tests to become officially certified.

To maintain the consistency of the standard, the EPSG regularly holds certification events to test the conformity of hardware and software products with the POWERLINK specification. The events also feature a plugfest, where the products are tested together in a multi-vendor system.

At the latest certification event, products from the following companies succeeded in passing all of the tests: Comau, Bosch Rexroth, Analog Devices, SIKO, MIREA, SMC, Pilz, Mini Motor and IBV.
Wireless real-time communication and Industry 4.0 solution
Schildknecht adds POWERLINK interfaces for DATAEAGLE series

Schildknecht has expanded its DATAEAGLE series of wireless communication modules. The DATAEAGLE 7050 IoT edge gateway and the DATAEAGLE 4000 series are now equipped with a POWERLINK connection. The latter is also optimized for the openSAFETY safety protocol.

The DATAEAGLE 4000 wireless module with a POWERLINK interface is the result of a development partnership between Schildknecht AG and the EPSG. The module allows wired POWERLINK communication to be transmitted wirelessly over a certain distance. Advantages include the elimination of maintenance-intensive slip ring solutions.

Secure data over wireless
DATAEAGLE 4000 modules are also optimized for transmission of openSAFETY containers, ensuring secure wireless communication. Brief interruptions in data traffic are bridged by patented Schildknecht filter technology.

DATAEAGLE 7050 is a proven IoT edge gateway designed for Industry 4.0 solutions. Suitable for deployment anywhere in the world, it provides highly secure, cost-effective communication for the Industrial Internet of Things.