European Industrial Ethernet Award

The EPSG is calling on students at European Universities and Technical Colleges to participate in the 4th European Industrial Ethernet Awards. Awards will be given to the most innovative projects and automation concepts based on the open Industrial Ethernet POWERLINK protocol.

Applicable projects range from mechatronic applications to the creation of solutions for industrial applications by developing new devices with POWERLINK interfaces and even implementation of new features in the openPOWERLINK stack. Projects must be submitted by the end of the year and implemented by June 2017.

Popular with colleges and universities
POWERLINK enables high-performance real-time communication that can be used to create solutions for many of the challenges faced in industrial applications. Absolute openness is one of the main reasons POWERLINK is so popular with colleges and universities and used in many research projects.

The openPOWERLINK protocol stack is open source and released under the BSD license on the SourceForge web-based service for developers. It can be downloaded here and immediately tried out: http://openpowerlink.sourceforge.net/. Due to its architecture, the stack is freely scalable and can be implemented on a wide range of hardware and software platforms without limitations.

Attractive cash prizes
The Industrial Ethernet Awards are being held by the EPSG together with partners OSADL, B&R and BE.services. Winning teams will receive attractive cash prizes and take part in an exciting social event. They can also publish their scientific findings as sponsored open access articles. The award ceremony will take place in the summer of 2017.

Further information regarding the procedure and the call for projects (CFP) can be found on the awards website: http://www.ethernet-powerlink.org/en/award. Registrations will only be accepted in the form of an email sent to award@ethernet-powerlink.org. Current information is made available on a regular basis in the Industrial Ethernet Awards Group on LinkedIn: www.ethernet-powerlink.org/en/linkedin.
Counting cash with POWERLINK

Each year, the European Central Bank (ECB) examines billions of banknotes to sort out those that are damaged or counterfeit. To manage the enormous volumes of data generated by the scanning and sorting process, the ECB will be implementing the real-time POWERLINK communication protocol.

„Performance, openness and absolute vendor independence were the factors that led POWERLINK to be the only protocol defined as permissible in the CDI2 specification,” explains Stefan Schönegger, managing director of the Ethernet POWERLINK Standardization Group (EPSG). This specification describes the requirements for machines used by the ECB to detect the security features in euro banknotes.

The primary challenge in this application is the highly precise synchronization of image processing and drive control. Periodically checking all of the banknotes in circulation – currently worth more than €1 trillion – requires throughput speeds that can only be achieved with extremely short cycle times.

The CDI2 specification from February 2016 is available under the following link: https://www.ecb.europa.eu/euro/pdf/Common_Detector_Interface_CDI2_Spec.pdf?c674b586cf3845c32ec588bf36b2f5d1
New servo drives offer increased integration and opportunities

ADVANCED Motion Controls releases POWERLINK-certified DigiFlex Performance

ADVANCED Motion Controls recently received the EPSG’s certification of POWERLINK compliance for its family of DigiFlex Performance (DP) servo drives. With the high performance of centralized motion control and the reduced cost of a distributed architecture, POWERLINK reduces both overall system cost and installation time – all while providing real-time deterministic communication over standard Ethernet networking hardware.

The DP servo drives cover a wide continuous power range from 0.8 to 16.0 kW and can be used across many different industries. To easily accommodate customers' varying installation requirements, DP servo drives are presented in two main form factors – panel-mount or plug-in modules.

Flexible universal standard

Both form factors can be configured to operate multiple motors, including: BLDC and PMAC servo, closed loop AC induction, closed loop 3-Φ stepper, PM brushed, voice coils and inductive loads. These drives also support feedback from either a 5 V incremental encoder, a 1 Vp-p sine/cosine encoder or an absolute encoder (Hiperface, EnDat 2.1 and 2.2, or BiSS C mode) with dual control loop capabilities. Together with complete operating mode configurability, this allows the DP family to be used in a broad range of applications – from factory lines and machinery to assembly cells and robotics, as well as in mobile equipment.