openSAFETY now also available for PROFINET

After the introduction of openSAFETY solutions for SERCOS III, Modbus TCP, EtherNet TCP/IP and POWERLINK at this year’s Hannover Messe exhibition, the Ethernet POWERLINK Standardization Group (EPSG) has now presented the openSAFETY standard for PROFINET at the SPS/IPC/DRIVES trade show in Nuremberg. Thus, openSAFETY is now available for all major real-time Ethernet protocols, which cover a total of 91% of the Industrial Ethernet market. With its openSAFETY solution, the EPSG is the only provider of a ready-to-use safety technology running on all transport protocols. openSAFETY has been developed independently from all fieldbus organizations.

Since the development of safety-oriented technology is very cost-intensive and carries a high investment risk, the automation industry has been calling for a global standard for safety systems for a long time. By introducing openSAFETY, the first completely open safety-oriented data transfer protocol for all automation applications, the Ethernet POWERLINK Standardization Group (EPSG) has laid the foundations. The protocol, which has been certified by German testing authorities TÜV Rheinland and TÜV Süd, allows for communication cycles at the microsecond level, thus ensuring very fast reaction times as well as optimal safety. It is suitable for use in systems with safety requirements up to SIL 3.

EPSG supports users
The EPSG actively supports the use of openSAFETY with any transport protocol, providing support for certification and conformance tests. openSAFETY is a technically and legally open solution: the protocol is available as an open source software that can be downloaded free of charge. Its BSD license and independence from fieldbus systems ensure optimal investment safety for all users, and considerably reduce development efforts for manufacturers and plant operators.
EPSG at the SPS/IPC/DRIVES 2010

The EPSG booth at this year's SPS/IPC/DRIVES focused on two topics: the openSAFETY implementation for PROFINET, and more than 2,500 OEMs from various industry sectors worldwide who use POWERLINK. A juggling robot developed by students from Prague Technical University, who won the second prize at the Industrial Ethernet Awards, was a special eye-catcher. With the Industrial Ethernet Award, B&R rewards creative POWERLINK solutions.
POWERLINK Slave from B&R

In addition to service providers such as IXXAT, Hilscher and port, B&R now also offers a POWERLINK Slave based on Altera and Xilinx FPGAs. Thanks to steadily decreasing hardware prices and no license requirements, prices for POWERLINK Slaves interfaces are up to 45% lower than for ASIC-based Industrial Ethernet systems with a comparable performance. Apart from reference designs, B&R also provides support during design, business level maintenance and a POWERLINK testing system. Due to its high performance and low production costs, the POWERLINK Slave solution from B&R is equally suited for cost-sensitive products, such as compact sensors with few electronics, and for high-performance servo drives or modular I/O systems. The new reference design does not require manufacturers to have previous experience with POWERLINK technology. The complete package also includes a simple API which can be used via a serial connection (SPI) or via a 8/16 bit microprocessor interface, allowing for the connection of any host processor (such as ARM, x86 or DSPs) to a POWERLINK network. Simple sensors do not require an external microcontroller and can be directly connected to the POWERLINK Slave FPGA, thereby further reducing overall costs.
Bihl+Wiedemann connects AS-i Safety at Work and openSAFETY

Bihl+Wiedemann, one of the leading companies in the development and implementation of electronic automation components and safety solutions with an AS-interface, will launch a safe gateway for AS-i Safety at Work systems and openSAFETY. Also, Bihl+Wiedemann becomes a member of the EPSG.

The gateway enables both non-safe diagnosis data and safety-related process data to be exchanged between AS-interface installations and openSAFETY. On the AS-i side, the gateway provides an AS-i Master with an integrated safety monitor. For openSAFETY, the gateway constitutes a safe I/O node with a variable number of safe input and output signals. The number of signals is determined by the AS-i configuration. On the occasion of this development, Bihl+Wiedemann has decided to join the EPSG. “The combination of AS-interface – the tried-and-proven, simple, and inexpensive installation system for the lowest field level – and openSAFETY is very attractive to us”, said Jochen Bihl, CEO of Bihl+Wiedemann. “Since AS-i Safety complements every open safe fieldbus technology, joining the EPSG was the logical conclusion.”

About AS-interface

Due to its simple installation and low costs, AS-interface technology is widely used. More than a hundred companies provide more than a thousand different products. With AS-i Safety at Work, safety-oriented sensors and actuators in openSAFETY applications can also benefit from the advantages of AS-i.
First Korea Industrial Ethernet Conference was a great success

The first Korea Industrial Ethernet Conference took place on October 21st, 2010, in Seoul. Approximately 140 participants followed the invitation by the Industrial Communication & Networking magazine (ICN). Many well-renowned Korean companies such as Kia Motors, Samsung, LG, and Posco were represented. A number of lectures addressed various aspects of the implementation of POWERLINK and openSAFETY and presented reference projects as well as hardware components.

Sanghoon Kim, Director of Cooperation at Hankyung National University, took the opportunity to announce the founding of a POWERLINK training center for technological education and practical training. Lecturers further included members of the EPSG and several leading manufacturers of automation components such as Hilscher Korea, Phoenix Contact, and B&R. “I am impressed by the strong interest in POWERLINK”, said Oh Seung Mo, managing director of ICN. “Engineers and users seem to be particularly interested in POWERLINK as an open technology.” Specific requirements of customers and users have been becoming more and more important for manufacturers. POWERLINK enables solutions which meet these individual demands. The conference, jointly organized by ICN and the POWERLINK User Group Korea, was supported by the KGCCI (Korean-German Chamber of Commerce and Industry), the Austrian chamber of commerce, Tuev Sued, and the EPSG.
Second Industrial Ethernet Conference in Paris

On October 7, the second French Industrial Ethernet Conference took place in Paris. More than 70 participants from more than 50 companies attended the event, where 16 exhibitors presented POWERLINK-centered products and services. Machine safety was this year’s central topic. Representatives from Bureau Veritas, a globally leading certification authority, gave a talk about the European Machinery Directive and explained the consequences of the safety directives for machine manufacturers and users. Further speakers included representatives from IXXAT who gave a talk about various Industrial Ethernet systems. Moreover, Harting introduced its new Fast Track Switching Technology and COPALP presented its STRATON embedded system solution with POWERLINK. Other speakers addressed topics such as openSAFETY and the implementation of applications with the first open, busindependent safety protocol worldwide. Additionally, the pneumatics manufacturer Asco Numatics announced that the new pneumatic valve system G3 will feature a POWERLINK interface.