COPALP integrating POWERLINK in IEC 61131 soft PLC

COPALP has recently upgraded its core product, the IEC 61131-3 soft PLC Straton, to include full POWERLINK support. For COPALP, integrating openPOWERLINK, the open source POWERLINK stack, is about more than simply expanding connectivity; it also paves the way to greater flexibility, especially since the open standard does not require a specific Ethernet controller.

“Integrating POWERLINK into Straton is another step forward in the openness of COPALP’s products,” says COPALP CEO Jerome Follut. “It also addresses growing demand in markets where this deterministic Ethernet protocol has become the standard, such as China.”

Open answers to market demands

Straton’s ability to communicate via POWERLINK makes it easier to integrate B&R X20 and X67 I/O systems, addressing the needs of both machine manufacturers and process automation applications. In combination with the IEC 61850 tools included in Straton, it also opens up a host of new opportunities for the power industry.

COPALP is a provider of software tools, protocols and components for embedded systems in the field of industrial control, energy and utilities. The company is a part of the COPA-DATA group, known for its zenon SCADA systems. COPALP joined the EPSG in 2012.
Electrical industry welcomes one network for all devices

The EPSG stood out at this year’s ELECRAMA exhibition for the electrical equipment industry as the only booth dedicated entirely to the topic of communication networks. POWERLINK and openSAFETY have been extremely well received in India, and the five-day event in Bangalore with over 100,000 visitors was no exception.

One network for all devices

The EPSG booth’s main attraction was a live demo showing drives, encoders, sensors, I/O modules and a safety PLC – all from different vendors – communicating with the PLC over the high-speed POWERLINK bus. “POWERLINK technology is quickly gaining momentum in India,” says Ninad Deshpande, representative of the EPSG in India. “As OEMs and end users become more cautious regarding the technology used in their machines and plants, they are extending their specifications beyond the automation vendor and moving towards open technologies that ensure their independence and avoid vendor lock-ins.”

Fieldbus-independent safety solution

Another eyecatcher at the EPSG booth was the presentation of a fieldbus-independent safety solution able to handle both standard and safety-related data. Many were surprised to learn that the high-speed openSAFETY protocol is not only completely open, but also completely free of any legal or technical restrictions. As an open, bus-independent safety solution, openSAFETY provides an answer for users looking to operate safe plants without having to change their currently installed systems.

Ever-growing list of successful implementations

The strength with which POWERLINK technology is spreading was evidenced by products from vendors like ABB, KEB, Lenze, B&R, Baumer, TR-Electronic, Schneider Electric, ASCO Numatics and Pepperl & Fuchs. The systems on display at the booth nevertheless represented only a modest selection of the fast-growing list of organizations placing their trust in this technology to meet their customers’ requirements for vendor-independent real-time data transfer.
New Anybus multi-network solution available

Along with PROFINET and EtherCAT/IP, POWERLINK is among the first protocols to be offered in the new Anybus CompactCom 40-series networking interface for fieldbus and industrial Ethernet. This innovative solution from HMS allows high-speed, accurate communication between the host device and POWERLINK. With data latency less than 15 μs, this technology also allows 1,500 bytes of process data to be transferred in each direction over each cycle.

CompactCom 40-series interfaces come equipped with an integrated Ethernet hub in the Anybus NP40 network processor and support multiplexing and PollResponse Chaining. They feature a response time – the time between the PollRequest and PollResponse – of 1 μs.

POWERLINK equals high performance

“We see POWERLINK as an important network for the future, especially for device manufacturers and machine builders who need high-performance network technology that combines reliability with high-speed data transfer,” says Leif Malmberg, product manager for embedded technology at HMS. “We have received many requests for POWERLINK connectivity from all around the world. In response, we are now pleased to be able to offer POWERLINK connectivity in our latest series of embedded products.” The new Anybus CompactCom 40-series makes it possible for device manufacturers to implement POWERLINK connectivity with a single development project while also providing accessibility to 19 other networks.

Anybus CompactCom is a series of industrial network interfaces that can easily be integrated into an industrial device to provide connectivity to several different industrial networks. Available in chip, brick or module format, CompactCom allows the user to choose the necessary level of integration. For CompactCom users, the new CompactCom 40-series makes the transition to POWERLINK easier than ever before. The Anybus CompactCom 30-series is already in use in millions of industrial automation devices.
With new profiles, openSAFETY is more open than ever

openSAFETY devices can now exchange data even easier - even if they come from different manufacturers. At the most recent meeting of the EPSG Safety working group, many new profiles were presented and others were adopted. “For our technologies, openness and independence are the most important factors,” explains Stefan Schönegger, Managing Director of EPSG, at the 3-day event that was hosted for the first time by Festo in Esslingen, Germany. In addition to the working group meeting, certification of new products was also on the agenda.

New profiles adopted at EPSG working group meeting
A device description format for openSAFETY was adopted by the members of the working group, which is completely independent of the lower-level Black Channel principle. This allows devices from other manufacturers to be easily integrated into any engineering software. This is another example of the EPSG’s dedication to complete openness and hardware-independence.

At the EPSG Technology working group meeting, the latest developments related to the POWERLINK specifications were approved. Products from the following companies have passed the tests for final certification: ABB, Aventics, Baumer, HMS, Port and Texas Instruments.