POWERLINK-Community enjoys Sustained Growth

Danfoss, Getriebebau Nord, Indel, Infranor, Sick, Softing, Texas Instruments and the robot manufacturers Comau and Sepro have recently caused another remarkable growth spurt of the Ethernet POWERLINK Standardization Group member list. Over the past few weeks, no less than nine companies joined the POWERLINK and openSAFE-TY user organization. On their booths at the Nuremberg SPS IPC Drives 2012 show, the new members will showcase their POWERLINK-based products and solutions as central exhibits. Additionally, these will also feature on the EPSG booths 114 and 117 in Hall 6.

The new EPSG members are companies from different industries who integrated POWERLINK and openSAFE-TY in various products. The TI Sitara ARM 335x Microprocessor by Texas Instruments, for instance, can operate in POWERLINK networks without external circuitry. A compact Slave node connection for the technologically leading real-time Ethernet protocol is a new addition by Softing.

In the area of industrial control, a POWERLINK Master by Indel and openSAFE-TY components combine into an OEM system solution for electric discharge machines, while Comau and Sepro upgrade robot control systems to this innovative communication technology.

Due to POWERLINK’s outstanding synchronization properties, some more drive system manufacturers have joined the EPSG community as well. Among them are Danfoss, Nord Drive Systems and Infranor. Another entry on this summer’s list of new EPSG members is Sick, one of the leading sensor producers, who equipped their print mark sensors with the fast industrial field network interface.

Stefan Schönegger is pleased with the sustained growth of the user organization. “POWERLINK users profit from the availability of a rapidly growing number of devices and components compatible with the manufacturer-independent real-time Ethernet”, says the managing director of the Ethernet POWERLINK Standardization Group.
EPSG Plugfest: New Hardware POWERLINK-certified

At the Eggelsberg B&R facilities, automation hardware manufacturers met this September to have compatibility of their POWERLINK products verified and certified. All products had first to provide proof of the systematic correctness of their POWERLINK implementations and of compliance with all compatibility requirements.

After successful completion of all tests, they communicated with each other in one large, heterogeneous network with mixed topologies. Now that all the test protocols have been issued, each manufacturer, but more importantly each and every customer can safely rely upon full POWERLINK compatibility of the certified products. Freshly tested and found POWERLINK compliant, the 2012 Nuremberg SPS IPC Drives show will showcase products such as the NXHX 50-ETM netX software development board by Hilscher, the ABB MicroFlex E100B frequency converter, the OCD POWERLINK absolute angle encoder by Fraba Posital or the RS 20 / 25 print mark sensors by German manufacturer, SICK. Thus, POWERLINK user benefit from a continuously rising number of available devices and components for this manufacturer-independent real-time Ethernet.

Stäubli adopts POWERLINK for Pick-and-Place Robots

With their compact size, broad work envelopes, high speed, precision, resistance to all types of environments and, above all, the flexibility to adapt to the greatest number of tasks, industrial robot arms by Swiss manufacturer Stäubli deliver distinct technical advantages.

At the Nuremberg show, Stäubli introduces the TP80 fast Picker, a new generation of high speed pickers that deliver speeds up to 200 picks per minute. The robot is ideally suited for packaging applications in various industries such as PV/solar power, pharmaceuticals, consumer goods and food. And it comes complete with POWERLINK connectivity. Stäubli is one of three robot manufacturers who have joined the EPSG this year alone.
Softing brings POWERLINK Solution for Altera FPGA

Using the highly advanced Altera FPGA as its programmable hardware, the integration solution by German industrial automation hardware and software supplier Softing makes it easy for device manufacturers to equip their products with Real-Time Industrial Ethernet interfaces.

Using a uniform software interface for integrating various Real-Time Ethernet (RTE) protocols into field devices, both the module and the FPGA itself are now available for POWERLINK. The solution includes IP Core, operating system, protocol software and the unified programming interface SDAI (Simple Device Application Interface).

“We know that our customers yearn for product unification”, says Softing market segment manager Thomas Hilz. “They need to provide the manufacturers of production machinery with a single product to use no matter what the system bus in the particular application may be.”

Softing Industrial Automation GmbH is providing its industrial communication solutions and products to process automation applications as well as for integration in manufacturing equipment. This is another reason why the Munich-based company designed this universal communication interface module to meet the requirements of all Industrial Ethernet technologies.

“We softing solutions are known for their ease of use and profound functional advantages in a complex application environment, and so is POWERLINK”, says Stefan Schönegger, Managing Director of the Ethernet POWERLINK Standardization Group. “The Softing integration solution lowers the threshold to that innovative communication technology for device manufacturers.” This in turn helps rapidly increase the number of POWERLINK devices, adding further to the attractiveness of that Industrial Ethernet protocol that is used for real-time applications as well as process automation.
Indel IPCs feature POWERLINK and openSAFETY

The IMP-MAS4 is the most recent generation of IMP boards that form the core of mid-range industrial control systems by Swiss manufacturer, Indel. Based upon 1 GHz single-core Power PC silicon, its performance is nearly three times that of its predecessor. It boosts IMP-MAS4 to the performance level of stand-alone master systems. And they feature POWERLINK connectivity.

Traditionally, Indel CPUs communicate with I/O systems, servo drives and other motion controllers by that same manufacturer via Indel’s own fast GinLink. The IMP-MAS4 will be the first Indel CPU board to feature POWERLINK as well. “Two considerations led to this decision”, says Thomas Jericke, Executive Director of Indel. “POWERLINK substantially broadens the range of available peripheral devices such as I/O modules and motion controllers and it makes it easy to design systems with integrated safety features.”

Indel not only designs and manufactures hardware and software for industrial control applications but designs custom automation solutions as a partner for manufacturers of production machinery. “Our first project using POWERLINK is a tool handling device for use with EDM (electrical discharge machining) machines”, Jericke names the initial application for the innovative communication technology. “We meet its particularly short design cycle using already certified openSAFETY components by B&R.”

“With Indel, another PLC and IPC manufacturer joined the POWERLINK community”, says Stefan Schönegger, Managing Director of the Ethernet POWERLINK Standardization Group. “The EPSG welcomes this as it not only adds to the number of compatible system brands but gives proof that the vendor-independence of POWERLINK goes way beyond actors and sensors.”
Danfoss VLT® AutomationDrive connects to POWERLINK

44 years after introducing the company’s first frequency converters, Danfoss has enhanced the current version of their VLT® AutomationDrive FC 300 series with a POWERLINK interface.

As well as intelligent plug-and-play technology, the current VLT® AutomationDrive FC 300 series covering motors from 0.25 to 1,400 kW features a modular design and in its more sophisticated version also integrates safe stop functionality suitable for EN ISO 13849-1 cat. 3 installations.

While USB and RS 485 connectivity are onboard, standard features, field bus interfaces are selectable options. The latest addition to the VLT® AutomationDrive FC 300 series’ connectivity options is POWERLINK.

“Now that the FC 301 and FC 302 frequency converters are available with a POWERLINK interface, we can better fulfill the ever increasing demand for synchronization of large numbers of drives in real-time environments”, says Serdar Gökbulut, Danfoss Drives Application Engineer for Central Europe.

POWERLINK New Standard for the Automotive Industry

During the “Trends in Automotive Networks“ developer forum organized by the Carl Hanser publishing house at Fellbach near Stuttgart on November 20, 2012, Sebastian Sachse from B&R will present the manufacturer-independent real-time network POWERLINK.

The number of electronic systems in automobiles has risen dramatically over the past twenty years, and so has the need for communication between them. This takes the leading system buses to the limits of their capacity. Consequently, the automotive industry is investigating technologies for future on-board networks. These require data rates such as those provided by Ethernet but also a deterministic mechanism for real-time data transfer.

Already available with these properties and time-tested in a harsh industrial environment, POWERLINK is ideally suited for adoption by this market. Based upon proven Ethernet technology, the open network widely used in industrial control applications allows utilization of standard components. This and the easy access to its technology lead to a greatly reduced total cost of ownership while providing maximum performance due to a short network cycle time with minimal jitter.