Open source high availability

Hannover Messe: Master redundancy implemented in POWERLINK stack

It is now easier than ever to create high availability systems with POWERLINK. Version 2.2 of the openPOWERLINK stack has all the functions needed to implement master redundancy. The Ethernet POWERLINK Standardization Group will be presenting the new stack at the Hannover Messe (Hall 9/Booth F25).

One of the greatest advantages of POWERLINK-based redundancy solutions is the failover speed. “If one controller fails, there is a hot failover to the standby controller within one cycle,” explains Stefan Schönegger, managing director of the EPSG. High availability systems based on POWERLINK are therefore also suited for especially critical applications, such as in the power sector or the shipping and steel industries. SYS TEC Electronic played a significant role in the development of the POWERLINK redundancy solution.

More than 30,000 downloads

Since POWERLINK is based on one hundred percent open source technology, users have maximum freedom when it comes to implementing their redundancy system. They are not bound to any formalities and are completely technologically independent. So far, openPOWERLINK has been downloaded more than 30,000 times from the SourceForge platform. Version 2.2 will be available for download on the openPOWERLINK project page starting in late April: http://sourceforge.net/projects/openpowerlink/.
More than just a valve terminal

Festo has expanded its CPX automation platform to include a fieldbus node for POWERLINK communication. This now allows Festo valve terminals to be integrated directly in the powerful real-time network. With this POWERLINK integration, the valve terminals are now fully equipped to handle highly complex and time-critical applications.

**Extensive list of functions**

CPX is an electrical terminal with remote I/O for valve terminals that offers much more than just a means of linking the field and master control levels. Its individual modules make it possible to integrate the control of pneumatic cylinders via the modular valve terminals together with motion controllers for electric drives. It also has diagnostic capabilities and can perform condition monitoring in addition to providing safety functions. Examples of integrated functions include IT services such as web servers, a front end controller for decentralized local control, an end position controller and a proportional valve or pressure sensor for detecting internal valve terminal pressures or external signals.

**Modular and scalable**

Integrated in the high-performance POWERLINK network, the CPX platform has the modularity and scalability that are indispensable for the most flexible automation concepts. “In our pursuit of integrated automation we have come to rely on POWERLINK compatibility,” says Eberhard Klotz, Festo’s head of marketing for products and technology. “It opens up a whole new realm of automation possibilities for our users.”
embedded world: great interest in openSAFETY

The open source safety protocol openSAFETY continues its unwavering advance. The technology was met with great interest at embedded world in Nuremberg. Visitors were particularly drawn to the live demonstration featuring three evaluation boards – from Wallner Automation, Hilscher/ MESCO Engineering and the EPSG – which allow implementation of the openSAFETY stack on various platforms.

Another highlight was provided by Indian R&D service provider Kalycito, whose position control demo, based on a Cortex M4 processor from Analog Devices, provides axis synchronization with a cycle time of 250 μs. A commercially available Linux industrial PC serves as the master. More information regarding this demonstration can be found at http://sourceforge.net/projects/adopenpowerlink/.

“The products you see here make implementing openSAFETY and POWERLINK more economic and efficient than ever,” explains the EPSG’s managing director, Stefan Schönegger, on the sidelines of embedded world.