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The EPSG at this year's Hannover Messe trade show

POWERLINK equals 100% open technology: not protected by patents, no proprietary software or components, no dependence on individual manufacturers, no license fees.

If you wish to learn more about:

- the advantages of POWERLINK technology,
- new POWERLINK components,
- POWERLINK manufacturers and service providers,
- POWERLINK technology and its functions,
- the open source world of POWERLINK ,
- or the Ethernet POWERLINK Standardization Group (EPSG),



visit us at this year's Hannover Messe in hall 15, booth C04. Our experts will be happy to provide you with information on POWERLINK technology. Our booth, which measures more than 100 m², showcases exhibits from various POWERLINK manufacturers. We are looking forward to present a new highlight in 2009: the free-of-charge openCONFIGURATOR. The tool, which has been developed by the French software service provider and EPSG member Kalycito, allows users to easily configure POWERLINK networks. Just like openPOWERLINK, the software has been released under the BSD open source license, making it freely available for anyone. Thus, openCONFIGURATOR becomes a major element of the open source POWERLINK environment. For more information, please refer to page 2.

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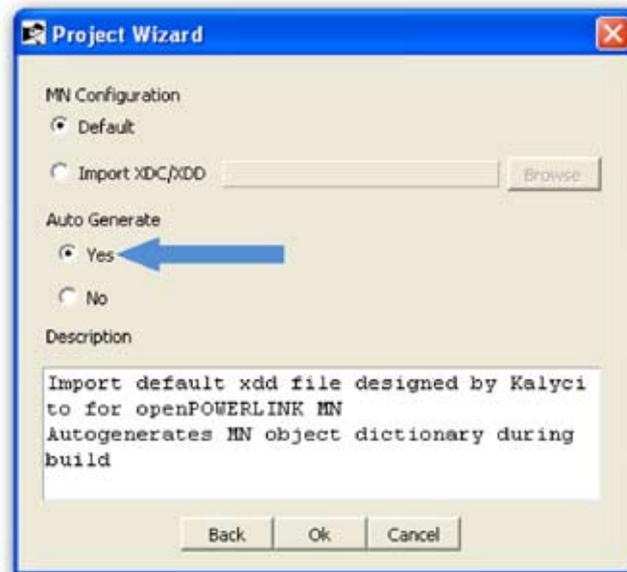
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Easy POWERLINK configuration with openCONFIGURATOR

Kalycito, a French technology services provider for embedded software and member of the Ethernet POWERLINK Standardization Group (EPSG), has developed a new open source tool for Linux and Windows which allows for easy set-up, configuration and maintenance of POWERLINK networks. The openCONFIGURATOR software has been released under the BSD Open Source license and can be downloaded from <http://sourceforge.net/projects/openconf> free of charge.



openCONFIGURATOR from Kalycito enables quick and easy configuration of POWERLINK networks

openCONFIGURATOR allows for the quick and easy configuration and commissioning of POWERLINK networks. Users merely need to import the device description files (.XDD) which are made available by the manufacturers of the devices to be integrated. When the corresponding setting is chosen, openCONFIGURATOR will automatically generate the PDO mapping. The graphic interface guides users through all further procedures. At the end of the process, the tool automatically generates the CDC file with the complete object dictionary and an XML file and a header in C which contain the variable names and offsets. Additionally, openCONFIGURATOR gives experienced users complete control over the configuration at any time, allowing them to manually add comments and objects, adjust automatically generated files and establish cross-traffic between nodes. openCONFIGURATOR consists of a library of C++ dlls with a Tcl/Tk-based graphic interface, enabling those who wish to use their own GUI to access the API provided via C++.

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info@ethernet-powerlink.org
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Introducing the Mint Machine Module, Baldor provides a cost-efficient plug-in motion control module for its POWERLINK-compatible MotiFlex three-phase drives. The module renders separate controllers and additional wiring unnecessary. The module, which is simply inserted into the drive's hardware extension slot, is available in two types: a simple version allows users to control two axes, with the equipped drive serving as the host, providing a conventional analog interface to control a second external drive. The high speed version of the Mint Machine Module acts as a stand-alone POWERLINK master (Managing Node), which can manage a complete multi-axis control system: the controller interpolates the movements of up to five axes. Since each drive features an I/O extension and a CANopen extension slot, systems suitable for extremely complex automation tasks can be configured as well. Both module versions are compatible with Baldor's Mint, a high-level programming language for motion and machine control. This Basic-like language features modern structured program functions, multitasking support and an extensive library of high-level keywords which provide a ready-to-use motion control software.



Users can easily implement a control system for several axes with Baldor's motion control plug-in for POWERLINK drives

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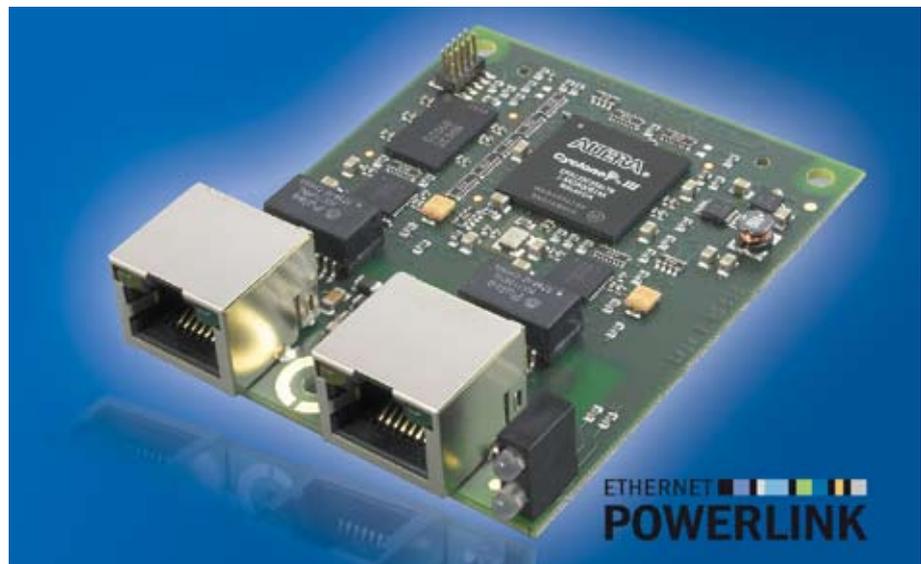
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Introducing a new Industrial Ethernet Module, IXXAT Automation provides a flexible and cost-efficient interface which allows users to easily connect automation devices to POWERLINK networks or other Ethernet-based fieldbus systems. Since central development goals included suitability for a wide range of protocol standards and low production costs, the new module is smaller than its predecessor model and provides a better performance at a smaller price. The module is based on an Altera Cyclone III FPGA. An integrated CPU executes the Industrial Ethernet protocol and ensures data transfer via the host interface.



IXXAT's new Industrial Ethernet Module

Users can easily integrate the module into their existing systems via the host CPU's open programming interface (Ethernet Module Interface – EMI). The counterpart on the module, the Bus Protocol Wrapper (BPW), abstracts the functions of the currently used protocol, allowing users to configure applications independently of the underlying protocol via the EMI. The host interface has been implemented as a general μ C interface. Optionally, a Serial Peripheral Interface (SPI) is also available. Moreover, the module and the host CPU have a shared memory with up to 16 kB. The data memory is physically implemented within the FPGA as real dual-port RAM, which makes the interface suitable for demanding applications such as servo drives or fast I/Os. The FPGA features 8 MB RAM to run the protocol software and 2 MB Flash memory to store the software and FPGA design. The module measures 72.2 x 57.5 x 16 mm. If this format is unsuitable for specific applications, IXXAT provides customized solutions with specific measurements and plug connections as well as design-in solutions with additional features. An evaluation kit which includes a carrier board, adapter boards to connect various CPU modules, software and documentation is also available.

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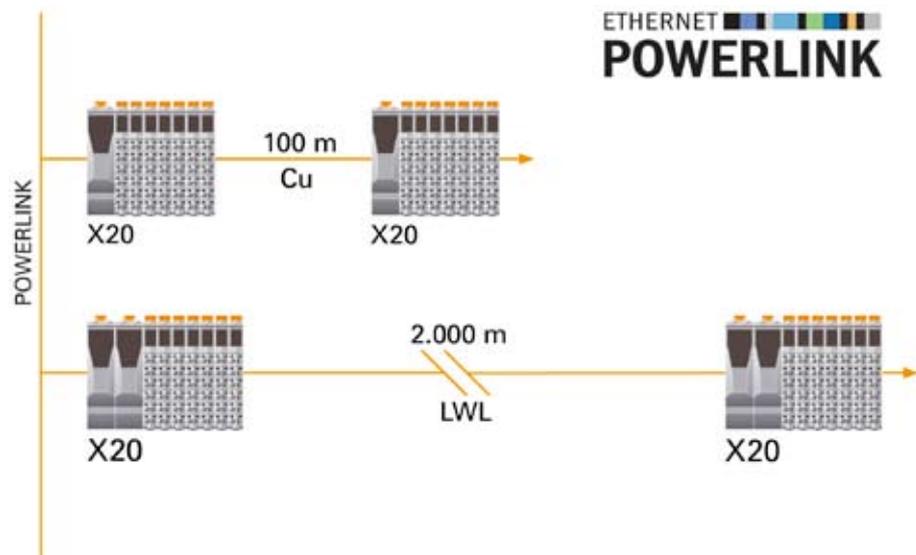
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X20 hub system from B&R

X20 hub system from B&R: New fiber optic modules allow for extensive POWERLINK networks

B&R has expanded its X20 hub system, adding a fiber optic module which enables users to connect decentralized remote modules with maximum distances of 2,000 m. Copper cables, which have been used up to now, merely allow for distances of up to 100 m between nodes in Fast Ethernet networks.

The modular X20 hub system, which was developed by B&R for POWERLINK and other Industrial Ethernet applications, enables users to easily configure different hub devices from a kit. It includes hub units with two RJ45 connections, which are simply lined up together or serve as bus controller extensions. The underlying standard is 100Base-FX, based on duplex LC technology. No internal downgrading technology is used, which means that there is no performance loss (wire speed). Therefore, the fiber optic module is optimally suited for use in the X20 hub system in any POWERLINK topology.



The new fiber optic expansion module for B&R's X20 hub system covers distances of up to 2,000 m

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