PROFINEWS

PROFINET and PROFIBUS News for North America

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Safety is being integrated into automation

http://profinews.us/2014/05/safety-in-automation/

The gates of Hanover Fair 2014 have just closed. Many visitors and exhibitors are looking back at five successful days at the trade fair filled with interesting discussions on all aspects of automation.

It's clear that products and solutions for PROFINET and PROFIBUS are enjoying strong demand. For most users, there is no longer any question of whether to use industrial communication. It is the backbone of modern automation systems, opening up significant opportunities for increasing productivity.

 Besides conventional field devices, a main component of industrial communication is safety. It must be incorporated seamlessly and be easy to configure, program, and handle. PROFIsafe for PROFIBUS and PROFINET offers the ideal conditions, and many new PROFIsafe products were presented at Hanover Fair.

Functional safety is being increasingly included in national guidelines and standards and is therefore having to be taken seriously in the design of machines and systems internationally.

This trend is shown clearly by the node counts for PROFINET, PROFIBUS and PROFIsafe. In 2011, the ratio of PROFIsafe nodes to total PROFIBUS and PROFINET nodes sold was approximately 1:29. This dropped to 1:23 in 2012 and fell further to 1:18 in 2013.

The trend can be expected to continue as more and more products and solutions for PROFIsafe become available, making it increasingly attractive to take the simple step of integrating safety in a customized manner.

So, with good reason, safety is the featured topic of the next few articles. I hope you enjoy reading about it.

Martin Müller is Head of I/O and Networks Business Unit, Phoenix Contact Electronics

PROFIsafe: an overview

http://profinews.us/2014/05/profisafe-an-overview/

A new era in the automation of safety-related machines and plants began 15 years ago with the first PROFIsafe specification and certified products. PROFIsafe can be used with PROFIBUS and PROFINET networks and not only guarantees greater safety, but also maximum functionality. PROFINET Marketing Working Group Leader Xaver Schmidt explains.

The PROFIsafe solution is based on the "black channel" principle that originated with PROFIsafe, in which safety-related information is packed into a secure "PROFIsafe container".

In the case of an emergency stop, for example, the status of the safety sensor or emergency pushbutton is transmitted by a PROFIsafe telegram to the safety controller, edited and then forwarded to a drive. On arrival in the drive unit, the requested safety reaction is triggered, for example the drive is switched to torque-free operation using the "Safe Torque Off" (STO) safety function. Meanwhile, standard communication continues: with PROFIsafe, everything runs on one cable so that standard and safety data are processed together in one failsafe CPU.

PROFIsafe is now established as an international standard (IEC 61784-3-3). PROFIsafe's "black channel" principle is now included in other IEC standards. PROFIsafe complies with safety standards such as IEC 62061 and ISO 13849 (for production automation) and IEC 61511 (for process automation), and are compliant with the Machinery Directive 2006/42/EC and the Seveso Directive of the European Union. Other local regulations such as NFPA 79 (USA) are also met.

Building on many years of experience with PROFIBUS-based PROFIsafe applications, it was possible in 2005 to integrate them into PROFINET with minimum system discontinuity. With the aid of the Tool Calling Interface (TCI) and the specified i-Parameter server, the engineering and replacement of equipment has been simplified. F-parameters are stored in the CPU and, in the event of a device being replaced, are downloaded to the new device without further assistance.

Another option is the switching on and off of individual channels – without repercussions on the other channels in the same failsafe I/O module. Safety-related communication over wireless LANs simplifies the development of mobile operating concepts.

PROFIsafe even permits the connection of safety-related Intrinsic Safety (Ex-i) devices via a PN/PB link. And, when an application demands the separation of F-controller and standard controller, the integration of safety functions into devices can be exploited with the aid of a "shared device" architecture (see diagram). Additional possibilities include use of the "safe speed" feature, and combining PROFIsafe, PROFIdrive and PROFIenergy in one system.

PROFIsafe Resources

http://profinews.us/2014/05/profisafe-resources/

Want to learn more about PROFIsafe?

Start here:

1. Go to the PROFIblog
2. Watch a MinutePROFINET video
3. Watch this PROFItelevision video
4. View a webinar
5. Take the Web Based Training course

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1. PROFIblog

Over at the PROFIblog, there are over a dozen posts tagged PROFIsafe. It is a good starting point to read up on what Carl Henning has blogged about with respect to safety and PROFIsafe.

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2. MinutePROFINET

Watch this short video:

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3. PROFItelevision

Here's an excellent explanation of how PROFIsafe works.

4. Webinars

Two webinars are available:

- One dedicated to providing general overview of functional safety and PROFIsafe
- Another specifically addressing functional safety when using motors and drives

5. Web Based Training

For a step-by-step approach to the technology, over at the PI International website there exists a Web Based Training course for PROFIsafe. It allows the student to progress through the material at his/her own pace.

One Day Training Classes (Issue 65)

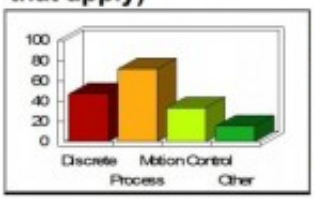
http://profinews.us/2014/05/one-day-training-classes-issue-65/

Who attends PROFINET one-day training classes? We track that through our Course Evaluations. So far this year:

Category	Percentage
End user	40
System Integrator	20
Device Maker	16
OEM	8
Distributor	7
Other	9

And what areas do the attendees work in?

What application space do you work in? (mark all that apply)



Response	Percent
Discrete	47.31
Process	71.92
Motion Control	33.85
Other	15.38

The Houston class tilted the application space to Process; the Detroit class later this year will tilt it back.

The Course Evaluations also provide feedback on the course. There is both praise and constructive criticism. Both are valued. Recent criticism included:

Beef up PROFIsafe section. [It is tough to balance all the great things about PROFINET. For PROFIsafe details, we invite attendees to view the webinar: PROFIsafe – Functional Safety over PROFIBUS and PROFINET.]

Add hands-on. [There are too many students for that to work. Exhibitors in the room can provide that though.]

Recent praise included:

I am new to PROFINET but have used PROFIBUS in the past. This was a great view of what we can expect as we migrate to PROFINET.

Came in with little to no knowledge of PROFINET. Great course. Instructors made 310 slides bearable!

I found this to be extremely helpful in understanding even the basics.

Good course with no excess product pushing. The vendor support is an excellent resource.

This was excellent as I was able to learn new material and then ask questions of the vendors to see how well their equipment will integrate.

Nice job keeping it simple but informative, and nice use of humor.

Very helpful and technical course.

Certified Network Engineer Classes (Issue 65)

http://profinews.us/2014/05/certified-network-engineer-classes-issue-65/

Dig deep into the workings of PROFINET and PROFIBUS in these week-long Certified Network Engineer classes. Pass the written and hands-on tests to be certified and have your name recorded on the PI website.

Recent student feedback: “I enjoyed the class, lots of material to cover in one week. I came into the class knowing very little about PROFINET. Now I feel confident in my abilities to troubleshoot / commission PROFINET installations at our plant.”

Remaining classes:

PROFINET	PROFIBUS DP	PROFIBUS DP/PA
June 9	August 11	June 16*
September 15		November 3
December 8		

Classes are held in Johnson City, TN, unless asterisked (in Peterborough, ON.) Onsite classes can be arranged. Contact CertifiedTrainingManager@PInorthAmerica.com.

PROFIsafe Application Story: KUKA Reduces Machine Safety Components

http://profinews.us/2014/05/profisafe-application-story-kuka-reduces-machine-safety-components-by-85/

KUKA Flexible Production Systems is one of the most prominent producers of Automated/Robotic production systems for car bodies and chassis.

When KUKA decided to become a Tier I supplier of automobile bodies to DaimlerChrysler, they needed to use their extensive knowledge of body shops and find a partner that was willing to work with them to change the landscape of the North American market. KUKA was faced with designing a body shop utilizing DBOOM (Design, Build, Own, Operate, and Maintain) philosophy

with no restrictions on the equipment used. The only criteria, "Utilize only field proven technology." The result: A partnership with Siemens that utilized field proven revolutionary technology realizing substantial cost savings, while significantly improving system safety, manufacturing flexibility and Mean Time To Repair (MTTR). This is all happening at the KUKA Toledo Productions Operation LLC (KTPO) assembly plant, which produces the Body-In-White on the DaimlerChrysler (DCx) Jeep JK vehicles, currently the Wrangler Model.

The Body-In-White application involves many systems from underbody to windshield to panel line assembly. Two main problems plagued their current design. First was the hardwired safety required for each cell was expensive to install, troubleshoot and maintain. This hardwiring of these points also made future changes and modifications cost prohibitive. The other was the power distribution to robots and welders.

Traditional machine safety systems in the automotive market are implemented with hard fencing, remote emergency stop pushbuttons, safety gate switches, safety mats, light curtains and large amounts of redundant relays. At the heart of this system is a complicated and extensive system of hard wired circuits, each wired redundantly making the electrical panels very large. This design has inherently hampered flexibility, impeded communications to the control system, increased the cost of troubleshooting and

significantly increased the cost of a machine. While hardwired relay logic for control has long since migrated to the Programmable Logic Controller (PLC), little has been done to garner similar improvements in machine safety systems.

Knowing this was a major source of costs and complexity, KUKA looked to simplify the safety system with a new, more cost effective method for safety management and controls using a fail-safe controller with high diagnostic capability. While this alone would have saved thousands in wiring and troubleshooting, KUKA saw moving from hard wired safety relays to a standalone Safety PLC-based method was not enough. Combining both machine safety and standard machine control on one field bus was key to nearly eliminating all relays and "out to the field" wiring, creating significant reductions in control panel space requirements, hardware requirements, engineering design, troubleshooting and overall wiring costs.

KUKA chose a PROFIBUS-based processor that communicates to all field components, including safety devices, via an inexpensive two wire cable capable of speeds up to 12 MBaud. The previous standard solution included communication via a simple field bus for control and hardwired circuits for safety which all acted independently. The architecture in that legacy design required a large five door main control panel with auxiliary panels on the robots, roller tables and assorted field device locations. Power was supplied by expensive multi-conductor cable drops.

The Siemens processor chosen acts as both the control processor for normal machine functions and safety processor to monitor and control all safety devices. Working from one common programming environment, and utilizing ladder logic for both process control and safety, has substantially reduced the engineering efforts and increased flexibility. Previously, all relays and PLC inputs required monitoring via independent logic to detect faults. Diagnostics were hampered by the complex and isolated designs. With the new Siemens solution, KUKA has implemented point level diagnostics for all critical I/O (both standard and safety I/O) and bus level faults. These events are automatically generated and displayed on the single machine HMI, significantly reducing troubleshooting time and expense. Furthermore, by adding an inexpensive device called a "Diagnostic Repeater" all information on the field bus is reported on the HMI including pinpointing any breaks in the communication cable within a foot of the break. By combining safety and standard I/O along with a common programming method, KUKA engineers reported an impressive 85 percent reduction in relays, local I/O, terminal blocks and cable connections which has substantially reduced labor costs. The entire design was reduced to six standard panel configurations that could handle all varieties of system design requirements.

The base design criterion was to only design and build what was needed on the smallest of systems to reduce capital costs. As the system expands for other body types, or requires the addition of other equipment including robots, expansion to the design is easily achieved. Furthermore, KUKA engineers reported that the modular design/build accounted for a substantial savings on engineering hours since the overall design was reduced to six standard panels utilizing common wiring and addressing. The ability to have electrical equipment ready during commissioning with no last minute engineering greatly reduced the time to market. This was largely due to the common field wiring, labeling and extensive diagnostics available in the safety system. The ability to have common safety code from one system to another also greatly reduced the commissioning time. Since the code is now software based rather than hardware based, adaptability to engineering changes and flexibility is greatly enhanced.

The second major obstacle for cost reduction was the extensive power wiring to the field for robots, welders and general control. The traditional method used fused branch circuits with motor starters, circuit breakers for robots and tip dressers. Proper fuse sizing was required as was the testing of each circuit prior to power up. This resulted in significant time required for startup and commissioning. Additionally, a common issue in the plant is power load balancing by having various types of voltages tied to the grid. All of this was housed in multi-door main power enclosures that occupied a significant amount of real estate.

Siemens introduced KUKA to FastBus®, a 3-phase bus bar system for power distribution. The modular design provides the flexibility needed to fit any application. Circuit breakers and starters, which are typically pre-wired at the factory, are easily snapped on or removed from the bus bar in seconds. With complete domestic and international approvals, this system makes it ideal for a global panel design. Overall, the FastBus system helps save panel space by allowing one to wire and mount circuit protection and motor starters in a tight line, and therefore, reducing installation costs with faster mounting and significantly fewer power connections. The KUKA design was based on bringing in 480VAC into the machine and distributing the power out to the 24VDC devices via power distribution panels which were also completely free of fuses. Balancing plant power loading became significantly easier since all incoming voltage to the devices was now 480VAC 3 phase with total elimination of single phase devices and transformers.

KUKA was able to see substantial reductions in components, labor and space while increasing the flexibility of the system. With an adjustable main circuit breaker, the main panel was capable of handling any combination of up to eight safe (Category 4) motor power networks and/or fourteen 25A robot power drops with one design. KUKA engineers reported a significant start-up savings with this design. Schedules would typically dictate 2-3 days of commissioning/ debug time per system. With the Siemens FastBus system, that time was reduced to less than one hour. Future expansion costs are also reduced as the system is scalable without re-engineering. All of this is accomplished without air-conditioning. The traditional system required a five door main enclosure which was now reduced to two doors with shorter overall height gaining back expensive real estate. KUKA reported the overall footprint of the cell was reduced over twenty percent utilizing this design philosophy.

For KUKA USA, prior experience with Siemens software and solutions was virtually non-existent. KUKA engineering and floor personnel learned and implemented the Siemens system very quickly. Ease-of-use and Siemens "train the trainer" approach enabled Kuka to reduce implementation risks and meet tight deadlines. "We built the system in no time and commissioning was surprisingly easy. This approach has saved us $10's of thousands on the first installation alone," says Rod Brown, KUKA Engineer.

Originally Published in the PROFI Interface Center Connection.

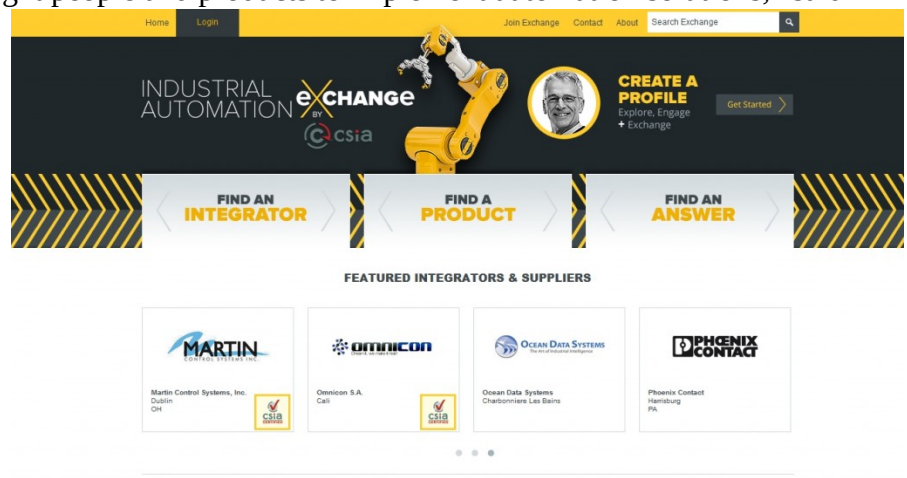
Control System Integrators Association introduces the Exchange

http://profinews.us/2014/05/control-system-integrators-association-introduces-the-exchange/

A new online service will help industrial plant managers connect with control system integrators and suppliers who can meet their industrial automation needs.

The Industrial Automation Exchange was introduced by the Control System Integrators Association (CSIA) at its annual executive conference in San Diego. The Exchange, www.csiaexchange.com, replaces the association's previous online directory with a feature-rich digital community that includes Find an Integrator, Find a Product and Find an Answer.

"Our members are looking for ways to educate prospective clients about system integration and to help industrial clients connect with the right people and products to implement automation solutions," said



Bob Lowe, CSIA executive director.

One of the features that distinguishes the Industrial Automation Exchange from a traditional buyers guide is the ability to create personal profiles and communicate with other visitors to the site. For example, visitors can post questions in the Find an Answer and members of the community can respond directly or refer to a white paper or case study they've shared.

"The social component of the Exchange allows our members to demonstrate that system integration is not a commodity product. As with other professional services, it's the people behind the company name and logo who make the difference," said Lowe.

More advanced features, including the ability to compare companies and send requests for information, are in development. CSIA will introduce the Exchange to end user clients and customers in early July.

To learn more about the Exchange or to create a company profile, visit www.csiaexchange.com.

Social Media Update (Issue 65)

http://profinews.us/2014/05/social-media-update-issue-65/

PI North America uses social media, including

- The PROFIblog
- Twitter: @AllThngsPROFI
- LinkedIn groups: PROFINET, PROFIBUS & PROFINET, PROFIbusters
- Facebook Profibus Profinet North America
- YouTube: MinutePROFINET, The PROFIblogger, and PROFI-TV

You are probably using some of these also, and we hope to connect with you in one or more of these places.

But we also like an old technology – RSS. Imagine if there was a technology that automatically delivered new information from your favorite websites to you, perhaps right to your email inbox. That's RSS.

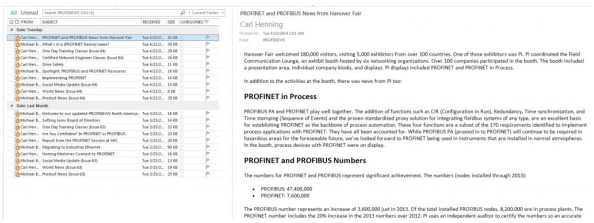
This symbol indicates the availability of an RSS feed. If you click it, you will probably get instructions on how to add that feed.

There are two ways to access RSS feeds: a dedicated RSS Reader and Outlook. Just do a web search for "RSS Readers" and you will get many results. But here at PI North America we prefer getting our RSS feeds directly into Outlook. That way we can forward them when appropriate. And it's one less program to run; one less place to check. Microsoft has instructions on adding RSS to Outlook: Subscribe to an RSS Feed.

The RSS feeds for PI North America are:

- Headlines: feed://us.profinet.com/feed/?post_type=headlines
- Press Releases: feed://us.profinet.com/feed/?post_type=press_release
- PROFIblog: feed://us.profinet.com/feed/
- PROFINEWS North American Edition: feed://us.profinet.com/feed/?post_type=pi-newsletters
- PROFINEWS North American Edition – All Articles: http://feeds.feedburner.com/profinews/bbvD

Use the first PROFINEWS North American Edition link to get a notice of what is in the newsletter; use



PROFINET and PROFIBUS News from Hanover Fair

Carl Henning

Hanover Fair welcomed 180,000 visitors, visiting 5,000 exhibitors from over 100 countries. One of those exhibitors was PI. PI coordinated the Field Communication Lounge, an exhibit booth hosted by six networking organizations. Over 100 companies participated in the booth. The booth included a presentation area, individual company kiosks, and displays. PI displays included PROFINET and PROFINET in Process.

In addition to the activities at the booth, there was news from PI too:

PROFINET in Process

PROFIBUS PA and PROFINET play well together. The addition of functions such as CIR (Configuration in Run), Redundancy, Time synchronization, and Time stamping (Sequence of Events) and the proven standardized proxy solution for integrating fieldbus systems of one type, are an excellent basis for establishing PROFINET as the backbone of process automation. These four functions are a subset of the 170 requirements identified to implement process applications with PROFINET. They have all been accounted for. While PROFIBUS PA (proxied in to PROFINET) will continue to be required in hazardous areas for the foreseeable future, we've looked forward to PROFINET being used in instruments that are installed in normal atmospheres. In the booth, process devices with PROFINET were on display.

PROFINET and PROFIBUS Numbers

The numbers for PROFINET and PROFIBUS represent significant achievement. The numbers (nodes installed through 2013):

- PROFIBUS: 47,400,000
- PROFINET: 7,600,000

The PROFIBUS number represents an increase of 3,600,000 just in 2013. Of the total installed PROFIBUS nodes, 8,200,000 are in process plants. The PROFINET number includes the 20% increase in the 2013 numbers over 2012. PI uses an independent auditor to certify the numbers so an accurate

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the second one to get every article, which will look like this:

World News (Issue 65)

http://profinews.us/2014/05/world-news-issue-65/

Southeast Asia, Italy, and China held events recently.

PI **South East Asia** held a PROFIBUS - PROFINET Seminar 2014 in Singapore on May 9th, 2014. Karsten Schneider and Xaver Schmidt presented market developments and trends. There was also a microfair.

Separately, PI South East Asia announced that 10 engineers from across Asia were certified as PROFINET Certified Network Engineers. More classes are coming. SOUTH EAST ASIA

To celebrate 20 years of success, Consorzio PROFIBUS Network **Italia** invited engineers, installers and system integrators to a PROFIBUS & PROFINET Day held in the Chiavenna Landi Castel, Piacenza on April 16. National experts discussed themes such as operational excellence, energy efficiency and security, and well-known guests presented successful PROFIBUS and PROFINET applications. ITALY

In April, more than 60 **PI-China** member representatives gathered in Beijing for a day of sharing PROFIBUS and PROFINET experiences and discussing latest developments. PI-China is growing rapidly. In 2013, 24 members were added and PI-China is now PI's fourth largest regional organization. CHINA

Product News (Issue 65)

http://profinews.us/2014/05/product-news-issue-65/

New Products:

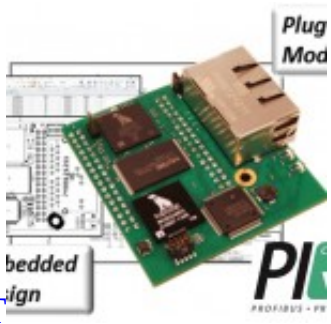
A new high performance controller, a PROFINET master for IO-Link, rugged cabling, secure cloud, and embedded connectivity round out this issue's offering of new products.

Phoenix Contact Introduces High Performance Controller

The new Axiocontrol AXC 3050 controller from Phoenix Contact is well suited for complex automation tasks due to the fast processing speed it offers. Functions like high-speed counters and event tasks are integrated directly into the controller.

Turck Announces IO-Link Master with PROFINET connectivity

New master modules extend Turck's BL20 and BL67 I/O systems with IO-Link functionality for the PROFIBUS and PROFINET protocols. The BL67 system now also provides a modular IO-Link master in IP67 with an operating temperature range of -40…+70 °C for harsh industrial environments.



Innovasic Certifies RapID Platform for PROFINET IRT

Within one month of announcing the newest version of its RapID Platform Network Interface for PROFINET RT and IRT connectivity, Innovasic has certified the solution for both Class B and Class C. It is possible to design in PROFINET with the RapID Platform now and take advantage of seamless support for version v2.3.

Molex Debuts Weld-Slag and Oil-Resistant Cable for PROFINET

Molex Inc recently launched a line of weld-slag and oil-resistant (WSOR) cable designed for use in harsh environments. Offered in a complete range of standard and custom termination styles, Molex WSOR cable reduces inventory costs by providing a single-cable solution for automotive, material handling and other industrial factory automation applications.

mGuard Secure Cloud

Phoenix Contact introduces the mGuard Secure Cloud (mSC), a free web-based service that allows FL mGuard users to securely communicate with and support industrial equipment over the Internet. The mSC uses FL mGuard hardware to give OEMs, machine builders and system integrators a secure, easy and cost-effective way to access machines and systems anywhere in the world over the Internet.

Anybus CompactCom 40-series offer fast communication for PROFINET and PROFIBUS

The Anybus CompactCom range of embedded communication solutions from

HMS Industrial Networks have provided automation devices with connectivity to any fieldbus or industrial Ethernet network for more than a decade. With the new Anybus CompactCom 40-series, HMS now introduces a new technology generation.

High-performance controller for maximum performance

http://profinews.us/2014/05/high-performance-controller-for-maximum-performance/

The new Axiocontrol AXC 3050 controller from Phoenix Contact is well suited for complex automation tasks due to the fast processing speed it offers.

Functions like high-speed counters and event tasks are integrated directly into the controller. This enables short response 

times without the need for special I/O modules. The rugged, EMC-resistant housing opens up new possibilities for use in harsh industrial environments.

To set up local stations, the Axioline F I/O system modules can be installed in the modular controller as required. The controller can be integrated into existing networks via the three Ethernet interfaces and expanded to include additional local I/O modules. The user can choose between the TCP/IP, UDP, Modbus/TCP, and Profinet communication protocols, with the controller functioning as both a Profinet controller and a Profinet device. A USB connection makes it easy to log data on removable media and to update the controller program. In the event of power failures, the Axiocontrol PLC automatically backs up all controller data from the application onto the flash card.

Phoenix Contact

IO-Link Master Module for Profinet

http://profinews.us/2014/05/io-link-master-module-for-profinet/

New master modules extend Turck's BL20 and BL67 I/O systems with IO-Link functionality for a large number of fieldbus and Ethernet protocols

Turck is extending its portfolio of IO-Link solutions by adding new master modules for its BL20 and BL67 modular I/O systems. The new IO-Link master modules fully support specification 1.1 with the transmission rates 4.8, 38.4 and 230.4 kBaud (COM 1, COM 2 and COM 3). This provides the user with a wide range of possibilities for implementing IO-Link communication in a large number of fieldbus and Ethernet networks. The BL67 system now also provides a modular IO-Link master in IP67 with an operating temperature range of -40…+70 °C for harsh industrial environments.

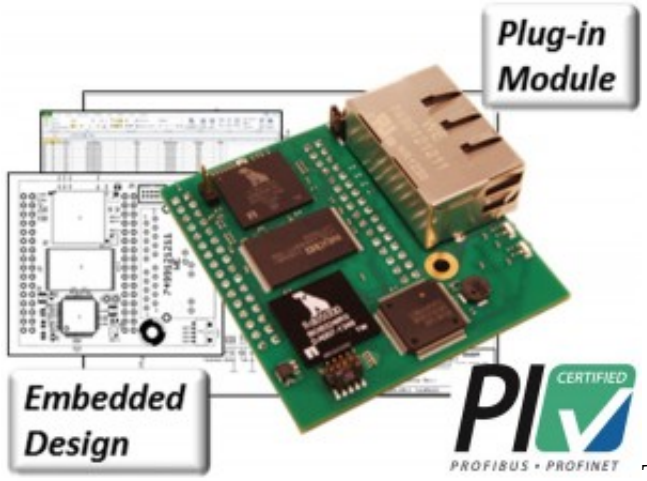
By the product launch in the summer it will be possible to use the 4-channel IO-Link master modules with the gateways for Profibus, CANopen as well as the Ethernet protocols Profinet, EtherNet/IP and Modbus TCP. The EtherCAT, DeviceNet and Modbus RTU protocols will then follow in the second step.

All new modules support Turck's multiprotocol technology, which allows the use of the same device in Profinet, EtherNet/IP and Modbus-TCP networks. The multiprotocol devices can be operated automatically in each of the three Ethernet systems and thus reduce inventory and engineering requirements. The devices detect the protocol used by listening to the communication traffic during the startup phase.

Innovasic Certifies RapID Platform for PROFINET IRT

http://profinews.us/2014/05/innovasic-certifies-rapid-platform-for-profinet-irt/

Within one month of announcing the newest version of its RapID Platform Network Interface for PROFINET RT and IRT connectivity, Innovasic has certified the solution for both Class B and Class C. It is possible to design in PROFINET with the RapID Platform now and take advantage of seamless support for version v2.3. Innovasic's solution allows users to certify their design to v2.3 as soon as certification is available through any of the PI Test Labs.



The PROFINET IRT Network Interface is delivered as a module or embedded design containing everything needed to participate in a PROFINET IRT and RT network. A host processor connects to the Network Interface via a UART or 16-bit Parallel Interface. At the software layer, the host connects to Innovasic's Unified Interface API so other protocols can be used without changing host processor software. Since the Unified Interface is exactly the same across all versions of the RapID Platform, customers developing a PROFINET IRT or RT product can easily convert to any other supported Industrial Ethernet protocol.

"This is a momentous occasion for Innovasic," says Keith Prettyjohns, Innovasic's CEO, "and speaks to the power of our new fido5000, Real-time Ethernet Multi-protocol (REM) switch and the openness of the PROFINET standard."

The RapID Platform - PROFINET IRT Network Interface module and embedded design were available in April 2014. Please visit www.innovasic.com to learn more.

Molex Debuts Weld-Slag and Oil-Resistant Cable for PROFINET

http://profinews.us/2014/05/molex-debuts-weld-slag-and-oil-resistant-cable-for-profinet/

Rugged and versatile WSOR cable improves operational efficiencies in harsh environments

Molex Incorporated recently launched a line of weld-slag and oil-resistant (WSOR) cable designed for use in harsh environments. Offered in a complete range of standard and custom termination styles, Molex WSOR cable reduces inventory costs by providing a single-cable solution for automotive, material handling and other industrial factory automation applications.

“Heretofore, machine and line builders had limited choice when selecting cables for rugged applications. Each machine required a different cable, leading to higher inventory costs, less shelf space, and confusion when differentiating between cables,” states Riky Comini, business development director for Molex industrial automation. “WSOR cable improves operational efficiencies by offering industry’s widest cross-section of styles for multiple applications, from welding to cutting oil environments.”

Rated for a wide temperature range (static -40 to +90°C), WSOR cable meets UL 758/1581 and VDE 472-803/B specifications. Suitable for machine sensors, valves and network connections, WSOR cable is available in cross sections of 0.25, 0.34, 0.50, and 0.75 to 1.50mm2. It can be terminated to a variety of industry-standard connectors, including the Molex Brad® M12 Power, Brad® Nano-Change® M8, Brad® Mini-Change®, DIN, Brad® M23 and I/O modules within a PROFINET or other Ethernet industrial network. The highly flexible cables feature a bend radius of 5x outside diameter for static and 7.5x outside diameter for dynamic and drag chain conditions. The outer jacket is available in four colors.

“Tool and line builders in automotive factories, machining centers and conveyor system manufacturers now have a rugged and more versatile alternative for their most demanding cable requirements,” adds Comini.

To learn more about WSOR cables visit www.molex.com/link/wsorcable.html.

Secure cloud VPN for cost-effective remote connectivity

http://profinews.us/2014/05/secure-cloud-vpn-for-cost-effective-remote-connectivity/

Easier remote support and reduced travel costs for machine builders, OEMs and system integrators with Phoenix Contact's new web-based service

Phoenix Contact introduces the mGuard Secure Cloud (mSC), a free web-based service that allows FL mGuard users to securely communicate with and support industrial equipment over the Internet. The mSC uses award-winning FL mGuard hardware to give OEMs, machine builders and system integrators a secure, easy and cost-effective way to access machines and systems anywhere in the world over the Internet.

Because small and medium-size businesses do not always have the resources to implement, host and support their own VPN solution, Phoenix Contact essentially acts as the customer's IT department. Phoenix Contact hosts the mGuard Secure Cloud at its state-of-the-art data center near Harrisburg, Pa. This helps the user eliminate the hardware and installation costs of an in-house VPN. It also reduces travel expenses incurred from service visits to remote customers.

The mGuard Secure Cloud, which uses the IPsec security protocol with AES-256 bit encryption, performs five times faster than similar services that rely on Secure Sockets Layer (SSL) technology. The SHA-1 algorithm ensures data integrity when packets travel over the Internet. For additional layers of security on the technician side, the cloud \uses a two-factor method for session and VPN authentication and supports X509 certificates, ensuring each VPN tunnel is unique and confidential.

Phoenix Contact

First products in Anybus® CompactCom™ 40-series offer fast communication for PROFINET and PROFIBUS

http://profinews.us/2014/05/first-products-in-anybus-compactcom-40-series-offer-fast-communication-for-profinet-and-profibus/

The new Anybus CompactCom 40-series enables multi-network connectivity for demanding and high-performance industrial devices.

The Anybus CompactCom range of embedded communication solutions from HMS Industrial Networks have provided automation devices with connectivity to any fieldbus or industrial Ethernet network for more than a decade. With the new Anybus CompactCom 40-series, HMS now introduces a new technology generation.

Built on solid and proven experience
The existing Anybus CompactCom 30-series (based on the Anybus NP30 network processor) has been installed in millions of automation devices and systems around the world and is tailored for general purpose automation such as AC drives, weigh scales, valves, barcode scanners, sensors, HMIs etc.

The new CompactCom 40-series is based on HMS' Anybus NP40 network processor and is especially suitable for high-end industrial applications that require fieldbus or real-time Ethernet connectivity. Offering close to "zero delay" between devices and real-time networks, the 40-series is ideal for high-performance applications such as servo drive systems, which require fast network cycles and synchronization capabilities.

The CompactCom 40-series supports all major industrial networks, and the first release in April 2014 includes connectivity to EtherCAT, POWERLINK, EtherNet/IP, PROFINET and PROFIBUS.

The same hardware for all Ethernet networks
Like all CompactCom solutions, the 40-series covers all types of industrial networks — traditional fieldbuses as well as industrial Ethernet. Device manufacturers that choose to use CompactCom get access to all networks through one single development project, during which the user simply integrates the generic Anybus interface (hardware/software). After this, any CompactCom 40-series product can be connected, offering instant connectivity to industrial networks.

The CompactCom 40-series extends the level of flexibility even further since it uses a common reprogrammable hardware to support several Ethernet networks. For example, it is possible to install the CompactCom 40-series Ethernet hardware into an industrial device and simply download ready-made firmware to connect to the desired network (for example POWERLINK, EtherNet/IP, PROFINET IRT or EtherCAT).

Three form factors – Chip, Brick and Module
Anybus CompactCom comes in three different form factors offering different levels of hardware integration to automation devices:

- CompactCom Chip: A full network connectivity solution on a single chip for integration into the user's PCB design.
- CompactCom Brick: Ideal for users who have limited space or want to add their own choice of network connectors.
- CompactCom Module: Complete and interchangeable communication modules that offer the

fastest time to market.

"With the Anybus CompactCom 40-series, we can offer a complete communication solution suitable for both general automation devices and high-performance applications, says Leif Malmberg, Product Line Manager, Embedded, at HMS. "Users get the performance and accuracy they need for demanding applications, and the flexibility to adapt to different networks by simply downloading a new firmware."

HMS
