

PROFINEWS

PROFINET and PROFIBUS News

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Welcome



In only a few days the SPS/IPC/Drives Show will open its doors in Nuremberg.

One highlight of this year's booth will be a new manufacturing model that clearly demonstrates the technologies. The model was designed and built in a cooperative partnership with the TU Darmstadt and will include PROFINET products from many different vendors. For example, you will find drives from different suppliers – all connected with PROFINET. In addition, the model presents the profiles PROFIdrive, PROFIsafe, and PROFIenergy.

With the model we show a great example how PROFINET provides the best basis for machine building – because of all the benefits of PROFINET. It demonstrates how the different components from various suppliers fit together.

For machine builders, the message is clear: “PROFIBUS & PROFINET – The right decision!”

This issue will highlight a range of PROFINET products, solutions, and applications with the focus on the implementation of PROFINET by machine builders.

Enjoy this PROFINEWS. I welcome you to start the production of you own paper airplane at the PI booth!

Matthias Himmler, Head of Marketing for PROFIenergy at PI

[Click here for more information on SPS/IPC/Drives.](#)

PI Booth at SPS/IPC/Drives Show

PI (PROFIBUS & PROFINET International) and 100 of its members will present devices and technologies on all aspects of PROFIBUS, PROFINET, and IO-Link at the SPS/IPC/Drives trade fair in Nuremberg, Germany.

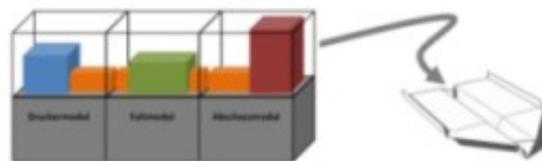
PI will be part of Europe's leading exhibition for electrical automation at a new location in hall 2, stand 220 and 221. From November 25 – 27, 2014 you are invited to learn about all the products, trends, and innovations around the technologies.

The diversity and breadth of the technologies involved is reflected in the number of live demos. PI will show the broad range of products and manufacturers with a cross-technology multi-vendor wall. The visitor will be provided with an excellent overview of the available product range here. Fully 15 % of the devices shown on the wall are newly certified.

The live demo of PROFIBUS and PROFINET for process automation shows simple device replacement plus diagnostics in accordance with NE107 and the related user benefits. FDI will be presented as a complement to PROFIBUS and PROFINET in process automation.

The PROFIsafe live demonstration illustrates for the visitor how machines can be put into a safe state individually or all at once. An Emergency Stop or additional safety functions act in just one or on all systems.

IO-Link will also present new products and features and is represented at the booth with a record 140 products, of which 15 % of the devices are available on the market for the first time.



A highlight of the trade fair is a paper

airplane maker

that was produced in cooperation with the Technical University in Darmstadt. It vividly demonstrates the operation of the technologies employed. A simple sheet of paper, which can be provided with personalized printing, becomes a precision flying object with special folding and turning mechanisms.

The broad range of technologies can be heard and experienced at the PI forum on the three days of the trade fair between 10 am and 4 pm. Specialists will share information on the latest developments and trends, and on the applications, advantages, and handling of the PI technologies.

A selfie corner is new at the stand. The winner of the photo contest will be presented with an attractive prize.

The PROFINEWS editorial staff looks forward to seeing you at the PI booth at the new location in Hall 2 (Booth 220/221) .

If you do not know what to expect to see, you can see detailed reports from the 2013 show on the PROFiblog [here](#). To follow activities at this year's show, follow us on [Twitter](#). Then watch the PROFiblog for news right after the show. There will be a roundup of top stories in December's PROFINEWS.

PROFINET builds the Boeing 787 Dreamliner



Aerospace automation provider Advanced Integration Technology incorporated Safety PLCs, Motion Control, plus safety and standard I/O, all on a single PROFINET network for more efficient, compliant automation. As a prime contractor on the Boeing 787 Dreamliner, AIT had responsibility for the final assembly and body join functions, charged with delivering a fully automated positioning and joining system.

[CLICK HERE TO READ THE APPLICATION STORY](#)

Training and Events



Are you a vendor of automation products? Want to know what goes into PROFINET product certification? [Watch this webinar](#) to learn about testing and certifying PROFINET devices. The goal is simple: to eliminate system integration headaches by ensuring a consistent, positive customer experience with PROFINET products across the spectrum of vendors. PROFINET products must be certified before they hit the market; a process the PIC has been performing since 2007. [View the archived version.](#)

[- FOR TRAINING AND EVENTS AROUND THE WORLD, CLICK HERE -](#)

Web Based Training

If you are not a vendor of automation products, then perhaps you are installing PROFINET networks in your automation environment? Web based training is available that describes the recommended steps when [planning a PROFINET network](#). Topics include topology, design aspects, device parameters, and additional functions. The training is presented in either English or German language.

Automotive Training in Detroit

On October 23, 2014 over 130 OEMs, Users, and System Integrators gathered for a free PROFINET one-day training class in Detroit. The automotive industry was strongly represented with students from Chrysler, Comau, Ford, GM, KUKA, and many others. There are only a few such PI North America classes left in 2014, but the dates for 2015 are slowly being finalized See: [PROFINET training](#) for more information.

Submit your PROFI-stories

With the merger now complete of the PROFNEWS International and PROFNEWS North American editions, we look forward to publicizing PI members' company and product news. Got an interesting PROFIBUS case study? Or perhaps a new PROFINET product? Submit those and other relevant news items to editor@profinews.com. The combined newsletter means a wider, more global audience has access to this information.

A global audience means a global perspective. As a reader, in addition to the content that is relevant to your region, you can also expect to hear interesting stories from around the globe. In the navigation menu here at profinews.com, there is a menu item titled "*Regional News*" that contains sub-menu items for individual regions. Use this section to get localized information. As profinews.com get populated with more content, this menu will grow to include those stories. For example, here in Issue 122 there is a story from Japan which now appears under "*Regional News*". As a PI member, we're always looking for your valuable stories to distribute to the industrial automation community.

Tech Tip: PROFINET's Got Class - in Real Time

PROFINET has class, in fact, many classes: Conformance Classes, Real Time classes, media redundancy classes, and even more class(es). Last issue covered [Conformance Classes](#); this Tech Tip covers Real Time classes.

The Real Time classes determine the services used and how the protocol operates "under the hood," if the communication is synchronized or unsynchronized among devices, which path is taken in the device or through the network, and if there might need to be hardware support (like a PROFINET ASIC or FPGA). All PROFINET devices must support RT (Real Time) which usually means around 250 microseconds-10 milliseconds update time with <100 microseconds of jitter and the data is sent unsynchronized.

Here is a 20-second video explanation of synchronized and unsynchronized:

RT uses a special EtherType for PROFINET which streamlines the Real Time message when using standard Ethernet components. In the vast majority of applications this is just fine. This also applies to Conformance Classes CC-A, CC-B. It is optional to support IRT (Isochronous Real Time) which is usually <1 millisecond with <1 microsecond of jitter. It is used in motion control applications where multiple devices need clock synchronization and a higher level of determinism using bandwidth reservation and scheduling. A Conformance Class C (CC-C) device would support both IRT and RT for example.

Another optional service is RT over UDP/IP (user datagram protocol/ internet protocol). We haven't seen many vendors using this due to RT/IRT being much more robust and deterministic in the field and just simpler to use. With UDP/IP you can run into more delays and overhead and have additional commissioning, however you can transfer the RT frame via a router. Most PROFINET traffic uses just switches only on the PROFINET part of the system since RT/IRT use layer 2 communications. Of course some services with PROFINET always use UDP or TCP so they can still be used through a router (for example, configuration and diagnostics). For developers the Real Time class is set in the GSD file of the device (tag = SupportedRT_Classes) or in the controller configuration tool. In PROFINET terminology this is mentioned in the specs and shown below:

RT_CLASS_UDP = RT over UDP/IP (with this RT can be sent via a router, not used much up to now)

RT_CLASS_1 = RT (for CC-A and CC-B)

RT_CLASS_2 = IRT (depreciated and not used today)

RT_CLASS_3 = IRT (used when motion or high speed applications are necessary, CC-C)

Next class in the next issue: media redundancy classes.

--from the PROFI Interface Center in Tennessee where all these classes are explained in class – the [PROFINET Certified Network Engineer class](#).

Social Media

PI and its Regional PI Associations can be found in many social media locations. You are invited to read the blog, follow us on Twitter, join our LinkedIn groups, "like" us on Facebook, and subscribe to our YouTube videos. Recent blog posts have included "Don't Need No Stinkin' Fieldbus." To connect, click these:

- [The PROFIBlog](#)
- Twitter: [@AllThngsPROFI](#), [@PChairman](#)
- LinkedIn groups: [PROFINET](#), [PROFIBUS & PROFINET](#)
- Facebook: [Profibus Profinet North America](#), [PROFIBUS PROFINET International](#), [PROFIBUS PROFINET South East Asia](#)
- YouTube: [MinutePROFINET](#), [The PROFIBlogger](#), and [PROFI-TV](#)



Recent PROFIBlog topics have included:

- [3 Questions to Ask Your PROFINET Supplier](#)
- [How to Explain PROFINET to Your Mom](#)
- [8 Go-To Resources for PROFINET](#)
- [Don't Need No Stinkin' Fieldbus](#)

There is a new MinutePROFINET video showing how PROFINET fits into a wireless environment:

Why not join us on social media?

Member News

On October 27 - 29, GE Intelligent Platforms hosted its User Summit in Orlando, FL with over 600 people in attendance. Ideas from the event included the Industrial Internet, Big Data, Uptime, and Analytics, with an overarching theme of:

Connect >> Monitor >> Analyze >> Predict >> Optimize

PROFINETS is used right at the beginning in the "Connect" phase to provide real-time data. For GE in particular, this often includes redundancy, or what they call "high availability".

According to GE, the holy-grail for industrial companies is what they term as zero unplanned downtime.

A roundup can be [found here](#).

Here's GE Chairman and CEO Jeff Immelt's [keynote address \(video\)](#) from the event.

Regional News



The Profibus Association of Australia (PAA) is adding new members at a strong clip. Similarly, membership in the Japanese Profibus Organization (JPO) has surpassed 100. Both accomplishments underscore the growing adoption of PROFIBUS and PROFINET as global, market-leading technologies.

Over the last 18 months, the PAA has invested in programs and campaigns to raise awareness within the industry about the productivity and cost benefits that automation solutions driven by PROFIBUS / PROFINET can offer. As a result, the PAA is enjoying one of its highest intakes of new members in a 12 month period (2014). [Read more, including interviews with the new member companies HERE.](#)



On October 7 in Tokyo a celebration was held with a seminar and party, to mark the occasion of JPO reaching 100 members (currently at 103). Over 120 visitors attended the seminar to learn about PI, the organization, its technologies, and the impact on the automobile industry. Experience the growth from 11 members to 103 [here](#).

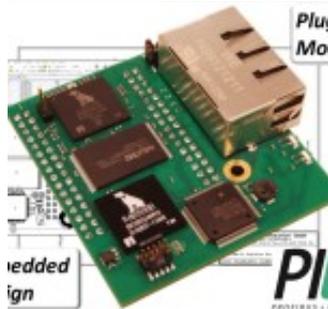
New Products

New products this month include: new connectors, PROFINET communication modules, gateways, touchscreen computers, and RFID readers with PROFINET. Click on the headlines for additional details.



[PROFINET to Serial Gateway](#)

From Agilicom: AGILiGATE PROFINET to serial is a gateway to exchange data between a PROFINET network and any equipment with a serial link. AGILiGATE PROFINET is an IO-Device. The serial link is fully configured via the IO-Controller.



[Industrial Ethernet Solution Certified to PROFINET v2.31](#)

Innovasic is pleased to announce the RapID Platform with the new fido5000 REM Switch chip has been certified to PROFINET v2.31 for Class B and Class C devices. The certification includes conformance to Net Load Class III.



[Ruggedized Industrial RJ45 Connectors](#)

TE Connectivity, has launched a range of ruggedized Industrial RJ45 connectors for industrial use. The new products include an industrial RJ45 Push-Pull Variant 14 connector with a plastic shell, and an industrial RJ45/Fiber Optic Push-Pull Variant 14 with a metal shell, which are specified for PROFINET.



[Connectors Enable Fast, On-Site PROFINET Connections](#)

Belden Inc., has launched two connectors from Lumberg Automation – designed specifically for establishing industrial Ethernet connections in applications with challenging conditions, such as railway and on machine.



[Communication Module Certified for PROFINET V2.31](#)

Hilscher is pleased to announce that the comX 51CA-RE communication module has successfully been tested against PROFINET IO Version 2.31 and certified for conformance by PI. Fast Start Up (FSU), Media Redundancy Protocol (MRP), and Netload Class III were also tested and certified.

[Low Power Flat Touch Panel Computer](#)

Advantech's new 12.1" and 15" TPC-1251T/1551T touch panel computers are the latest of their type to use the Intel® Atom™ E3827 1.75 GHz Processor, and to feature the much heralded iDoor Technology, a truly flat screen and a multitude of I/O ports while being able to operate in a wide range of temperatures.



[High-Reliability UHF Readers](#)

Siemens is launching a new generation of RFID readers for the ultra-high frequency (UHF) band. The three new devices in different functional and performance classes enable users to implement RFID projects more quickly and to reduce plant downtimes.

PI Australia's 2014 membership spike reflects its rising star in industry

Seeking to remain up-to-date in the industrial market, and improve their automation capabilities, nine companies joined the Profibus Association of Australia (PAA) as new members in 2014.

Over the last 18 months, the PAA has invested in programs and campaigns to raise awareness within the industry about the productivity and cost benefits that Profinet- and Profibus-driven Industrial Automation can offer.

The PAA has also organized and held trade events which acted as opportunities for its members and their customers to network and learn more about Profibus. These include Profibus Business Luncheons featuring guest speaker Karsten Schneider, the Profinet & Profibus EXPO and a PROFINET Technical Seminar with Siemens expert Bernd Lieberth.

The PAA, through its efforts, has increased overall industry awareness of the benefits of process and factory automation, attracting the attention of many end-users and vendors.

As a result, the PAA is enjoying one of its highest intakes of new members in a 12 month period.

The new PAA members of 2014 include:

- Newmont Mining
- SMC Pneumatics
- BESST
- Balluff
- Crisptech
- Hero Engineering
- Watersure
- Aucom
- Micromax

PAA's marketing manager Andrew Dummett talked to some of these new members regarding their operations and their expectations in regards to their membership.

SMC Pneumatics (Australia)

SMC Pneumatics (Australia) provides electric and pneumatic automation systems and components that are typically integrated into Profibus and Profinet networks, and used to control all aspects of automated systems including pressure, flow and actuation on site.

According to Darrell Adams, Business Development Manager at SMC Pneumatics, the company decided to join the PAA in order to stay up to date with the market.

“As Profibus and Profinet are market leaders in the area of standard communications protocols. By joining the PAA, SMC will be able to stay ahead of the curve when it comes to developing products that

meet the market need for integrated sites,” Adams explained.

BESST

BESST designs automated power and control systems for power generation systems, such as remote area power stations, grid connected power generation plants and micro-grids.

To enable modularization and scalability, and to speed up deployment and reduce the design, installation and commissioning costs, BESST designers develop these systems using Profibus and Profinet.

David Batterham, lead electrical engineer at BESST says membership in the PAA will allow the engineering firm to access a raft of Profibus specifications and documents so it can upskill its capabilities, allowing the company to provide better support for its project activities.

“Membership also provides BESST with the PROFINEWS newsletter and allows us to participate in seminars and exhibitions, so we can keep up to date with Profibus news, and network with other users,” Batterham said.

Balluff

Balluff is a global company which has been manufacturing sensor and transducer products and RFID systems with Profibus and Profinet interfaces for many years. It is a founding member of the IO-Link consortium and is already an active part of the Profibus International automation community.

The company’s range of IO-Link IP67 and IP20 distributed IO modules, sensors, transducers, RFID, inductive couplers and indicator lights are used to expand Profibus and Profinet networks.

Balluff recently created a wholly owned subsidiary in Australia, and is establishing a new office, warehouse and applications center in Bayswater Victoria, where it will host training courses on connectivity applications with Profibus and Profinet communications as a key feature.

Balluff’s Marketing Manager Jim Wallace says the company decided to join PAA to offer its experience and support to the local organization.

“In the past decade, Balluff has made a significant investment in distributed IO, especially in Profibus and Profinet. As a global company with local presence it is very important for us to promote the technology locally in Australia,” Wallace said.

Crisptech

Crisptech’s Ethernet Australia division was recently appointed the Australian distributor of Trebing + Himstedt network diagnostic tools. Ethernet Australia also provides fiber to Profinet converters from Ultra Electronics and Moxa -- tools that help clients identify and correct maintenance problems before they become major issues.

Crisptech Managing Director Nick Czeperko says the company is also considering offering Profinet technical training to engineers and instrumentation personnel.

“Ethernet Australia joined the PAA as we were seeing a strong trend towards Profinet in a lot of major

projects,” Czeperko said. “We want to learn, be a part of the technological change and participate with like-minded people.”

[PI Australia](#)

PI Japan Passes 100-member Threshold



Exceeding 100 members in the Japanese PROFIBUS Organization was cause for celebration. The achievement was celebrated on October 7 in Tokyo with a seminar and party. (Membership is currently 103.)



At the seminar, Mr. Karsten Schneider of PI chairman kindly came to Japan for the event and made the special presentation about "New PI technology," "PI organization," and "PROFINET in automobile industry."

Mr. Motoyoshi, JPO chairman, explained the technical advantages of PROFIBUS and PROFINET.

Over 120 visitors joined the seminar.

The second half of the event is the party, where the JPO members got together.

Mr. Motoyoshi provided some background about the organization:



JPO started in 1997 with 11 members. After 17 years we have more than 100 members and I thank for their support other RPAs (Regional PI Associations), PISC (PI Support Center), and our members, too. Especially I appreciate our vice-chairman Mr. Imoto, who has worked for 17 years since the foundation of JPO. Now we know some members are competitors in the market with their products, but they recognize that the promotion of PROFIBUS and PROFINET expands the market itself and brings the benefit to all of us. This is the advantage of our organization. We want to work together to achieve the next target, 150 members.

[PI Japan](#)

Gateway AGILiGATE PROFINET to serial

AGILiGATE PROFINET to serial is a gateway to exchange data between a PROFINET network and any equipment with a serial link. AGILiGATE PROFINET is an IO-Device. The serial link is fully configured via the IO-Controller. A wide range of PROFINET data modules allows the exchange of serial



data inputs and outputs. Relevant diagnostic straightforward indicators and an embedded web server, speed-up troubleshooting, in case of serial link failure for example. alarms, together with

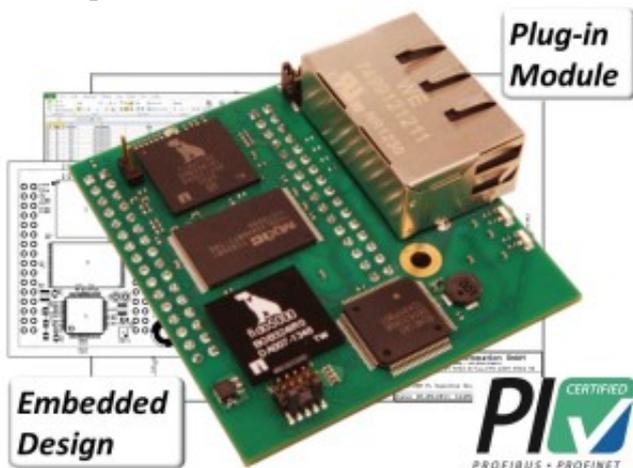
The embedded web server is also available for I&M information, user manual, download GSD file, manageable switch statistics. Customized web pages can also be downloaded in the AGILiGATE file system, and interact with I/O data. AGILiGATE runs at the same time as a MODBUS/TCP server or gateway.

[Agilicom](http://www.agilicom.com)

Innovasic's RapID Platform is the First Industrial Ethernet Solution Certified to PROFINET v2.31

Innovasic is pleased to announce the RapID Platform with the new fido5000 REM Switch chip has been certified to PROFINET v2.31 for Class B and Class C devices. The certification includes conformance to Net Load Class III, the highest level of network load testing, ensuring cycle times down to 250µs are immune to the effects of network traffic. Certifications for EtherCAT, SERCOS III, and POWERLINK will be announced over the next few months.

The RapID Platform – PROFINET IRT Network Interface is delivered as a module or



embedded design. Both legacy start-up and advanced start-up are supported when participating in an IRT network. The product includes standard alarms and diagnostics as well as DCP, LLDP, SNMP and VLAN Priority network management protocols. As such, Topology Recognition and Simple Device Replacement are supported. A web server is available and dynamic web pages can be customized by the user. Pre-planned product improvements include Fast Start-Up (FSU), ring support with MRPD/MRP, and cycle times down to 31.5µs.

According to Jordon Woods, Innovasic's CTO, "Innovasic is the first company to certify a multi-protocol device to PROFINET v2.31. And the flexibility of the fido5000 REM Switch allows customers to future-proof their designs to changes with the PROFINET specification or with any Industrial Ethernet protocol."

The RapID Platform – PROFINET IRT Network Interface module and embedded design are available now.

[Innovasic](#)

TE Connectivity Launches New Industrial Connectors that Combine Reliability and Cost Savings with Durability

New Range of Easy-To-Install Industry Standard Connectors Equipped with Robust Termination Technology Allows Timesaving and Flexible Field Installation

TE Connectivity, a world leader in connectivity, has launched a range of ruggedized Industrial RJ45 connectors for industrial use. The new products include an industrial



RJ45 Push-Pull Variant 14 connector with a plastic shell, and an industrial RJ45/Fiber Optic Push-Pull Variant 14 with a metal shell, which are specified for PROFINET.

Both connectors are designed for a high degree of reliability over a long lifetime, combining long-term cost savings with durability. They feature an IEC 61076-3-117 standardized interface for quick and easy connect and disconnect, and the robust termination technology used allows for timesaving and flexible field installation without any special tools. The comfortable push-pull mechanism ensures a secure, sealed interconnection in which all common cable diameters can be terminated. Both offer high grade IP (International Protection) shielding and temperature resistance, making them suitable for harsh and



outdoor environments.

In addition to supporting RJ45, the metal shell version also supports fiber optics. With its metal shell, this RJ45/fiber optic connector is able to withstand the harshest environments, such as shock, vibration or temperature, and offers good chemical, oil and spark resistance. Due to its high-grade IP rating and

durability, the metal shell version provides a reliable and safe connection and reduces maintenance cost.

Key applications for the plastic shell version include factory automation, sealed automation units, decentralized applications, cabinet-outlets, manufacturing cells and lines for the automotive industry, solar and wind parks, train communication, and data networks. The metal shell version is highly suited for automotive production, welding machines, machinery, motors/motor controls and robotics. Both versions are able to operate in a wide temperature range: minus 40 degrees Celsius up to 70 degrees



Celsius.

Introducing the range, Ruud van den Brink, product manager, TE Connectivity said: “This new range of connectors is able to meet the specific needs of customers.

While offering a significant number of key benefits such as reliability and cost savings, the connectors also provide sufficient flexibility to provide for all types of industrial applications – enabling customers to obtain a full range of fitting solutions from a single source.”

[TE Connectivity](#)

Belden Connectors Enable Fast, On-Site PROFINET Connections

Field Attachable Connectors from Lumberg Automation Makes PROFINET Set-Up Easy with Insulation-Displacement Technology

Belden Inc., a global leader in signal transmission solutions for mission-critical applications, has launched two connectors from Lumberg Automation – designed specifically for establishing industrial Ethernet connections in applications with challenging conditions, such as railway and on machine. The RSCIS 4D/9 and BRSCIS 4D/9 connectors feature insulation-displacement connector (IDC) technology for a highly reliable and efficient data connection in unforgiving environments.

“Our customers not only want connectors that can withstand the harshest conditions, but



also need a product that’s easy to install, saves time, is flexible, and improves their network’s efficiency and reliability,” said Fabian Seymer, product manager at Belden. “We’ve designed these new connectors with those needs in mind – resulting in a small size with fool-proof mounting characteristics – to make them easier to handle and install while out in the field.”

Two versions of the Lumberg Automation connectors are available, each with specific features for certain applications:

- The RSCIS 4D/9 connectors are designed specifically to meet the safety and quality needs of automotive, machine building, and material handling applications, and will also carry UL’s seal of quality in the near future.
- The BRSCIS 4D/9 connectors are proven for use in railway applications – according to Europe’s stringent DIN EN requirements – where vibration and inflammability are major concerns when it comes to transportation system reliability and the safety of the people traveling.

To offer network engineers, system integrators and machine builders the most efficient solution for establishing PROFINET connections in the field, the new connectors feature an innovative, patented IDC technology – which no longer requires installers to strip the wire of insulation before connecting. Through this concept, the connectors also require minimum force, saving both time and effort during assembly and mounting.

Additional benefits of the connectors include a new left-hand thread between the connector and IDC body, which allows for fool-proof attachment to other interfaces. “We also know many applications face space constraints,” adds Seymer. “Our new connectors are approximately 10 percent smaller in diameter than the market standard for IDC connectors, which will make them easier to handle and install in tight spaces.”

[Lumberg Automation](#)

PI Certifies Communication Module for PROFINET IO Version 2.31

Device Passes Most Stringent Levels of Testing for Conformance Class C and Netload III

Hilscher Gesellschaft für Systemautomation mbH and Hilscher North America, Inc. are pleased to announce that the comX 51CA-RE communication module has successfully been tested against PROFINET IO Version 2.31 and certified for conformance by PI (PROFIBUS and PROFINET International).

In addition to passing the typical test functions of Fast Start Up (FSU), Media Redundancy



Protocol (MRP) and Isochronous Real-Time protocol (IRT), the comX 51 CA-RE passed PI's tests for the highest Conformance Class C as well as the highest Netload Class III. Typical applications for Class C PROFINET IO include high-speed, synchronized systems such as motion control. Netload Class III requires the device to exhibit advanced robustness even under the highest traffic densities as defined by the PI Specifications.

Hilscher's comX communication module is designed for integration in automation devices, such as robot controllers, PLCs, or drives, in order to add a network interface. All communication tasks are executed autonomously in the comX module, independent of the processor of the target device. The comX 51 offers the security of a pre-certified PROFINET IO device interface and reduces the network integration effort for the device manufacturer. IO data will be transferred via a 50MHz SPI interface to the host processor or alternatively via an 8/16-bit parallel bus.

Due to compatible mechanics, consistent interfaces, and the use of the same software tools, comX supports a variety of network systems and topologies. And, since the communication module is based on Hilscher's own netX network controller chip, Hilscher can guarantee a minimum 10 years of delivery.

[Hilscher North America](#)

[Hilscher Gesellschaft für Systemautomation mbH](#)

Advantech Launches New Upgraded Low Power Consuming True Flat Touch Panel Computer

Advantech's new 12.1" and 15" TPC-1251T/1551T touch panel computers are the latest of their type to use the Intel® Atom™ E3827 1.75 GHz Processor, and to feature the much heralded iDoor Technology, a truly flat screen and a multitude of I/O ports while being able to operate in a wide range of temperatures.

The Intel® Atom™ E3827 1.75 GHz Processor is the latest CPU from the internationally renowned processor manufacturer and features enhanced performance and provides a smooth operating experience in a wide array of industries.

The truly flat and seamless design of the TPC-1251T/1551T provides easier maintenance and avoids mis-touches by providing IP66 protection against dust and water which can affect the use of the touch panel. This feature expands the environments which the TPC-51T series can now work in.

Advantech's iDoor technology is a new modular way of adding versatile functionality to give system integrators the flexibility to choose the functions that they need without purchasing devices that have excess costs and functions that they'll never use. With Isolated DI/O ports, Power over Ethernet, Profibus and CANOpen modules iDoor Technology gives a cost efficient solution to increase the functionality of the TPC-51T series.

Advantech's TPC range is renowned for its multitude of I/O ports and expandability and the TPC-51T series is no exception since it has: two USB 3.0 ports, Power over Ethernet; a PCI slot for adding functions; an HDMI port for an additional display; the iDoor Technology slot uses a mini PCIe connector and if not being used for iDoor modules it can be used for adding additional cards such as Wi-Fi, 3G and GPS. If further I/O ports and storage are required the TPC-1251T-EHKE expansion kit provides additional storage for hard disks/solid state disk and iDoor modules.

In addition to the Intel Atom processor, the TPC-51T includes 4GB DDR3L SDRAM and can be used with a variety of Microsoft Windows operating systems, Linux, and Advantech software applications such as WebAccess, Panel Express and SUSIAccess. So it can be kept clean, the front panel is IP65 certified front panel to allow it to be washed with water.

Furthermore, the TPC-51T offers not only a better performance and lower price, but it also offers the advantage of continuing to use the same cut-out dimensions for the last 10 years allowing the technology to be upgraded without changing the mounting environment.

[Advantech](#)

New generation of high-reliability UHF readers for production and logistics

- *Simatic RF650R for logistics applications*
- *Simatic RF685R and RF680R for production environments*
- *Simatic RF685R with integrated adaptive antenna*
- *Extensive diagnostic functions for high plant availability*
- *Reduced expenditure during commissioning, integration and maintenance*

Siemens is launching a new generation of RFID readers for the ultra-high frequency (UHF) band. The three new devices in different functional and performance classes enable users to implement RFID projects more quickly and to reduce plant downtimes. Thanks to their high IP65 degree of protection and integrated Profinet connection, the Simatic RF680R and RF685R devices are designed for use in the production environment, e.g. for the manufacture of multi-variant products. Users in the logistics sector can implement cost-efficient UHF projects using the Simatic RF650R.



Siemens is launching the Simatic RF685R, RF680R and RF650R devices on the market – a new generation of RFID readers for the ultra-high frequency (UHF) band.

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Thanks to four interfaces for external antennas, the Simatic RF650R and RF680R can be used for applications such as RFID gates or multiple individual reading stations. For the first time, the RF685R reader has an adaptive antenna. This integrated, polarization variable antenna simplifies commissioning and engineering of RFID applications in the production environment. What is more, the automatic antenna adaptation improves reading and writing reliability. In addition, the RF685R also performs difficult identification tasks in highly reflective surroundings.

The high-quality wireless module and extensive evaluation algorithms boost the reliability of all new readers in the read and write processes. Functions such as the modification of performance or the dynamic "RSSI limit" adapt automatically to changing environmental conditions. This enables the readers to deliver precise results even when reading moving objects or when the transponders are subject to sensitivity tolerances. All devices in the new generation of readers can be integrated into IT networks by means of Ethernet, TCP/IP, and the XML protocol.

For integration in automation systems, the RF680R and RF685R devices can be connected via the Profinet port to a controller, such as the Simatic S7. In this case the configuration and programming is carried out in the TIA Portal. Standard function blocks with a simple programming interface make integration into the user program easier, thereby reducing costs and potential sources of errors. This means the reader can be configured by means of Web-based Management which can be called, for example, directly from the TIA Portal. In addition to configuration and commissioning, users can also access extensive diagnostics options (for example: signal strength, recording frequency and transmit power) using an Internet browser.

Whether by remote connection or locally via the second RF680R/RF685R Ethernet port, diagnosis can take place during system operation without having to interrupt the higher-level system. This reduces not only the necessary effort and expense, but also the risk of incorrect readings and failures.

[Siemens RFID](#)
