



The advanced Industrial Ethernet solution for automation, motion control and IT integration



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The official email newsletter of the PROFIBUS Trade Organization

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**DID YOU KNOW?**

... MAN Roland implemented the first PROFINET IRT Motion control system in a printing press delivered in June?

...recent PROFIBUS Road Shows and Press Conferences in China and South East Asia attracted more than 600 attendees, including TV reporters?

... [www.profibus.com](http://www.profibus.com) contains more than 10,000 pages, all packed with PROFIBUS and PROFINET information to help you understand, design with, implement and use both technologies

... PTO plans to meet 2000 people in North America during its 2005 seminar series. Are you among them?



**GENERAL ASSEMBLY IN AUGUST:** 60 North American PROFIBUS companies converged on Scottsdale the first week in August for the annual General Assembly of the PROFIBUS Trade Organization. Technical Seminars and Developers' Classes accompanied the main agenda. End users presented their PROFIBUS and PROFINET experiences. [Become a member.](#)



**AUTOMOTIVE AD IN CONTROL ENGINEERING:** To highlight the standardization on PROFINET by leading German automakers, the PTO has begun running an ad in Control Engineering magazine. The ad will appear throughout the year. Mike Bryant, PI Deputy Chairman and Executive Director of the PROFIBUS Trade Organization in North America said: "This decision by key players in the European automotive market sends out a powerful signal. My assessment, based on our experience of the PROFIBUS market 10 years ago is that AIDA's lead will be followed by automotive manufacturers worldwide including, I believe, in North America."

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**FREE SEMINARS:** Our free seminar series is helping users across North America gain a deeper understanding of not only PROFIBUS but also PROFIBUS in the Process Industry, and PROFINET too. ARC Advisory Group Senior Analyst Harry Forbes is providing an objective overview of the Industrial Ethernet market. His insight into the market and the various competing technologies has been much appreciated. Coupled with the Basic Ethernet section, the PROFINET seminars have scored high on attendees' seminar evaluation forms. Almost everyone ranked the length as "Perfect." and one participant noted: "Basic Ethernet was the best review I ever experienced." Another said, "The seminar staff was very knowledgeable and approachable. Great job!" The most requested additions are for **more live demos** and to show **integration** with non-PROFINET networks. DeviceNet integration is already being demonstrated and others will be added. We are continuing to **add a few cities** for PROFINET seminars too, so [watch the website](#). Register early to ensure a seat! For developers ready to build products incorporating PROFINET IO, an intensive two day PROFINET IO **Developers' Class** is being offered in Johnson City, Tennessee (includes an OPC Server demonstration). **New classes** are being added - [watch the website](#) for updates. The **ISA EXPO show** is scheduled for October 25-27 in Chicago. Plan to stop by for the latest insight on PROFIBUS and PROFINET - we are right by the main entrance. [PTO members: apply for space in the booth here](#).

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#### More information:

- [PROFIBUS DP Seminars](#)
- [PROFIBUS Process Seminars](#)
- [PROFINET](#)
- [PROFINET IO Developers Course](#)
- [ISA EXPO 2005](#)

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### NEW DIAGNOSTICS ENHANCE PROCESS MANAGEMENT:

PROFIBUS International (PI) has adopted an amendment to the PROFIBUS 'PA Devices' profile, defining an important diagnostics concept developed in cooperation with NAMUR. The NAMUR recommendation 107 (VDI guideline 2650) calls for a classification of diagnostic events into their status signals.

PROFIBUS PA devices have the following status signals: *Function Check* (invalid output signal through malfunction in the field device or its periphery), *Maintenance Required* (valid output signal, but exhausted wear reserves), *Outside of Specification* (operation outside of specified operating conditions), and *Failure* (invalid output signal due to a malfunction in the field device or its periphery). In addition to the listed classification, detailed diagnostic information can be made available. By using functions in the control system or Plant Asset Management system, individual addressees (such as operator and maintenance personnel) can be notified. PROFIBUS PA uses the measured value together with its status - which was redefined as part of the specification work - for the transmission of the current status signal. A novel concept is that the effect of a certain diagnostics event can be set according to the status signal in the device. This is because diagnostic events are often subjective and may be evaluated differently in various applications and so should lead to different status signals. Detailed information about diagnostics are transferred via the PROFIBUS diagnostics or via readable diagnostics parameters. The diagnostics concept contributes to more powerful asset management.

>>> **MORE INFO**

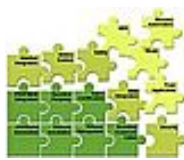
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**WHY YOU SHOULD USE PROFIBUS FOR PROCESS AUTOMATION:** A new 4 page article has been published by Siemens Miltronics Process Instruments explaining how PROFIBUS PA seamlessly integrates with PROFIBUS DP and PROFINET to provide the most elegant automation solution available for process plants. The text includes a comparison with FOUNDATION Fieldbus and is worth reading because it explains the differences and highlights how PROFIBUS offers key advantages in process applications.

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**PROFIsafe EXTENDED:** Another piece of the PROFINET jigsaw has dropped into place with the news that the PROFIsafe profile has been extended to cover PROFINET as well. The PROFIsafe profile has been available for PROFIBUS for some time as Version 1.3 and is already widely used. The new Version 2 has

been developed to bring similar functionality to PROFINET and take advantage of the capabilities of Ethernet. Version 2, which is also applicable to PROFIBUS, enables a wider spectrum of devices to be accommodated. These range from secure input and output modules of remote I/O via light curtains, laser scanners and transmitters up to drives with integrated safety functions, and robots. Ethernet-based communication not only provides greater address space and more user data but the use of active network components (switches, etc.) can be effectively employed in safety functionality. Harmonization of the new profile with the approval offices of TÜV and BGIA is currently taking place. First products can be expected in the fall of 2005 and pilot applications are expected by the end of this year. More than 80,000 PROFIsafe enabled devices are installed in over 8,000 safety systems.

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**PROFINET CONNECTS TO AS-INTERFACE AND PROFIBUS PA:** IEC 61158-2 and AS-Interface are coming soon for PROFINET. With the project to integrate Interbus into PROFINET completed, PROFIBUS International has turned its attention to the integration of AS-Interface and the IEC 61158-2 based PROFIBUS PA solution for process automation. The IEC 61158-2 project will offer process automation plants an easy way to connect PROFIBUS PA process devices into a PROFINET environment. It will mean that PROFIBUS PA process instruments can be connected directly to PROFINET without need for an intermediate network. Proxy technology will be used to create transparent connectivity from field instrumentation right up to enterprise level IT systems. The IEC 61158-2 proxy will incorporate the link device needed to power the bus and support IS operations. PROFIBUS International Chairman Edgar Kuester said: "Currently, PROFIBUS leads in process automation with well over 2.1 million installed devices, because we made our PROFIBUS DP solution fully transparent with PROFIBUS PA, enabling process instruments to co-exist with discrete devices. That is what most process plants need. Shortly, we will offer the same kind of connectivity for PROFINET. No changes to existing PROFIBUS PA slave devices will be necessary." PROFIBUS International also plans to integrate AS-Interface, the actuator/sensor protocol optimized for low-level devices such as pneumatics and ON/OFF devices. By integrating AS-Interface PROFIBUS International will open up the possibility of direct connection of low level field device networks to PROFINET. The proxy will act as an AS-Interface master, enabling field devices to appear as remote I/O.

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**SECURITY INITIATIVE FOR ETHERNET:** PROFIBUS International, in conjunction with the European organizations GMA, NAMUR, VDMA and ZVEI, has set up a new security initiative for Ethernet-based automation systems. Called 'Security in Automation', its objective is to establish a practical and cost-effective data security concept for new and existing systems and devices. PI has been working on IT Security for some time and published the 'PROFINET Security Guideline' document in November 2004. During a 2 day workshop in May 2005, over 50 experts worked in 4 Working Groups on various Security topics and compared the Guideline against latest goals. The directions in which the PROFINET guidelines should be developed and expanded were identified. Now the results of the working groups are being introduced to relevant standardization groups, including IEC and DKE. Results will also be presented to ISA for possible inclusion in their work on Ethernet-based security in the automation environment.

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**BECOME A MEMBER:** Why not join the world's largest fieldbus community? There's a wealth of benefits, ranging from being featured in these pages to gaining marketing advantages such as participating in major automation shows in the PTO booth. Whether you are an end user, developer, integrator or maintainer, there's something for you at the PTO.

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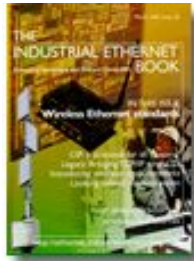
**AIR PRODUCTS USES PROFIBUS:** The Air Products plant in Wichita, Kansas, has reduced material, labor and field installation costs by installing a SIMATIC PCS 7 control system from Siemens using PROFIBUS for field device integration. Installed at the site's North Plant in early 2004, this is Air Products' largest implementation of fieldbus technology in the United States. "We are pleased with the improvements and cost reductions," said Dean Kerr, senior engineer at the Wichita Air Products plant. "The project was completed on schedule and below budget. PROFIBUS gives us the broadest choice of field devices from a large pool of name-brand suppliers and we can seamlessly integrate all of them on our network." The PROFIBUS devices continually monitor their own health, notifying operators when they sense degradation and enabling improved asset management and proactive maintenance. PROFIBUS devices from various suppliers are used, including Endress+Hauser, Micro Motion, Emerson, Mettler-Toledo and Siemens.

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**NEW PRODUCTS:** The RIF 1769-DPM PROFIBUS Master and RIF 1769-DPS PROFIBUS Slave expand the functionality of a CompactLogix platform to include PROFIBUS DP. They appear to the CompactLogix Controller as standard I/O and can be mapped with RSLogix5000. The Master will support up to 125 slaves or 408 Input Bytes and 496 Output Bytes with diagnostics. The slave provides 244 Input and Output Bytes. Both support PROFIBUS DP-V1. Program examples are provided.

>>> [MORE INFO](#)[Hilscher](#)[pmarshall@hilscher.com](mailto:pmarshall@hilscher.com)

630-505-5301

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**FREE PRODUCT PROMOTION:** Promotion of your PROFINET products in the magazine 'The Industrial Ethernet Book' is free to members, who are invited to add their own products online. The IEB product and supplier directory, appears in every edition of this unique bi-monthly internationally distributed publication, as well as being permanently online. Simply register to add your details.

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