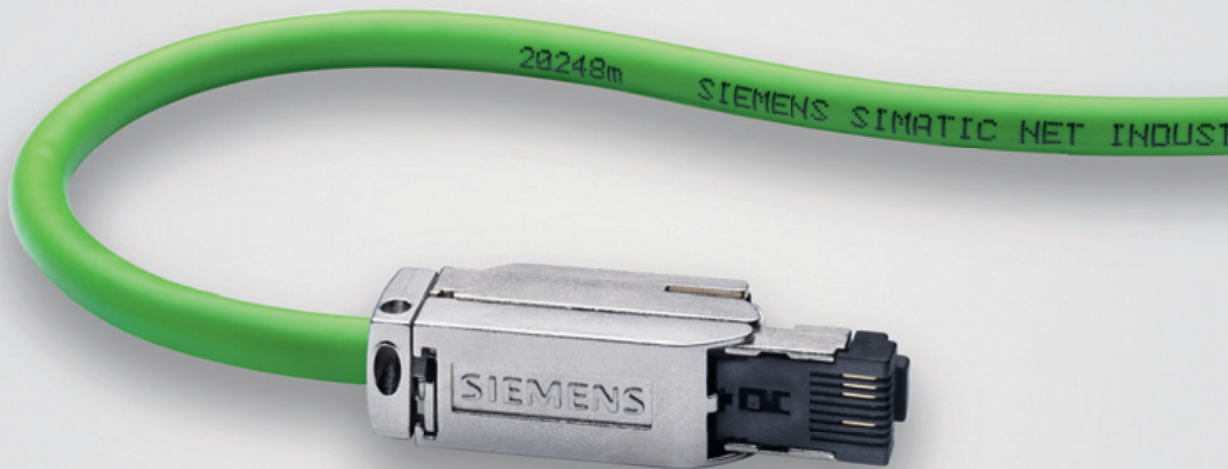


# Industrial Communication

Catalog News IK PI N • January 2010



## SIMATIC NET

Answers for industry.

**SIEMENS**

## Related catalogs

### SIMATIC NET

Industrial Communication

IK PI

E86060-K6710-A101-B6-7600



### SINUMERIK & SINAMICS

Equipment for  
Machine Tools

NC 61

E86060-K4461-A101-A3-7600



### SIMATIC

Products for  
Totally Integrated Automation  
and Micro Automation

ST 70

E86060-K4670-A101-B2-7600



### SIMATIC Sensors

Industrial  
Identification Systems

ID 10

E86060-K8310-A101-A6-7600



### SIMATIC S7-1200

Micro Controller for  
Totally Integrated Automation

ST 70 N

E86060-K4670-A151-A4-7600



### Low-Voltage Motors

IEC Squirrel-Cage Motors  
Frame sizes 56 to 450

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D 81.1

D 81.1 N



### SIMATIC HMI

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Interface Systems

ST 80

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### SINAMICS G110, SINAMICS G120

Standard Inverters  
**SINAMICS G110D, SINAMICS G120D**  
Distributed Inverters

D 11.1

E86060-K5511-A111-A6-7600



### SIMATIC PCS 7

SIMATIC PCS 7  
Process Control System

ST PCS 7

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### SITOP

Power Supply SITOP

KT 10.1

E86060-K2410-A111-A7-7600



### Low-Voltage Controls and Distribution

SIRIUS • SENTRON • SIVACON

LV 1

E86060-K1002-A101-A9-7600



### SITRAIN

Training for Automation and  
Industrial Solutions

ITC

E86060-K6850-A101-C1 (in German)



### Industrial Controls

SIRIUS Innovations

LV 1 N

E86060-K1002-A361-A2-7600



### Interactive Catalog

Products for  
Automation and Drives

CA 01

E86060-D4001-A510-C8-7600



### Motion Control

SIMOTION, SINAMICS S120 and  
Motors for Production Machines

E86060-K4921-A101-A1-7600

E86060-K4291-E101-A1-7600

PM 21

PM 21 N



### Industry Mall

Information and Ordering Platform  
in the Internet:

[www.siemens.com/industrymall](http://www.siemens.com/industrymall)



# SIMATIC NET

## Industrial Communication

Catalog News IK PI N · January 2010



The products and systems described in this catalog are manufactured/distributed under application of a certified quality management system in accordance with DIN EN ISO 9001 (Certified Registration No. can be found in the Appendix). The certificate is recognized by all IQNet countries.

Refer to the Industry Mall for current updates of this catalog:

[www.siemens.com/industrymall](http://www.siemens.com/industrymall)

The products contained in this catalog are also contained in the e-Catalog CA 01.

Order No.:

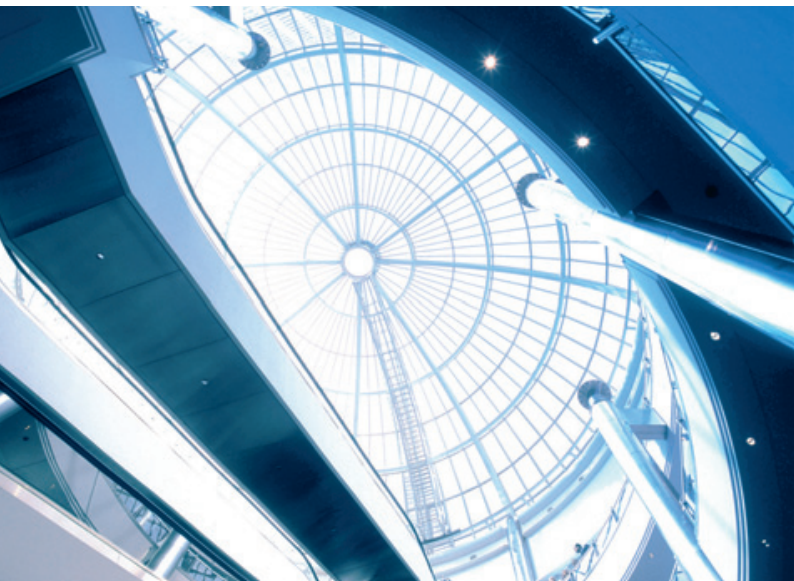
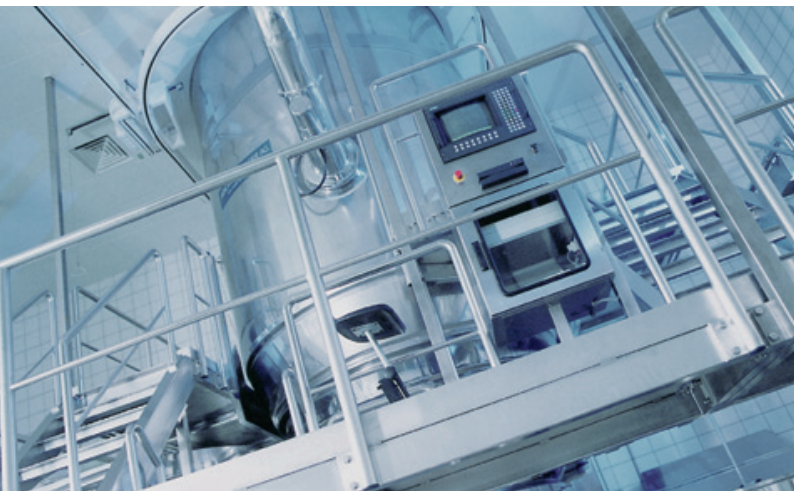
E86060-D4001-A510-C8-7600

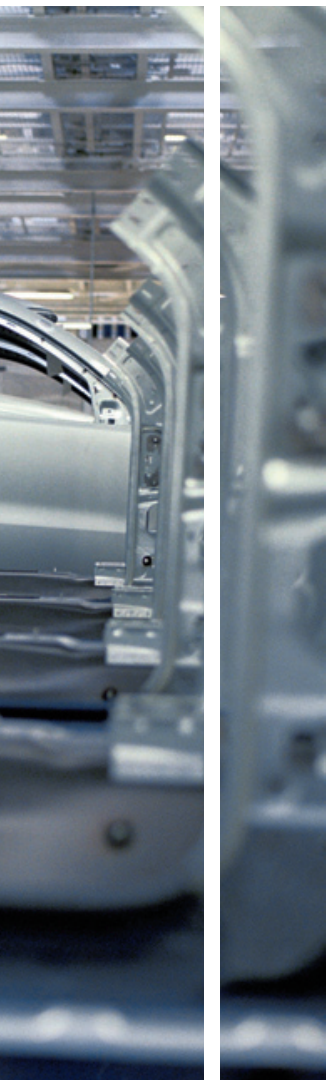
Please contact your local Siemens branch office.

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## Answers for industry.

Siemens Industry answers the challenges in the manufacturing and the process industry as well as in the building automation business. Our drive and automation solutions based on Totally Integrated Automation (TIA) and Totally Integrated Power (TIP) are employed in all kinds of industry. In the manufacturing and the process industry. In industrial as well as in functional buildings.

Siemens offers automation, drive, and low-voltage switching technology as well as industrial software from standard products up to entire industry solutions. The industry software enables our industry customers to optimize the entire value chain – from product design and development through manufacture and sales up to after-sales service. Our electrical and mechanical components offer integrated technologies for the entire drive train – from couplings to gear units, from motors to control and drive solutions for all engineering industries. Our technology platform TIP offers robust solutions for power distribution.

The high quality of our products sets industry-wide benchmarks. High environmental aims are part of our eco-management, and we implement these aims consistently. Right from product design, possible effects on the environment are examined. Hence many of our products and systems are RoHS compliant (Restriction of Hazardous Substances). As a matter of course, our production sites are certified according to DIN EN ISO 14001, but to us, environmental protection also means most efficient utilization of valuable resources. The best example are our energy-efficient drives with energy savings up to 60 %.

Check out the opportunities our automation and drive solutions provide. And discover how you can sustainably enhance your competitive edge with us.

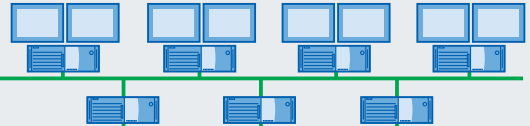
## ERP – Enterprise Resource Planning

## Management Level

## MES – Manufacturing Execution Systems



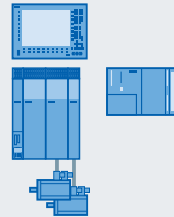
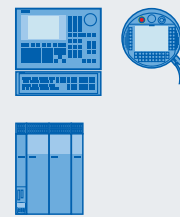
## Operations Level

SIMATIC PCS 7  
Process Control (DCS)

## Control Level

## Industrial Software for

- Design and Engineering
- Installation and Commissioning
- Operation
- Maintenance
- Modernization and Upgrade
- Energy Management

SIMOTION  
Motion Control SystemSINUMERIK  
Computer Numeric Control

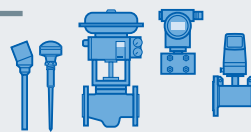
## Field Level

■ PROFIBUS PA

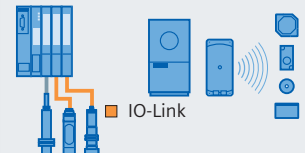


■ HART

## Process Instrumentation



## SIMATIC Sensors

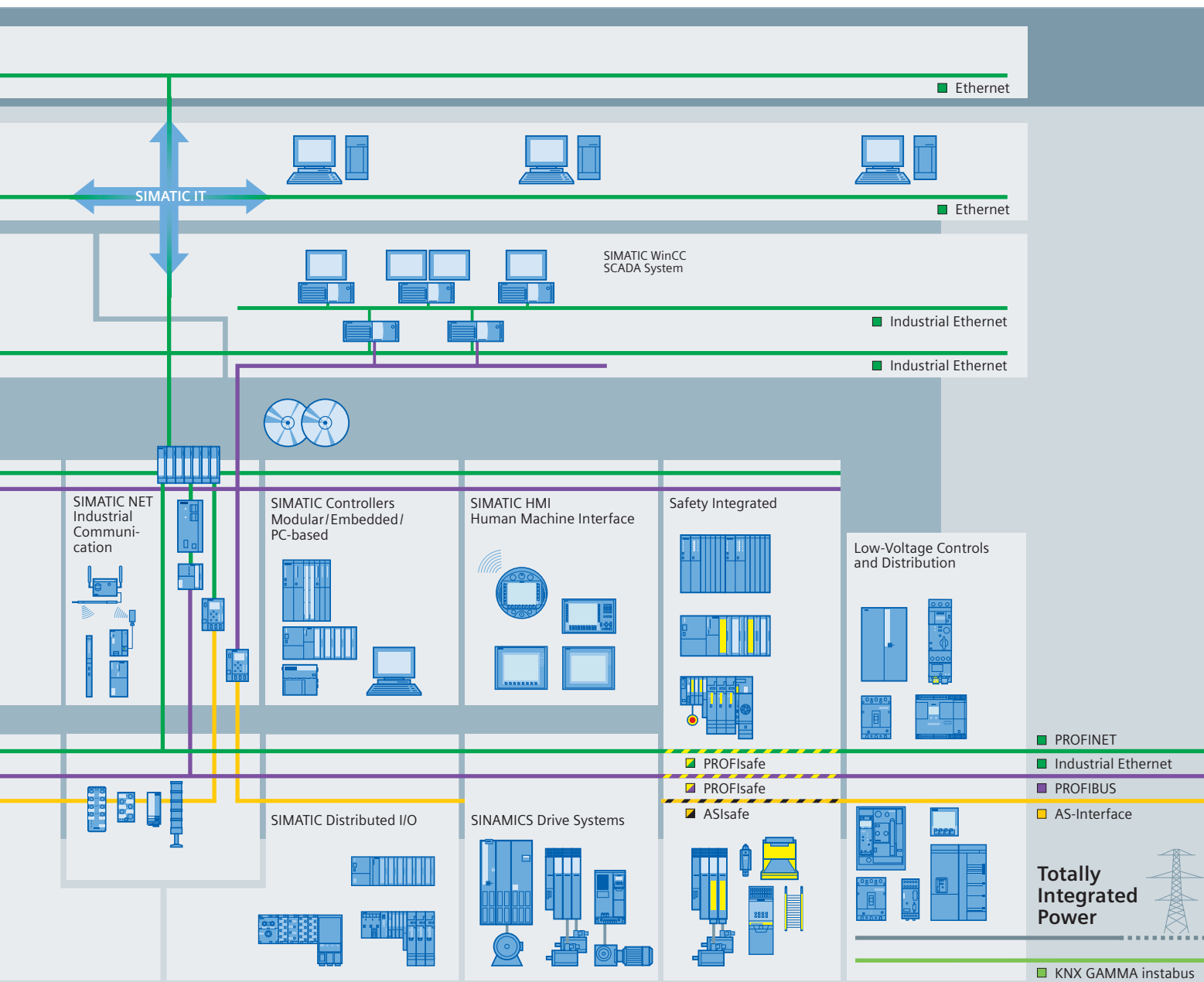
Totally  
Integrated  
Automation

02.03.2009

# Setting standards in productivity and competitiveness.

Totally Integrated Automation.

Thanks to Totally Integrated Automation, Siemens is the only provider of an integrated basis for implementation of customized automation solutions – in all industries from inbound to outbound.



### TIA is characterized by its unique continuity.

It provides maximum transparency at all levels with reduced interfacing requirements – covering the field level, production control level, up to the corporate management level. With TIA you also profit throughout the complete life cycle of your plant – starting with the initial planning steps through operation up to modernization, where we offer a high measure of investment security resulting from continuity in the further development of our products and from reducing the number of interfaces to a minimum.

### The unique continuity is already a defined characteristic at the development stage of our products and systems.

The result: maximum interoperability – covering the controller, HMI, drives, up to the process control system. This reduces the complexity of the automation solution in your plant. You will experience this, for example, in the engineering phase of the automation solution in the form of reduced time requirements and cost, or during operation using the continuous diagnostics facilities of Totally Integrated Automation for increasing the availability of your plant.

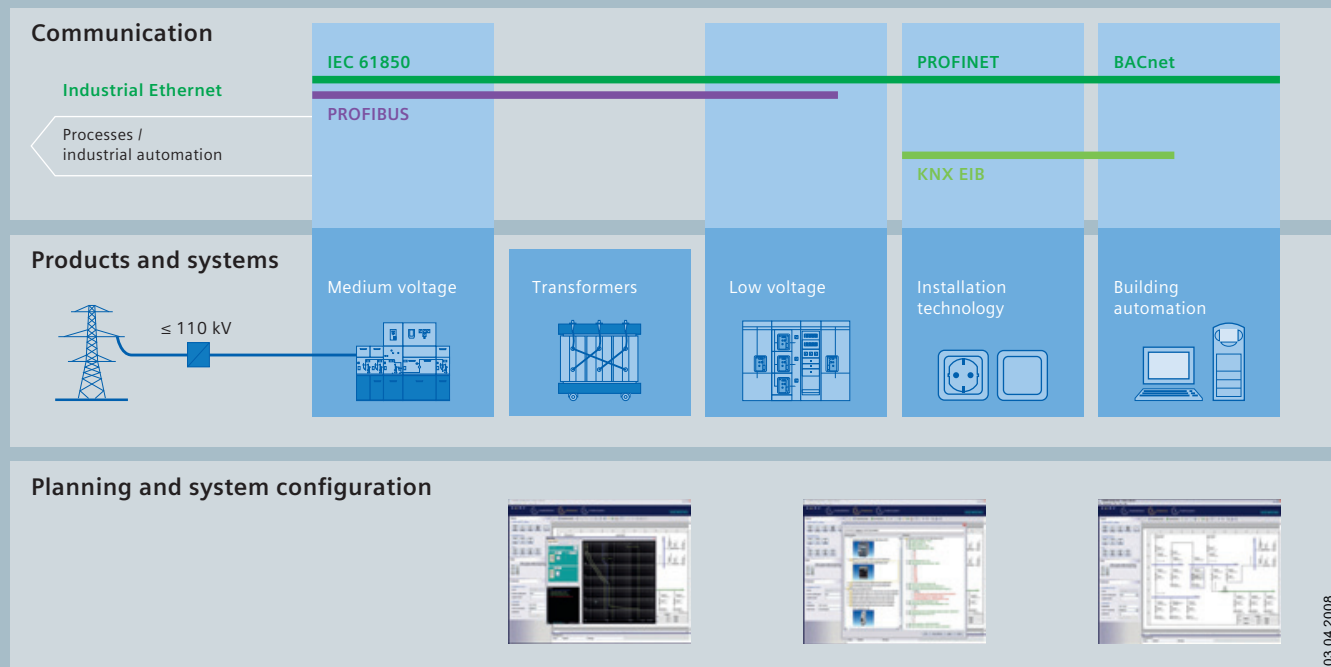




## Integrated power distribution from one source.

**Totally Integrated Power.**





Electrical power distribution in buildings requires integrated solutions. Our response: Totally Integrated Power. This means innovative and integrated, interface-optimized products and systems which have been optimally coordinated and complemented with communication and software modules that link power distribution to building automation or industrial automation. Totally Integrated Power accompanies power distribution projects from one end to the other. From A to Z. From the planning to the building's use: Totally Integrated Power offers significant advantages in every project stage and to everyone involved in the project – the investors, electrical planning engineers, electricians, users and building facility managers.

Our portfolio comprises everything from engineering tools to the matching hardware: from switchgear and distribution systems for medium voltage to transformers, from switching and circuit-protection devices to low-voltage switchgear and busbar trunking systems, as far as to the small distribution board and the wall outlet. It goes without saying that both the medium-voltage switchgear, which requires no maintenance, and the low-voltage switchgear are type-tested, and their busbar connections, too. Comprehensive protection systems ensure the safety of man and machine at any time.



## Much more than a catalog. The Industry Mall.

You have a catalog in your hands that will serve you well for selecting and ordering your products. But have you heard of the electronic online catalog (the Industry Mall) and all its benefits? Take a look around it sometime:

[www.siemens.com/industrymall](http://www.siemens.com/industrymall)



### Selecting

Find your products in the structure tree, in the new "Bread-crumb" navigation or with the integral search machine with expert functions. Electronic configurators are also integrated into the Mall. Enter the various characteristic values and the appropriate product will be displayed with the relevant order numbers. You can save configurations, load them and reset them to their initial status.

### Ordering

You can load the products that you have selected in this way into the shopping basket at a click of the mouse. You can create your own templates and you will be informed about the availability of the products in your shopping cart. You can load the completed parts lists directly into Excel or Word.

### Delivery status

When you have sent the order, you will receive a short e-mail confirmation which you can print out or save. With a click on "Carrier", you will be directly connected to the website of the carrier where you can easily track the delivery status.

### Added value due to additional information

So you have found your product and want more information about it? In just a few clicks of the mouse, you will arrive at the image data base, manuals and operating instructions. Create your own user documentation with My Documentation Manager. Also available are FAQs, software downloads, certificates and technical data sheets as well as our training programs. In the image database you will find, depending on the product, 2D/3Dgraphics, dimension drawings and exploded drawings, characteristic curves or circuit diagrams which you can download.

Convinced? We look forward to your visit!

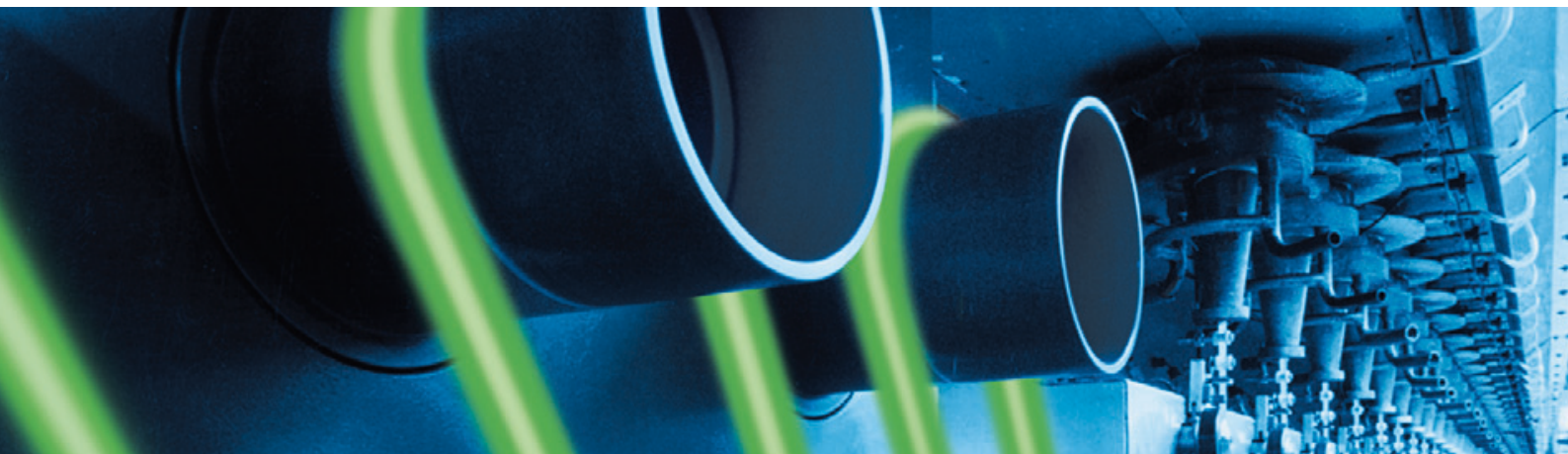


## New Since Publication of IK PI • 2009

The Catalog IK PI News • January 2010 supplements Catalog IK PI • 2009. It contains products which have been newly introduced or changed in their functionality since the main catalog was released.

The Catalog IK PI • 2009 is still valid.





## Section 2: PROFINET/Industrial Ethernet

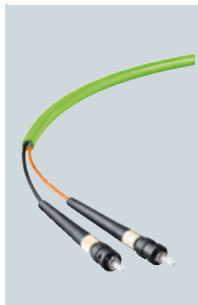
### Cabling Technology

The service-proven advantages of FastConnect technology such as easy plug mounting on site and the prevention of errors when assembling cables are now also available for fiber-optic cables – namely for PROFIBUS and PROFINET/Industrial Ethernet. This is made possible by the new FastConnect FO system.

### Industrial Ethernet Switches/ Media Converters

The new **SIMATIC S7-1200** generation of controllers is centered on PROFINET/Industrial Ethernet. For small, cost-effective automation solutions there is the new **CSM 1277** compact switch module which can be optimally integrated in an S7-1200 system.

To meet the steadily growing demands, the family of SCALANCE X industrial Ethernet switches has been expanded to include the **SCALANCE XB-000**, **XF-200**, **XR-300** and **X-300EEC** and **XR-300EEC** product lines.



The portfolio of existing product lines has been extended and rounded off. A new addition to the family of SCALANCE X-100 switches is the **SCALANCE X108PoE**. The spectrum of SCALANCE X-300 switches has been supplemented with SCALANCE **X308-2M**.

Assistance with the selection of Industrial Ethernet switches and configuration of the modular versions is available in the form of a Switch Selection Tool which can be downloaded free of charge from: <http://support.automation.siemens.com/WW/view/en/39134641>



### System Interfaces

Special communications processors with additional functionalities are available to reduce the load on the SIMATIC CPU. The product spectrum for the S7-300 system has been extended by two new CP versions:

- The **CP 343-1 ERPC** (Enterprise Connect) has been optimized with additional partner software for connection to MES or ERP systems.
- The **CP 343-1 BACnet** (Building Automation and Control Networks) has been specially designed for use in automation systems for buildings.

### SIMATIC S7-1200 Modular Controllers

The SIMATIC S7-1200 controller is modular, compact, versatile, a sound investment and perfectly suited for a whole range of applications. Scalable and flexible design, an integrated PROFINET communication interface to meet the most exacting industrial requirements, and a complete offering of powerful and integrated technology make this controller an integral component of a comprehensive automation solution.



### Embedded Automation

SIMATIC Embedded Automation unites the openness and flexibility of PC-based systems with the robustness of modular controllers. Control and PC applications run on one and the same hardware, which by doing without rotating parts such as hard disks and fans is highly robust.

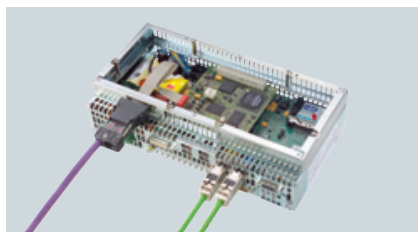


## Section 4: PROFIBUS

### System Interfaces for PG/PC

The number of installed PROFIBUS networks continues to increase, with new and updated communications processors promoting the trend. For example, the new **CP 5711** enables fast access to PROFIBUS or MPI through USB even without an integrated interface on the PC.

Other CPs reflect the ongoing further development of the PC and now also enable the connection of PCI Express systems to PROFIBUS.



### SIRIUS 3RK3 Modular Safety System

Thanks to the modular multifunctional SIRIUS MSS system, the large volumes of data in the safety system can be flexibly adapted to the particular applications: Safety functions are quickly and easily parameterized using the **Modular Safety System ES**.

### Power Management System

The Power Management System from Siemens is an innovative and future-proof solution for optimized energy consumption and appreciably lower energy costs. The **SENTRON PAC multifunction measuring instruments** record consumption data reliably and precisely, thus creating the ideal basis for optimization measures.

Using the **SIMATIC PCS 7 powerrate** and **SIMATIC WinCC powerrate** power management add-ons, it is an easy matter to present and evaluate energy values.

## Section 6: AS-Interface

Be it for operation in the control cabinet or for distributed configuration in the field: The comprehensive portfolio of powerful, communication-capable **motor starters** and **load feeders** stands for maximum reliability and cost efficiency in applications with AS-Interface.

## Section 5: SIMATIC ET 200 Distributed I/O

With the new **IM 154-6 PN IWLAN** interface module, the ET 200pro distributed I/O system can be connected to a higher-level PROFINET IO controller without the use of a cable.

SIMATIC **ET 200eco PN** is the new, robust and space-saving block I/O in degree of protection IP67 for PROFINET connection





## Section 7: Telecontrol

The TIM 3V-IE, TIM 3V-IE Advanced and TIM 4R-IE communication modules can communicate with the new firmware V2.0 directly over the Internet. The protocol used is a TCP/IP-based tunnel protocol (MSC-VPN) with 128 bit encoding. The TIM 3V-IE Advanced and TIM 4R-IE modules can communicate directly over DSL and the Internet by means of the integrated MSC protocol, whereas in applications with TIM 3V-IE the encoding is performed with the MD720-3 modem by means of GPRS. Configuration is easy using STEP 7 and the ST7 Engineering System.

Bidirectional communication with the control center is possible with the tunnel technology and standard GPRS mobile phone connections to the Internet. The connection is kept permanently "online" where small data volumes are involved.

## Section 8: Network transitions

WirelessHART is opening up the process industry for wireless communication. The new **IE/WSN-PA LINK** enables WirelessHART field devices to be connected to Industrial Ethernet, which in turn permits for example extensive diagnostics options.



## Section 10: IO-Link

IO-Link is a clever concept for the uniform connection of sensors and actuators such as load feeders or compact feeders to the control level through a cost-efficient point-to-point link.

The new communication standard below the fieldbus level enables central error diagnostics and localization up to the sensor/actuator level and facilitates start-up and maintenance by allowing parameter data to be dynamically changed directly from the application. The result: Greater plant availability and less engineering work. As an open interface, IO-Link can be integrated in all standard fieldbus and automation systems. Consistent interoperability ensures high protection for your investment. This also applies within the context of existing machine concepts for the continuing use of sensors which do not have an IO-Link interface.

