



SIEMENS

Industrial identification for sustainably efficient processes

Comprehensive portfolio of RFID and code reading systems
for seamless transparency in every industry

SIMATIC Ident

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SIMATIC Ident: Comprehensive portfolio for industrial identification - today and the future

You want flexible control of your production, efficient management of your assets, reliable tracking of products and components or intelligent synchronization of your supply chains. That is exactly what industrial identification from Siemens delivers.

With SIMATIC Ident, Siemens offers you a range of RFID and code reading systems of unrivaled scope and integration, that deliver the perfect identification solution to safeguard your competitive ability and make your business flexible for the future.

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Industrial identification for sustainably efficient processes

When is which product or which component in which location and which status? SIMATIC Ident will supply the answers quickly and reliably. Machine-readable, automated and contactless identification systems synchronize virtual data streams in the IT systems with the actual flow of goods and ensure maximum transparency – not only in production processes, but also in the external logistics processes. Advantages are created along the entire supply chain: quality requirements can be reliably met, production can be more flexibly structured, the number of manual operations reduced and potential sources of faults recognized and removed instantly. In any case, SIMATIC Ident will help you benefit from greater efficiency in logistics, material management, production and service.

Radio or optical – the application decides

Depending on the application in question, one of two main technologies is used in the industrial environment: Radio frequency identification (RFID) based on radio waves or optical code-reading systems for the recognition of 1D codes (barcodes), 2D codes such as data matrix codes (DMC) and optical character recognition (OCR) of plain text. These extremely reliable technologies ensure the gap-free traceability of products and components along the entire manufacturing, purchasing or dispatch process. By choosing SIMATIC Ident, you are opting for an integrated portfolio for industrial identification – ranging from code readers and RFID systems to the integration software.



Industrial identification – your advantages at a glance:

- Seamless traceability
- Increase in quality
- Compliance with legal requirements
- Faster time to market
- More flexible production
- Just-in-time and just-in-sequence logistics
- Optimized warehouse stock and thus lower costs
- Fast delivery

Identification systems: RFID and optical codes

Whether you use barcodes, DMC, RFID, or OCR: every technology has its specific strengths.

Optical character recognition is used wherever information must also be readable for people, such as use-by dates. 2D codes and RFID stand out due to their high level of data security and have proven their worth, even in the toughest industrial environments. The decisive criterion for an identification system: your individual application.

Verification, identification: code-reading systems

When higher performance is required, 2D codes are recommended as an alternative to barcodes, as they offer greater memory capacity and a faster reading rate. They can be applied cost-effectively, e.g. together with dispatch labels. They also allow direct part marking (DPM) of the product by means of laser, printing, or pinning, making them particularly resistant to external influences. 2D codes can be read with absolute reliability even from an oblique angle or under poor lighting conditions. With SIMATIC code-reading systems, we provide an ideal solution for reading and verifying 1D and 2D codes – offering reliable traceability of production batches through the production plant and beyond.

Identification, mobile data storage: RFID

RFID is used if there is no direct line of sight between the detecting device and the identification label, if large amounts of data or large distances are required, or if stored information needs to be modified. With this technology, the product or object is fitted with a wirelessly programmable and readable memory chip. With attractively priced smart labels for logistics, robust data storage units for assembly lines and long-range transponders, RFID is ideally suited for a wide variety of applications. Our intelligent SIMATIC RF system family offers you complete transparency. Data is thus available at any time throughout the entire production and distribution chain – for the perfect control and optimization of material flows and logistics.



Siemens – the right partner for trend-setting industrial identification

Siemens knows the strategic significance of industrial identification and has made consistent advances in this field for over 25 years. We offer you an extensive and scalable portfolio of hardware and software – supplemented by process advice, system integration and project management. It goes without saying that we also implement complete identification solutions from A to Z and all from a single source. With us as your partner, you can rely on our sound knowledge of the technology and the industry.

Get the benefit today from the solutions of the future

With Totally Integrated Automation (TIA), our open system architecture for company-wide automation and its SIMATIC core technology, the comprehensive and integrated automation system, we can supply you with the complete automation portfolio from a single source. The consistent application of proven standards and the implementation of open, expandable architectures facilitates the system integration of all components into the automation and IT environment. And you secure the use of future-proof identification solutions today – for sustainably optimized and economical processes.

SIMATIC Ident: Industrial identification from a single source

- More than 25 years of experience
- Broad range of identification systems (RFID, 1D/2D code-reading systems, OCR), interface modules, and software for a wide variety of applications
- Fully automatic and high-speed identification, with 100% transmission reliability
- Components with a high degree of protection for industrial use, insensitive to temperature fluctuations and contamination
- Wide range of tags – from smart labels to 64 KB transponders
- Flexible communication with the automation system: serial, via PROFIBUS, PROFINET or Ethernet
- High-performance integration into higher-level IT systems (ERP, MES, SCM)
- Seamless integration into SIMATIC reduces engineering costs
- Support of global standards





A well-known automobile manufacturer was looking for an identification system to optimize the traceability of all body parts – and to eliminate the previous method of marking by hand and its potential for errors. They selected a dot-peened or lasered data matrix code and a part number in plain text. Code-reading systems from Siemens were used for automatic identification. The company is now benefiting from the unambiguous assignment of parts to individual vehicles, from automated, error-free assembly processes, consistent data storage and traceability all the way to final assembly.

Flexible processes for economical and versatile production

SIMATIC Ident enables you to set up an absolutely reliable and efficient make-to-order production process. Thanks to flexible production and material flow control, you can meet the demands for a greater variety of product variants throughout the manufacturing process, satisfy individual customer requirements and strengthen your competitive capability.

Meeting the rising challenges

An increasing variety of products and versions, shorter development and delivery cycles and unforeseeable fluctuations in demand: the individualization of mass production presents the manufacturing industry with enormous challenges. SIMATIC Ident ensures the unique identification of the products and thus the flexible control of production and material flow. This facilitates the completely individualized manufacture of products – all the way to unique specimens – and without retooling delays. SIMATIC Ident enables varied, yet economical production to be realized.

Make-to-order production using SIMATIC Ident

SIMATIC Ident ensures complete transparency – the prerequisite for an absolutely reliable and efficient make-to-order production process. Example: Automotive industry – in this case, the sequentially correct delivery of workpieces and their unique identification permits autonomous production steps in flexible production stations. This prevents installation faults, delays and reworking faults. Further advantages: significantly less complexity in the engineering, greater plant availability and minimal downtimes – thanks to the high level of automation and the rugged identification technology. In addition, rewritable data tags enable distributed automation architectures to be established.

Kunststofftechnik Bernt GmbH is using SIMATIC Ident to optimize processes for galvanizing plastic components. The RFID solution ensures that each individual step toward the manufacture of the high-quality, processed plastic parts can be reliably tracked at any time. Production data is assigned uniquely to each individual workpiece, reducing the potential for manual input errors and a more transparent and efficient production is implemented. Even the maintenance of the product carrier station that is always in high demand can be planned to optimum effect with industrial identification.



Sachsenmilch AG, one of the most modern dairy companies in Europe, equipped its powder bagging sector with RFID pallets and UHF readers from Siemens in order to increase the transparency of the internal logistics and optimize the handling of pallets and products. The advantages: greater flexibility, seamless tracking of batches and easier cleaning and maintenance, despite the restricted space available.

Optimized use of resources for greater performance and lower costs

SIMATIC Ident simplifies the management of your assets such as tools, containers or plant components. The stock can be recorded in real time and the actual status determined precisely. Thanks to gap-free documentation, you avoid wastage, make better use of capacity and benefit from optimized maintenance.

Assets at a glance – costs under control

When is which asset in which location and in what status? SIMATIC Ident will supply the answers quickly and reliably. Siemens identification systems record the movement and status data of all assets and therefore provide a precise snapshot of stock – in real time. This means that the use of the assets can be monitored perfectly at any time and optimized specifically according to stock quantity, capacity and maintenance. Further advantages: significantly reduced fault quotas and avoidance of wastage. Unused goods can be identified and returned to the process or removed from it. In this way, SIMATIC Ident reduces process costs and contributes toward more economical

production. Thanks to standardized data structures and interfaces, the efficient use of reusable transport items (RTI) is made considerably easier – even in widely distributed logistics networks.

Perfect asset management

The use of identification technology is especially recommended in closed loops. The more expensive and more maintenance-intensive the containers, the greater the advantages. Example: in plants in the chemical industry SIMATIC Ident permits the exact documentation of all maintenance work on the device itself.

A leading producer of aluminum alloy castings delivers liquid aluminum to its customers in special containers. To achieve the required quality with the lowest possible use of energy and resources, it was important to have full transparency regarding the use of crucibles as well as delivery times – and this problem has been solved perfectly with robust RFID technology from Siemens. The benefits: immediate crucible status information, better scheduling at the factory, documentation of product and delivery quality in the outgoing goods department, and the use of EPCglobal standards for the entire supply chain.



Identification technology optimizes service and maintenance processes for plants and machines.

Maximum transparency – over the entire product lifecycle

With SIMATIC Ident, each product leaves a digital trail that can be traced and documented seamlessly back to the origin of its individual components. In this way, product properties and quality can be reliably assured and verified in the context of legal requirements.

Complete product history

Fluctuating product quality and faulty products are a critical factor in production. Yet it is usually difficult to pinpoint the weakness – especially where a number of processing stages are connected in series in different systems and sometimes even in different companies. With SIMATIC Ident, you can guarantee seamless tracking and tracing of products. Because the changes to the actual status and local changes generate a digital trail that leads back to the origin of the product. If this also includes components or ingredients of a product, its properties and quality can be dependably assured and verified.

Increased quality in manufacturing and logistics

With SIMATIC Ident, fluctuations in the product quality can be traced as far as an individual machine. This means that faults can be detected and eliminated at an early stage. In logistics, Siemens RFID and code-reading systems permit the systematic recognition, analysis and removal of weak spots in the process. One further incentive for using tracking & tracing with SIMATIC Ident: the observance of existing legal regulations. In the pharmaceuticals industry, for example, fake medications can be identified more easily, legal requirements met more reliably and the greatest possible safety of patients can be guaranteed.

Identification technology from Siemens permits the seamless identification of all product components.



An international tobacco company was the first tobacco company to introduce a comprehensive tracking & tracing system in the fight against the illegal trade in cigarettes. Furthermore, BAT satisfied the requirements of the “WHO framework convention on tobacco control”. This was done using optical code-reading systems from Siemens. The comprehensive range of products from a single source enabled a fast development and implementation of the solution – without any appreciable interruption to production.



Leche Pascual, a leading Spanish company in the food and beverage sector, was looking for an identification solution that would offer automatic assignment of production location and batch of raw materials to finished products, reliable quality monitoring and compliance with legal regulations. RFID from Siemens ensures complete compliance with legal regulations and the high quality requirements. Further advantages: smaller losses due to unclear product documentation and maximum transparency across a number of locations.



SECM GmbH & Co. KG in Leipzig wanted an identification solution that could ensure product quality and supply chain transparency, optimize internal and external business processes, and rule out unjustified service and spare parts claims. The company opted for an RFID solution from Siemens and is now benefiting from more efficient logistical processes, faster commissioning of terminal devices, better protection of intellectual property, and prevention of wastage.

Intelligent control of complex networks

SIMATIC Ident enables extremely complex, corporate and international supply chains to be planned with optimum transparency. All relevant information is available in real time in order to synchronize internal and external processes automatically. This avoids delivery bottlenecks and standstills, optimizes warehouse stocks and raises profit margins.

Green lights in the supply chain

Suppliers are often located a great distance from the manufacturer of the end product. The result: global supply chains that have to be synchronized and coordinated. SIMATIC Ident can help here, too. Using Siemens RFID and code-reading systems, all individual parts can be traced on their transport route in real time and external processes can be better integrated into the actual production. This means that parts can be processed in the correct order as soon as they arrive at the factory. SIMATIC Ident enables synergies to be discovered in the network, processes to be increasingly automated and the system capacity to be maximized. So that products get to where they should be sooner: to the customer.

Optimization all down the line

Identification solutions from Siemens make your goods flows completely transparent and therefore controllable. They offer you the possibility of acting just-in-time, avoiding out-of-stock situations, promptly discovering and removing any weak points in the system, as well as reducing wastage and counterfeit products to a minimum. Example: SIMATIC Ident can be used in logistics to track the flow of goods in real time with precision down to individual articles, to increase warehouse turnover and shorten freight handling cycles. The benefits to you: lower costs, wider margins and more satisfied customers, thanks to high product availability, wide selection and fast service.

At Cimko, a Turkish cement manufacturer, industrial identification from Siemens ensures more efficient loading of goods in the Narli cement works. A passive RFID system was installed in order to control the traffic flow of the cement transporters through the works and to raise the efficiency of the daily weighing and loading of trucks. The advantages: a very fast implementation and improved plant capacity by up to 20 percent – thanks to seamless transparency.

One portfolio – limitless options

SIMATIC Ident means flexibility and assured future. Siemens not only supplies you with both identification technologies from a single source, but also offers perfectly coordinated components. You profit from seamless integration into the SIMATIC and SINUMERIK control – for a consistent system environment in accordance with ISO and EPC standards.

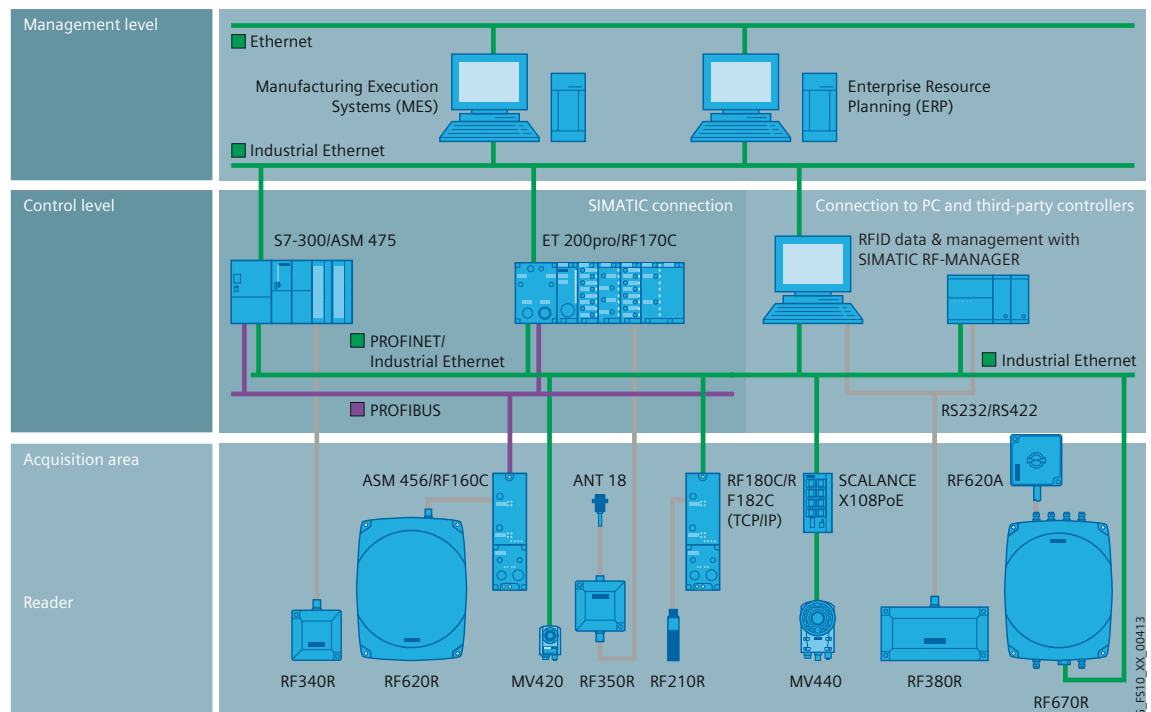
Industrial identification from a single source

Depending on the application and requirement, RFID and code-reading systems can be used side by side on the same production line: for example, DMC for the direct marking on products and RFID for pallets or workpiece carriers. Even in this case, SIMATIC Ident proves its superiority: shared communication modules or function blocks ensure seamless connection of both identification technologies to the SIMATIC controller. This ensures an integrated software architecture for you and saves considerable time and money on engineering, commissioning and maintenance.

A partnership with a future

We offer technology-neutral advice on applications. You benefit from our more than 25 years of experience in identification technology as well as our comprehensive automation and integration competence. regardless of whether you are extending your existing identification solution in stages or wish to remain flexible for a later change of technology – with Siemens as a partner you are securing a future-proof identification solution.

Identification technologies complement one another: Integration takes place via standardized interfaces in the automation or IT environment.



Systematic and professional: a closer look at the SIMATIC Ident portfolio

Regardless of the industry or sector: SIMATIC Ident makes a tailor-made, integrated identification solution a reality. This is made possible by our technical expertise, our extensive project experience and the fact that our complete range of hardware and software is open and integrated and complies with all requirements of international standards.

SIMATIC RF200: compact RFID system for standard HF applications

SIMATIC RF200 is ideally suited to industrial use on small assembly lines or in intracompany logistics. The system supports ISO 15693 transponders, which are particularly economical, low-maintenance and suitable for tough industrial environments. The compact design also enables them to be used on assembly lines where space is at a premium.

SIMATIC RF300: powerful RFID system in the HF range

Ideal for production and material flow control: the scalable, maintenance-free and rugged SIMATIC RF300 system is particularly suitable for contactless identification in the closed production loop. Depending on the demands on the performance of the identification system, different versions of the system are available:

SIMATIC RF600: powerful RFID system in the UHF range

Thanks to its extended range, SIMATIC RF600 is the first choice, not only for applications in production, but also in production-level logistics and distribution. The extended range of UHF write and

read devices offers a wide variety of options and impressively high reading rates. The advantage: fewer errors and faster processes.

SIMATIC MV420/MV440: flexible code-reading systems

SIMATIC MV420 and SIMATIC MV440 code-reading systems reliably and quickly recognize every type of 1D/2D codes – on the widest variety of surfaces and even under difficult ambient conditions. The compact devices are extremely flexible, scalable and ideally suited for product tracking, production control, verification and optical character recognition (OCR). Another plus point: the host of lighting, communication and connection options.





Siemens AG
Industry Sector
Sensors and Communication
Postfach 48 48
90026 NUREMBERG
GERMANY

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