SIEMENS

Security all around

Industrial security for your plant – at all levels

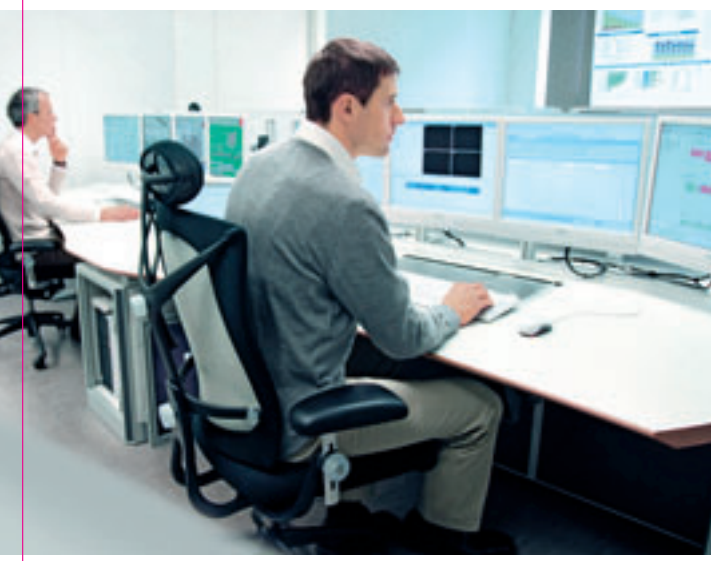
siemens.com/industrialsecurity

Answers for industry.

A systematic approach to minimize threats

With the increased use of Ethernet connections even down to the field level and the use of standard systems instead of proprietary systems, security issues are coming to the forefront of industry challenges. Open communication, increased networking of production systems, and standard systems not only provide enormous opportunities for threats but also involve high risks. The appropriate steps must be taken to provide industrial plants with comprehensive security protection against such attacks. Siemens supports you in implementing all the necessary measures – as part of our integrated range of products and services for industrial security.

Security management from the outside



Secure remote service with enhanced access protection

Siemens provides an extensive range of products with integrated security functions (security integrated), such as mobile radio routers, security modules, and communication processors for secure worldwide access to remote plants, remote machines, or mobile applications.

- These products support Stateful Inspection Firewall and secured VPN communication (Virtual Private Network) in accordance with our industrial security concept.
- Protected data transfer from the service PC to the machine/plant via VPN link and protected access point to the plant.
- Convenient diagnostics via Web interface.

Controllers with security integrated

Our new controller generation, such as SIMATIC S7-1500, offers a comprehensive security concept.

- Improved know-how protection: Algorithms can be reliably protected against unauthorized access and modification.
- Improved copy protection: On the SIMATIC Memory Card, individual blocks are connected to the serial numbers of the original memory card.
- Improved access protection: Access protection provides comprehensive protection against unauthorized configuration changes.
- Extended access protection: Protection against unauthorized access by an integrated firewall with security CP 1543-1.
- Improved tamper protection: The system protects the data transferred to the controller against unauthorized tampering.

Protection from unauthorized access from the outside

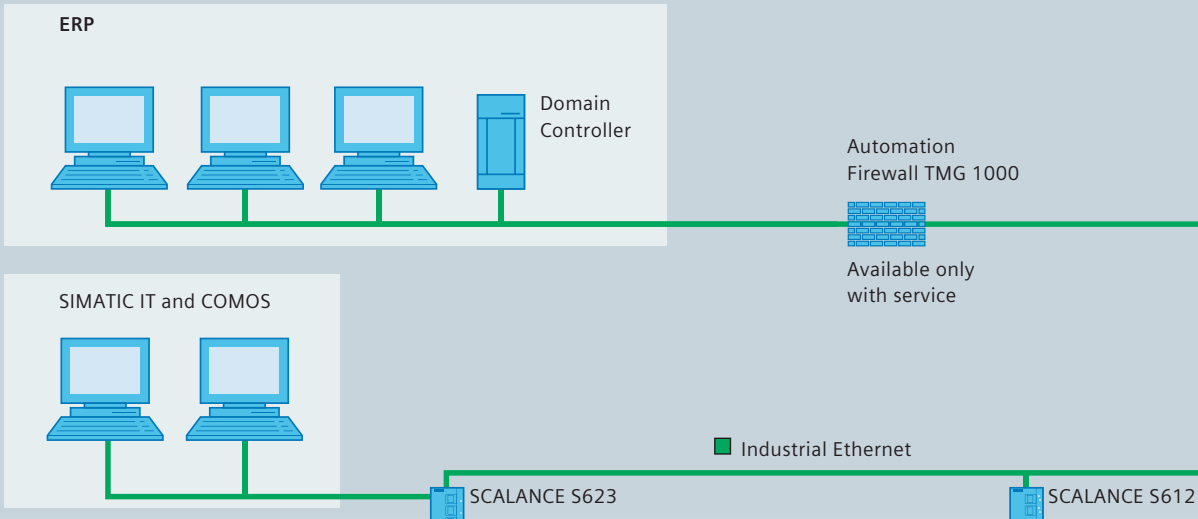
In addition to the physical protection system, it is also necessary to protect the production network. It can be accessed from other networks, such as the Internet, office LANs, or from local operator panels and this must be monitored.

- Patch management protects computer programs and PC-based controllers – firmware updates close security gaps in controllers.
- Segmentation of the plant into automation cells facilitates segregation from outside. The SIMATIC® automation system checks the data traffic and blocks unauthorized accesses with a firewall.
- Constantly updated virus scanners and whitelisting software protect the production and control systems from viruses and Trojans.

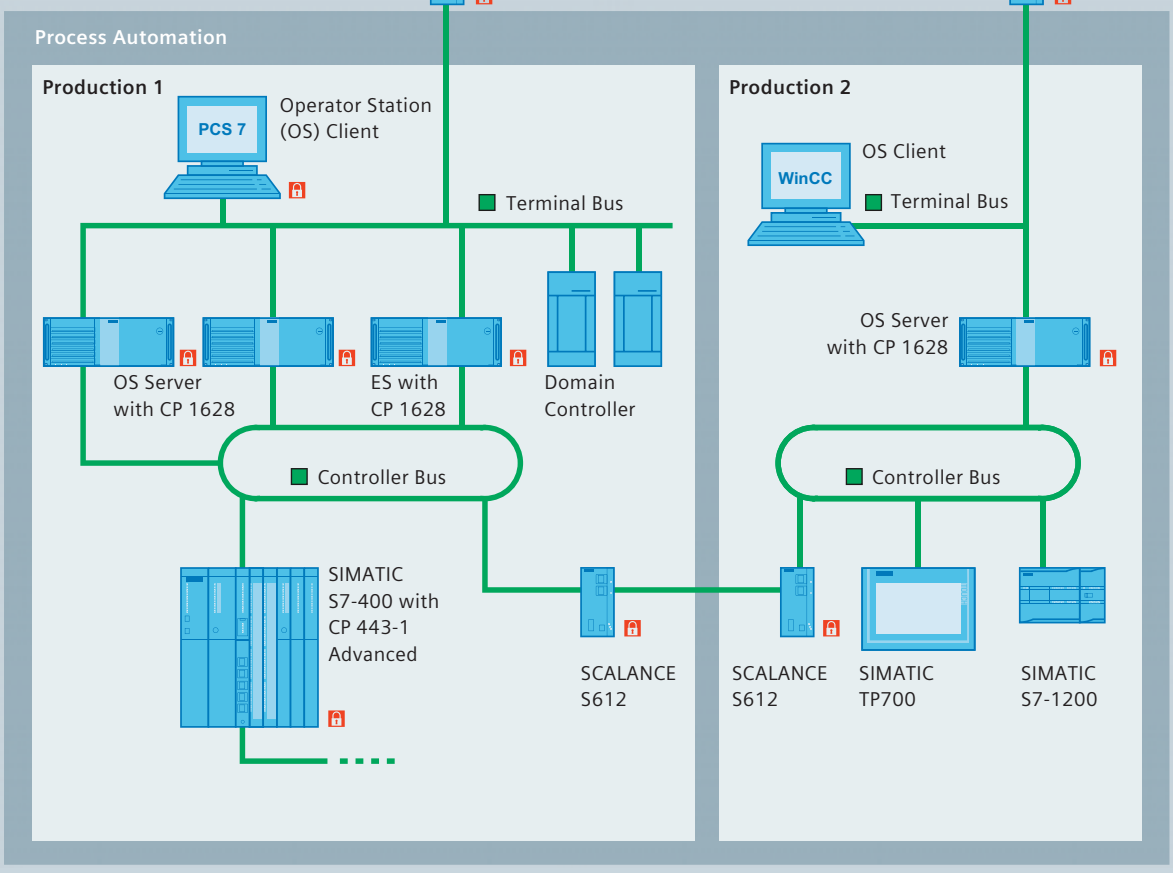
Plant security at a glance

Plant Security

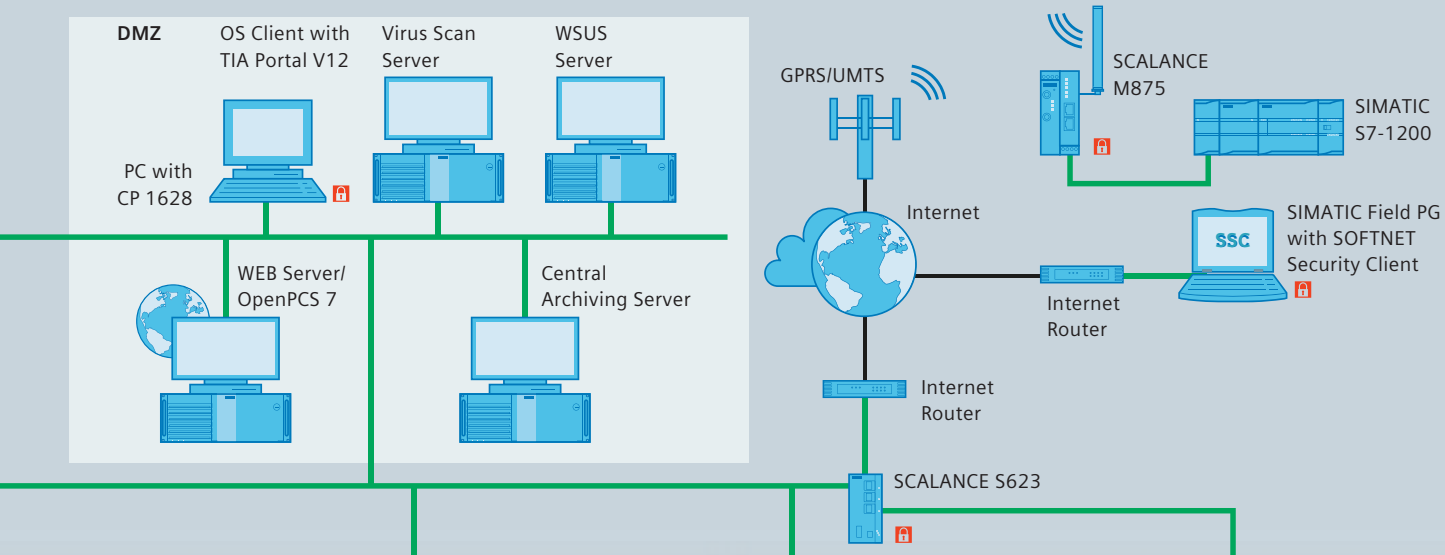
Network Security

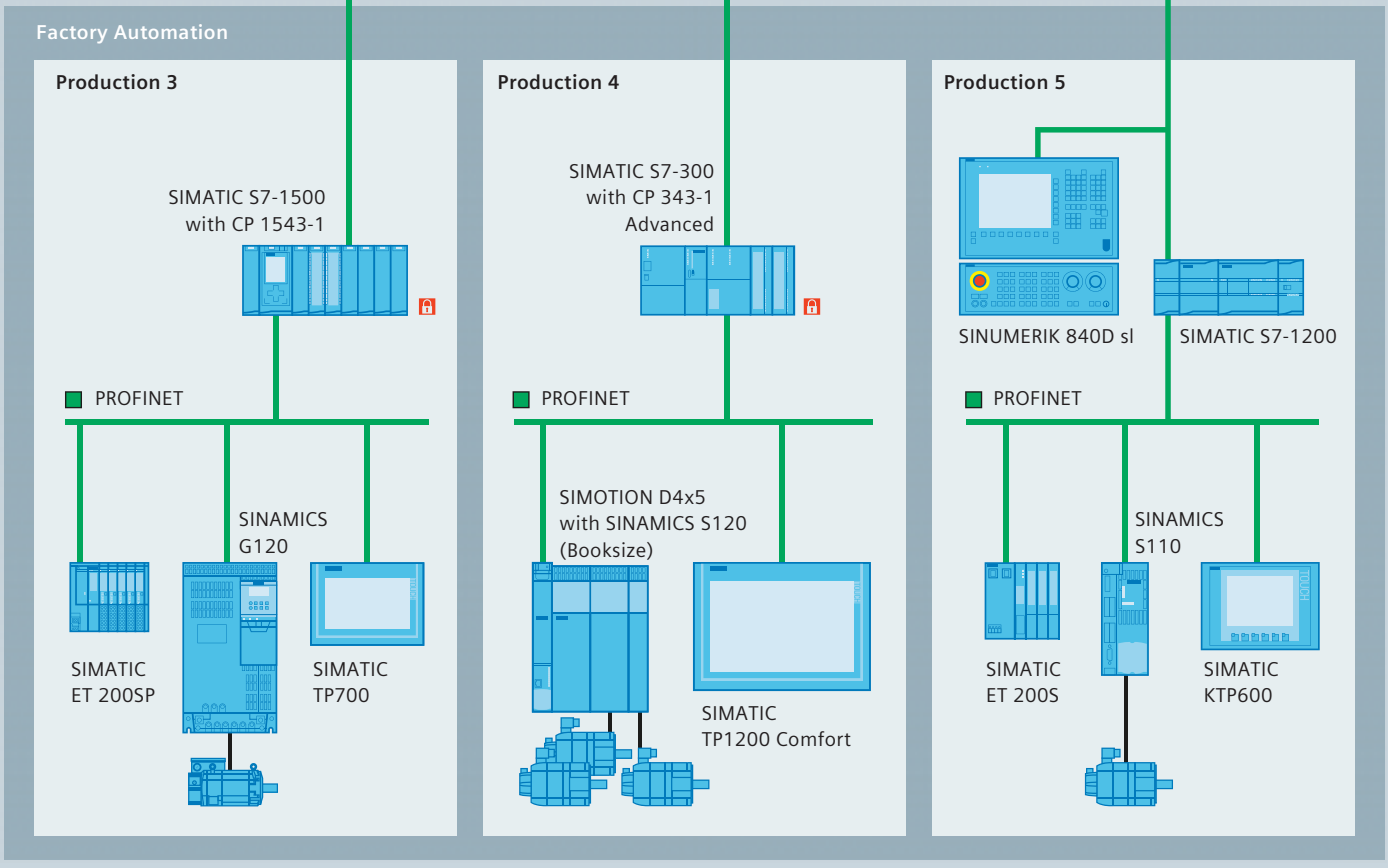


System Integrity



- Physical protection
- Security management



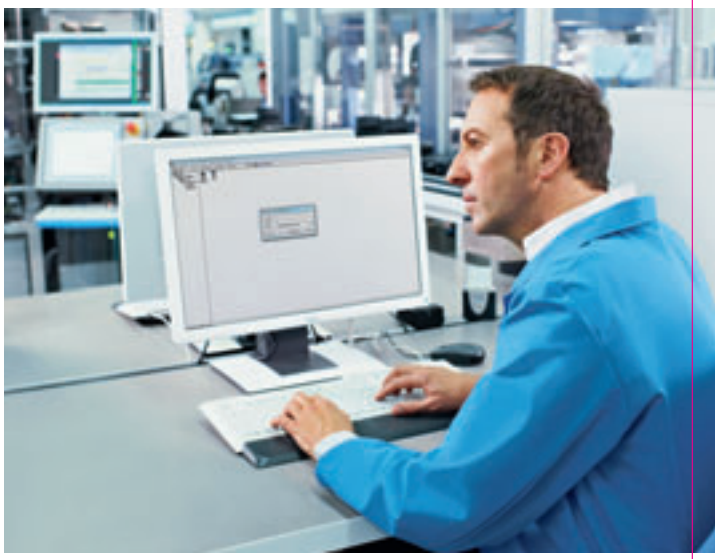


Protection from the cell to the plant

System hardening

With our automation components, you can improve protection even within the secure cell.

- The Security Module SCALANCE S monitors communication between the HMI, drive, and controller.
- SIMATIC Logon prevents unauthorized access by managing roles and rights.
- Disconnection of services and hardware interfaces prevents the spread of malicious software.
- The robustness of our controllers (SIMATIC S7-300, SIMATIC S7-400, etc.) against network attacks is confirmed by Achilles Level 2 certification.
- The most important acknowledged security standards in the world are supported.



Protection of automation cells by the cell protection concept

With this concept, a plant network is subdivided into individual protected automation cells within which all devices are able to communicate securely with further cells.

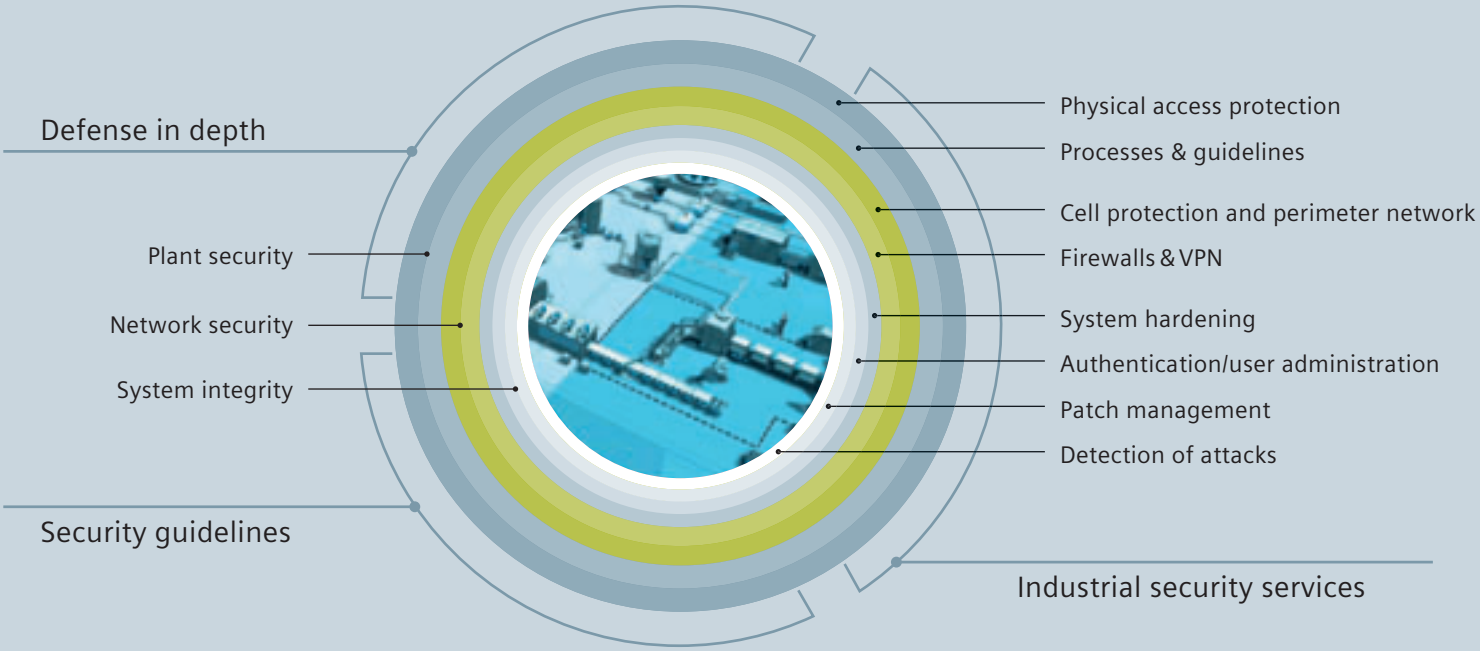
- Grouping of the devices of one or more cells depending on the communication and protection requirement
- SCALANCE S security modules and components with security integrated implement cell protection
- Connection to the overall network secured by VPN, firewall, or perimeter network (DMZ)

Security service

Siemens Industrial Security Services range from risk assessment, to implementation of suitable measures, to proactive threat management with the following aim:

- Permanent protection of the availability of your production processes with an individual security architecture
- Protection of intellectual property
- Integrity of the data and data streams

For this purpose, Siemens offers professional consulting and assessments and service contracts that are based on our packaged solution modules and are individually adapted to your needs.



Siemens Industrial Security – continuous protection for your plant

An optimal industrial security solution can only be implemented if new approaches are taken as they must be continuously adapted to new threats. There is no such thing as absolute security. To ensure a comprehensive and permanent solution, we provide in-depth advice, collaborative cooperation, and continual development of our security measures and products.

All around, but in-depth protection

With defense in depth, Siemens provides a multi-level concept that protects your plant both all around and in depth. The concept is based on the components, plant security, network security, and system integrity, as recommended by ISA 99 / IEC 62443 – the leading standard for security in industrial automation. While conventional plant security defends the plant against physical attacks, network protection, and protection of system integrity, protects against cyber attacks and unauthorized access by operators or external persons.

Security from Siemens – The service makes the difference

Experience has shown that in-house development of a sound security concept often exceeds available capabilities.

To overcome this, we offer tailored industrial security services that provide everything for all around plant protection, from risk assessment, to implementation of suitable measures, to regular updates.

Initial risk assessment and information in the Internet

Do you want to know now how good the security is of your industrial plant? On our Internet site, you can check using our "Industrial Security Health Check" and the more detailed "Operational Guidelines" with many recommendations on how to protect your production plant. Find out about the specific security issues of your industry and use the opportunity to contact our consulting team if you have any unanswered questions. Our experts will gladly prepare a security concept that is adapted to the needs of your production plant or process infrastructure.

With **Security Integrated** Siemens provides products with security functions, such as integrated firewall functionality, VPN communication, access protection, or tamper protection.

Find out more:

siemens.com/industrialsecurity

Get the full industrial security experience:

- Prepare an initial risk assessment using our security self-assessment
- Find out everything about our products and solutions
- Learn about newly discovered weaknesses and how to remedy them

Industrial security – take a look!

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Siemens provides automation and drive products with industrial security functions that support the secure operation of plants or machines. They are an important component in a holistic industrial security concept. With this in mind, our products undergo continuous development. We therefore recommend that you keep yourself informed with respect to our product updates and that you use only the latest versions. Please find further information on this subject at: http://support.automation.siemens.com. You may also register for a product-specific newsletter at this address.

To ensure the secure operation of a plant or machine it is also necessary to take suitable preventive action (e.g. cell protection concept) and to integrate the automation and drive components into a state-of-the-art holistic industrial security concept for the entire plant or machine. Any third-party products that may be in use must also be taken into account. Please find further information at: www.siemens.com/industrialsecurity

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