



Embedded Security

The Foundation of Trusted Systems



Common Criteria EAL 5+

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Safe & Secure by Design

Connected, Protected, Certifiable

In the rapidly evolving Security domain, the demand for **reliable, safe, and secure software solutions** is paramount. SYSGO offers cutting-edge real-time operating systems (RTOS) and hypervisor technologies tailored for the embedded market. Since 1991, SYSGO has grown to become Europe's premier provider of certifiable RTOS, with a strong focus on **Safety & Security** in various industries.

Industry Challenges

Embedded systems are the backbone of modern technology, but they face increasing threats:

- **Cybersecurity Risks:** Growing attacks on IoT and embedded devices demand robust Security architectures and solutions
- **Regulatory Compliance:** Adherence to international Security standards, such as ISO/IEC 15408 (Common Criteria), is mandatory for market acceptance
- **System Complexity:** Integrating multiple applications with varying criticality levels on a single hardware platform requires meticulous partitioning to prevent interference.

SYSGO's solutions are designed to tackle these challenges, ensuring that Security is an integral component of the system architecture in today's interconnected world.

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Real-World Implementations

SYSGO's flagship products, **PikeOS and ELinOS**, are designed to meet the highest Security and Safety standards in embedded systems, ensuring reliability across various industries:

- **Aerospace & Defense:** PikeOS is utilized in avionics systems requiring stringent Security certifications, ensuring the protection of mission-critical operations
- **Automotive:** SYSGO's solutions enable the development of secure ECUs, safeguarding modern vehicles against cyber threats and ensuring passenger Safety
- **Railway:** PikeOS supports the implementation of secure train control systems, maintaining the integrity and Safety of Railway operations
- **Industrial Automation:** ELinOS and PikeOS form the backbone of secure industrial control systems, protecting critical infrastructure from malicious activities

Ensuring Security and Certification Success

- **Security-by-Design:** Component are developed with Security in mind, minimizing vulnerabilities
- **CertKits & Pre-Certified Components:** Artifacts and support to accelerate compliance with standards such as Common Criteria
- **Secure Software Supply Chain:** Ensuring that development tools, updates, and system components remain uncompromised through end-to-end Security controls



Pioneering Security in Embedded Systems

PikeOS Certifiable RTOS & Hypervisor

PikeOS is a separation kernel-based real-time operating system and Type-1 hypervisor designed for certifiable embedded applications. PikeOS is certified to **Common Criteria EAL 5+**.

Security Features:

- Controlled Information Flow and Access Control
- Intrusion Detection and Data Protection
- Secure Boot and Trusted Execution
- Health Monitoring
- Secure Virtualization

ELinOS Industrial-Grade Embedded Linux

ELinOS is a robust, hardened, embedded Linux distribution optimized for industrial applications which can also work as guest OS on top of PikeOS.

Security Features:

- Disk Encryption
- Secure Boot
- Immutable OS
- Security-Enhanced Linux (SELinux)
- Address Space Layout Randomization (ASLR)
- Trusted Platform Module (TPM)
- Secure Network Protocols

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Why choose SYSGO?

Security is not just a feature, it's our core principle. Our expertise in secure real-time operating systems and software ensures that customers receive the highest level of protection, compliance, and long-term support for their mission-critical applications.

- **Built for Security-Critical Systems:** Following the Security-by-design approach, our products ensure that Safety, reliability, and compliance are deeply embedded in the system architecture
- **Proven Certification Leadership:** We specialize in certifiable real-time operating systems and offer pre-certified components, easing the compliance process with standards like Common Criteria for high-assurance Security applications
- **Security Consulting:** We help customers design secure architectures, ensuring compliance with evolving regulatory requirements
- **Certification Support:** We provide guidance, documentation, and pre-certified solutions to accelerate Security certification for embedded systems.
- **Long-Term Support:** We ensure continuous Security updates, including vulnerability patches and compliance updates, for the entire product life cycle



Need more information? Tell us about your project and your needs:

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For a Secure & Trusted Operation

In today's connected world, embedded systems face growing cyber threats and compliance challenges. SYSGO's certifiable Security solutions, including PikeOS RTOS & Hypervisor with Common Criteria EAL 5+ certification and secure ELinOS, provide robust isolation, controlled information flow, and protection against cyber attacks.

With decades of expertise, we help you meet the highest certification standards while also ensuring long-term Security and reliability. Partner with SYSGO to build systems that are powerful, secure and reliable.

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