



Avionics Solutions

Safe & Secure Embedded Software



DO-178C
up to DAL A



Common Criteria
EAL 5+

Integrated Modular Avionics

Connected, Protected, Certifiable

In the rapidly evolving Avionics industry, 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 Avionics applications.



PikeOS, our certified flagship product, ensures safe and secure operations in critical applications.

Use Cases

- **Unmanned Aerial Vehicles (UAVs):** PikeOS provides the reliability and Safety required for UAV operations, supporting complex functionalities while ensuring mission-critical performance
- **Cockpit Systems:** Enables the integration of advanced graphics and connectivity features in modern cockpits, enhancing pilot interfaces and situational awareness
- **eVTOL Aircraft:** Supports the emerging market of electric Vertical Take-Off and Landing aircraft by providing a certifiable platform for innovative Avionics applications

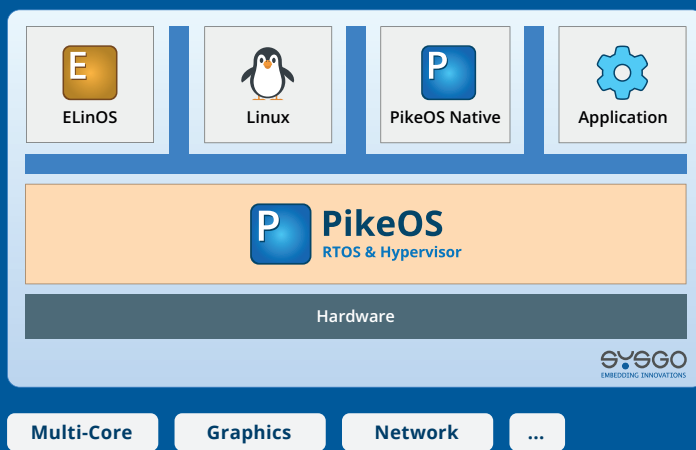
→ www.sysgo.com/avionics

Certifications and Standards

Ensuring Safety, Security, and compliance is at the core of our development process. Our solutions are rigorously designed to meet and exceed the demands of global standards in critical domains. Key certifications and standards we adhere to include:

- **DO-178C:** Our solutions meet the rigorous requirements of DO-178C, ensuring robust and certifiable software for Safety-critical airborne systems and equipment
- **ARINC 653:** We implement the ARINC 653 standard, offering partitioned architectures that enable the safe and efficient consolidation of multiple Avionics functions on a single system
- **FACE:** SYSGO's solutions align with FACE (Future Airborne Capability Environment) standards, fostering interoperability, reusability, and open architecture approaches for cost-effective and efficient Avionics development
- **A(M)C 20-193 / CAST-32A:** We tackle challenges in Safety-critical multi-core applications by adhering to A(M)C 20-193 (formerly known as CAST-32A), ensuring determinism, efficient resource management, and safe execution in Avionics systems

→ www.sysgo.com/safety



Safe & Secure Operations

The Future of Intelligent Systems

PikeOS provides a robust foundation for Integrated Modular Avionics (IMA) and beyond. Its microkernel architecture ensures high performance, Safety, and Security, making it ideal for Avionics applications, like flight control, mission-critical Defense systems, next-gen cockpit displays, autonomous UAVs, and secure air traffic communication.

Key Features

- **Hardware Compatibility:** Support for a wide range of processors, including x86, ARM, SPARC, PowerPC, and RISC-V, ensuring seamless integration with Avionics systems such as flight computers, graphics, GPU compute, and GPS
- **Mixed-Criticality:** Strict partitioning enables critical functions (e.g., flight control, autopilot, Avionics communication) alongside non-critical applications (e.g., in-flight entertainment, connectivity) on the same hardware
- **Guest OS:** Can host various guest operating systems, such as ELinOS, Linux, POSIX, etc., facilitating diverse application deployments
- **Certifiability:** Designed to meet rigorous certification standard such as DO-178C and ARINC 653, ensuring compliance with international Safety and reliability requirements
- **ITAR-free:** As European company, our products have no export restrictions enabling unrestricted global deployment

→ www.sysgo.com/pikeos

Why choose SYSGO?

- **Engineering Excellence:** Combining expertise with cutting-edge technology to meet the evolving demands of modern embedded, performant, and connected systems
- **Cutting-Edge Solutions:** Driving advancements in eVTOL, UAVs, next-generation cockpit systems, and integrated Avionics by providing certifiable real-time software platforms that enable future-ready, modular Avionics, and AI-driven applications
- **Long-Term Support:** Ensuring stability with extended product life cycles, continuous updates, and dedicated technical assistance

Our Commitment to Excellence

At SYSGO, we deliver more than just software: We provide confidence and reliability. With our solutions, Avionics and Defense applications will soar to new heights of Safety, Security, and reliability. Together with our customers and partners, we can engineer the future of Aerospace innovation.

” **Thales:** „We found SYSGO’s PikeOS to be a very appealing platform for the new ICDS, as it supports very strong Safety and Security by design. PikeOS guarantees the strict separation required in IMA systems and has been proven and certified in both Avionics and multi-core solutions.“



For a Safe & Secure Operation

In today's modern Aerospace industry, Safety, Security, and reliability are essential. SYSGO's certifiable real-time solutions provide the strong foundation for mission-critical applications, ensuring seamless operation in Avionics, UAVs, eVTOL, and beyond.

With decades of expertise and a commitment to innovation, we help you meet the highest industry standards while enabling next-generation technologies. Partner with SYSGO to build systems that are not only powerful but also safe, secure, and future-ready.

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