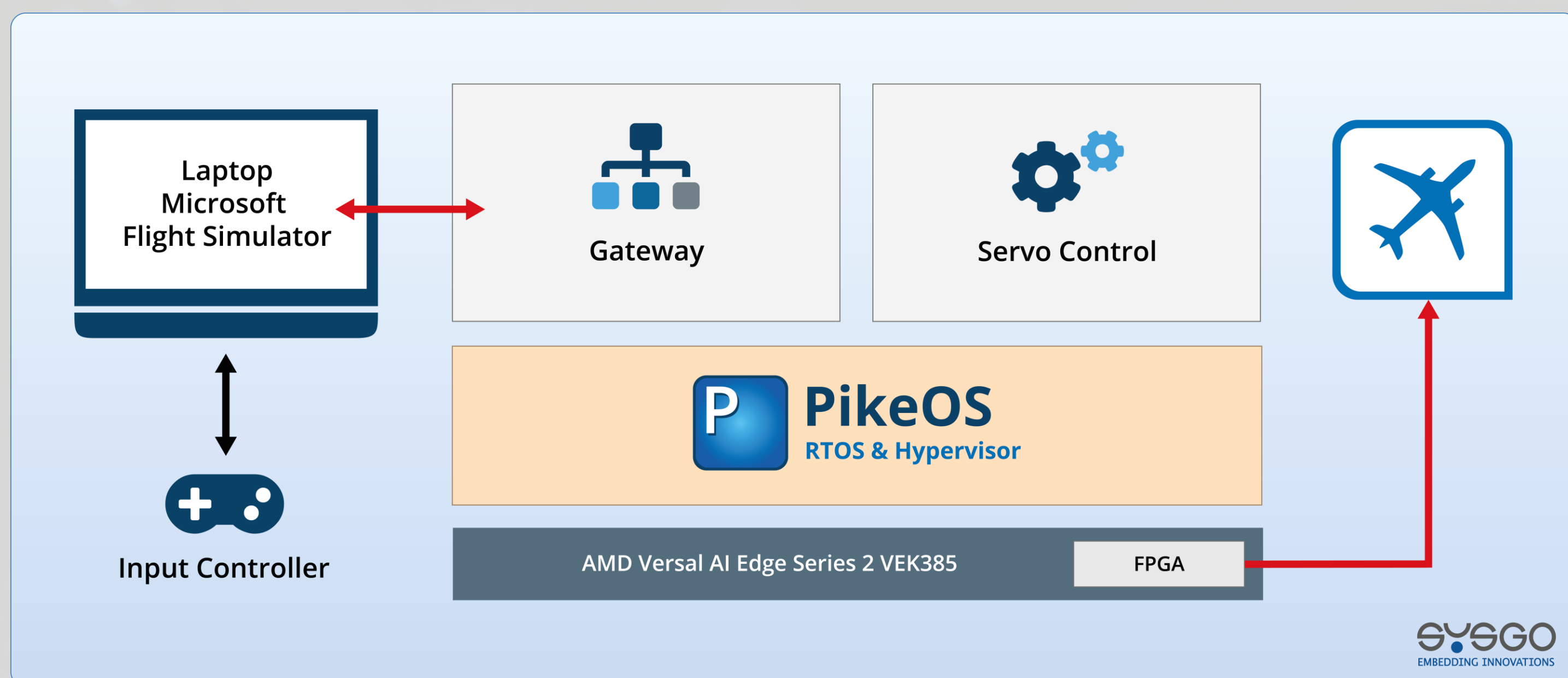




Safe Avionics System Execution in a Mixed Criticality Flight Environment

SYSGO shows an integrated, certifiable avionics demonstrator combining **PikeOS**, the real-time operating system and hypervisor, with the **AMD Versal AI Edge Series 2 VEK385** platform. The solution demonstrates a robust software architecture designed to reduce integration and certification risks while accelerating the development and deployment of secure, safety-critical avionics systems.

Users interact with MS Flight Simulator, which sends avionics data via Ethernet to the VEK385 board. The data is processed by PikeOS and translated into PWM signals that control the RC aircraft flight surfaces in real time.

PikeOS executes strictly isolated partitions:

- **Gateway Partition** – receives and processes avionics data
- **Servo Control Partition** – controls the aircraft's flight surfaces

This partitioned architecture demonstrates how applications with different functions and criticality levels can safely coexist on a single hardware platform.

Joint Customer Value

- Reduced integration and certification risk
- Faster development and time-to-market
- Secure execution of mixed-criticality applications
- Strong isolation between software functions
- Consolidation of multiple functions on one hardware platform



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AMD Xilinx develops highly flexible and adaptive processing platforms that enable rapid innovation across a variety of

technologies – from the endpoint to the edge to the cloud. Xilinx is the inventor of the FPGA, hardware programmable SoCs and the ACAP, designed to deliver the most dynamic processor technology in the industry and enable the adaptable, intelligent and connected world of the future.

Founded in 1991, SYSGO became a trusted advisor for Embedded Operating Systems and is the European leader in hypervisor-based OS technology offering worldwide product life cycle support. We are well positioned to meet customer needs in all industries and offer tailor-made solutions with highest expectations in Safety & Security.

More information at www.sysgo.com/avionics