



PRIMARY FLIGHT DISPLAY



Introduction

The NXP i.MX 8 SoC is getting more and more popular in the embedded market in general and more specific for the Avionics systems. The demo represents a primary cockpit flight display that is currently applied in a helicopter in the field today. The graphics is coming from our partner PRESAGIS.

Both SYSGO and PRESAGIS are well positioned in the Avionics market world wide. By using the hypervisor functionality of PikeOS the system can run strictly separated partitions, allowing mixed criticality between different Safety levels.

➔ Presagis Releases New Versions of VAPS XT, UA Accelerator, and UA Emulator Products

Presagis, a leading provider of Commercial-Off-The Shelf (COTS) modeling, simulation, and user interface development software, today announced the release of new versions of its software:

- Graphical HMI development tool, VAPS XT 5.0
- ARINC 661 development tool, UA Accelerator 5.0
- ARINC 661 Protocol Analysis tool, UA Emulator 5.0

www.sysgo.com/presagis-pr

Architecture

As PikeOS is a real-time operating system (RTOS) that includes a hypervisor, customers can easily scale on their platform from feature development to certification.

The demo consist of 4 partitions:

- For low criticality, the GPU/DPU driver is used in one partition and Linux in another one. Here the eVTOL flight taxi video is generated and rendered on the tablet display
- For the high criticality the GPU/DPU driver is running in a 3rd partition and the Presagis graphics in a 4th one, rendering the helicopter flight display application

The solution could be certifiable and could be used as an ARINC 661-compliant solution.



PikeOS RTOS & Hypervisor

www.sysgo.com/pikeos

AVIONICS DEMO PARTNERS



SYSGO is the leading European manufacturer of embedded software solutions with its real-time operating system and hypervisor PikeOS and the embedded industrial-grade Linux ELinOS. Since 1991, SYSGO has been supporting customers in the Aerospace, Automotive, Railway and IIoT industries in the development of Safety-critical applications on highest industry levels. For security certifications PikeOS also meets the Common Criteria EAL 3+ level. SYSGO is part of the European Thales Group.

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Presagis delivers simulation and graphics software, and services to defense and aeronautic organizations worldwide. We provide end-users, system integrators, developers, and manufacturers with advanced tools and dedicated services to help them achieve rich, immersive virtual environments for training, as a test-bench, and designing the cockpits of tomorrow.

www.presagis.com



NXP Semiconductors N.V. (NASDAQ: NXPI) enables a smarter, safer and more sustainable world through innovation. As a world leader in secure connectivity solutions for embedded applications, NXP is pushing boundaries in the automotive, industrial & IoT, mobile, and communication infrastructure markets. Built on more than 60 years of combined experience and expertise, the company has approximately 31,000 employees in more than 30 countries and posted revenue of \$11.06 billion in 2021.

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