

Wind River Helps Eurocopter Design State-of-the-Art Avionics Systems

Device Software in New Flight Display System Is Critical to Pilot Safety

Eurocopter helicopters fly in 133 countries and serve approximately 2,350 customers. With 45% of the worldwide market for new civil and military helicopters and 53% of the civil market, Eurocopter is the world's leading helicopter manufacturer. The Super Puma EC 225 and the Cougar EC 725 represent Eurocopter's next generation of transport helicopters, featuring the latest technological advances for critical civil and military tasks that include offshore operations, troop and VIP transport, medevac operations, and naval missions.

The new helicopters are equipped with an Advanced Helicopter Cockpit and Avionics System (AHCAS), which run all off the Super Puma EC 225 and Cougar EC 725 equipment. Everything that can be measured and displayed—from critical flight mission data to radar images—is handled by the new flight display system. This makes the reliability of the device software critical to pilot and mission safety. Eurocopter began work on these groundbreaking flight display systems in 1999. The systems achieved complete DO-178B Level A safety certification in the summer of 2004.

Developing safety-critical applications is a time-consuming and costly endeavor. Eurocopter understood that outsourcing to a commercial device software vendor capable of creating integrated software certifiable to DO-178B standards would optimize its software development process and reduce both development and certification costs. With developers at multiple sites, however, Eurocopter also needed a supplier that offered a flexible licensing model that could adapt to the company's changing project requirements over time.

"Wind River worked closely with the Eurocopter team throughout the development and certification process, providing tremendous value in optimizing the safety, security, and reliability of Eurocopter's new flight display systems."

— Marc Achache, System Architecture Department Manager, Eurocopter

Company Profile: Eurocopter Group

- Wholly owned subsidiary of European Aeronautic Defense and Space (EADS) Company
- Produces the largest civil and military range helicopters in the world
- One of the top three aerospace companies worldwide—accounting for 30% of the global market
- Headquarters in Marignane, France

Industry

- Aerospace & Defense

Solutions

- Wind River Platform for Aerospace & Defense, VxWorks Edition

Results

- Ability to develop state-of-the-art avionics systems on time
- An avionics system that attained DO-178B Level A safety certification

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— Marc Achache, System Architecture Department Manager, Eurocopter

Wind River’s proven technology and expertise in safety-critical aerospace and defense applications made it the clear platform choice. Wind River’s subscription-based licensing model also made the company a compelling business choice.

“Wind River’s technology and expertise is quickly making them an international standard for safety-critical systems,” says Marc Achache, System Architecture Department Manager for Eurocopter. “By choosing Wind River for this project, we had the complete foundation required to build and certify these mission-critical systems on time.”

With Wind River Platform for Aerospace & Defense, VxWorks Edition, Eurocopter was able to successfully meet stringent specifications for commands, reconfiguration modes, and other essential functions to protect against breakdowns or system malfunctions.

“Wind River worked closely with the Eurocopter team throughout the development and certification process, providing tremendous value in optimizing the safety, security, and reliability of Eurocopter’s new flight display systems,” Achache says.

With Wind River’s platform, Eurocopter gained a standard commercial off-the-shelf (COTS) application programming interface (API) that is portable and reusable, further reducing certification risk. Wind River’s preintegrated development platform—including the operating system, development tools, and industry-specific middleware—made it possible for Eurocopter to meet its delivery schedule on time. In addition, through Wind River’s subscription-based licensing, Eurocopter will continue to receive the latest technology upgrades year after year, helping to maintain its leadership position in the avionics field.

Learn More



For additional information about the products mentioned in this case study, visit :

www.eurocopter.com

www.windriver.com

WIND RIVER

Wind River is the global leader in Device Software Optimization (DSO). We enable companies to develop, run, and manage device software faster, better, at lower cost, and more reliably. www.windriver.com

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