

European Aeronautic Defense and Space (EADS) Company Drives Advances in Safety-Critical Applications

Wind River's VxWorks Platform Provides Optimal Foundation for Building and Certifying Software

CASA is the Spanish aerospace division of EADS, the largest aerospace company in Europe and the second-largest worldwide. EADS/CASA's Military Transport Aircraft Division (MTAD) is responsible for all military transport aircraft derivatives within EADS, including the Multi-Role Tanker Transport (MRTT).

MTAD was developing sophisticated control software for a new tail boom to enable air-to-air refueling for a new military aircraft—the A330 MRTT. This aircraft is derived from EADS's Airbus A330 aircraft, the leader in its commercial market segment. As part of the aircraft's refueling system, the software controls an artificial 3D-vision surveillance system, a night vision compatibility system, a release-and-retract system with redundant hoist and lock, and an independent disconnection capability.

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The complex device software that controls these midair refueling operations requires Radio Technical Commission for Aeronautics (RTCA) DO-178B Level A safety certification. In addition, the foundation operating system (OS) must be ARINC 653-compliant.

Why Wind River?

MTAD selected Wind River Platform for Aerospace & Defense, VxWorks Edition, for this project because the platform provides a fully integrated device software platform that meets the required stringent safety certifications. The platform is based on VxWorks AE653, a fully ARINC 653 Supplement 1 compliant OS. VxWorks AE653 enables

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Company Profile: EADS/CASA

- European Aeronautic Defense and Space Company (EADS) is the largest European aerospace company and the second-largest worldwide.
- Construcciones Aeronáuticas SA (CASA) is the Spanish aerospace division of EADS.
- EADS/CASA's Military Transport Aircraft Division (MTAD) is responsible for all military transport aircraft derivatives within EADS, including the Multi Role Tanker Transport (MRTT) aircraft using the new air-to-air refueling boom system.
- Headquarters in Madrid, Spain

Industry

- Aerospace & Defense

Solution

- Wind River Platform for Aerospace & Defense, VxWorks Edition

Results

- The new refueling software application provided the Airbus family with a high-quality, flexible, low-risk, and cost-effective technology.
- CASA was able to focus its efforts on driving advances in safety-critical applications.

applications of different safety levels to share computing resources and is specifically designed to support complex, partitioned applications such as CASA's refueling project.

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Wind River is the only device software vendor with an ARINC 653 Supplement 1-compliant platform. By choosing a preintegrated foundation—with the OS, development tools, and industry-specific middleware—MTAD was able to compress early development phases and focus its energy on creating significant value-added advances in safety-critical applications.

In addition, because EADS uses the Wind River platform in other divisions, the organization can streamline its device software development process and make enterprise-wide gains in interoperability.

Wind River also offers a flexible licensing model, allowing EADS and its divisions to develop mission-critical applications better, faster, at lower cost, and more reliably. This subscription-based model enables MTAD to benefit from the latest safety-critical and market-specific technologies.

Successful Results

The Royal Australian Air Force (RAAF) selected the A330 MRTT to meet its refueling requirements, and the first of five aircraft is scheduled for delivery in 2008. The A310-300, also owned by MTAD/EADS, was the first aircraft to include the new system. It was also used as the demonstration aircraft for the boom system qualification in 2005.

Learn More



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

www.casa.eads.net

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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