Schiebel demos CAMCOPTER work at REPMUS - APDR

APDR

Schiebel recently demonstrated the capabilities of its CAMCOPTER S-100 at NATO's annual REPMUS (Robotic Experimentation and Prototyping using Maritime Uncrewed Systems) exercise, hosted by the Portuguese Navy. Over the course of the large-scale multinational trials, the S-100 flew multiple missions with advanced payloads, underscoring its role as a maritime-proven solution, designed for naval combat system integration and as a proven multi-mission asset in complex maritime environments. At REPMUS 2025, the CAMCOPTER S-100 carried a suite of advanced sensors, communication links and AI-assisted data fusion modules.

Among the highlights was the CRFS RFeye Node 100-18 LW, a high-fidelity radio frequency intelligence sensor designed to capture spectrum activity up to 18 GHz, collect I/Q data, and enable geolocation in contested electromagnetic conditions. Installed on the CAMCOPTER S-100, this payload demonstrated its value in delivering actionable intelligence in real time (SIGINT).

The exercise also featured the Akheros Skylock module, which implements NATO's DIANA (Defence Innovation Accelerator for the North Atlantic) Artificial Intelligence (AI) framework – a transatlantic innovation accelerator promoting dual-use autonomy, data fusion and AI across NATO. It enabled in-flight data analysis, telemetry ingestion, and the detection of irregularities via onboard AI-driven analytics.

Interoperability with the emerging STANAG 4817 protocol was demonstrated through integration with Thales' Tacticos combat management system. This enabled operators to directly task and control the CAMCOPTER® S-100 from the Tacticos console – going beyond simple data exchange to true mission tasking and reporting. The cooperation with Thales underlines the drive to harmonise command and control across domains, allowing UAS, USVs and UUVs to be managed under a shared NATO framework.

In addition to these integrations, the CAMCOPTER S-100 impressed with a series of demonstrations that highlighted its operational maturity and mission versatility:

- Bathymetric LiDAR (Areté PILLS/PNGS): In partnership with U.S. company Areté, the S-100 carried the Pushbroom Imaging LiDAR for Littoral Surveillance (PILLS) Next Generation System (PNGS). Doubling performance from legacy 60Hz to 120Hz, the technology delivered enhanced bathymetric and obstacle detection, with successful launch and recovery from a Portuguese Offshore Patrol Vessel;
- Oceanwatch PT-8 maritime surveillance sensor: Designed to autonomously detect small objects on the ocean surface across wide areas.

"REPMUS is the ideal environment to validate the S-100's operational flexibility in partnership with leading industry innovators. From AI-driven analytics with Akheros and multi-domain interoperability testing with Thales, to RF intelligence gathering and advanced bathymetric LiDAR mapping, the CAMCOPTER S-100 continues to prove why it is the trusted VTOL UAS of choice for naval operations worldwide," said Hans Georg Schiebel, Chairman of the Schiebel Group.