



## News



### Aerocross to offer unprecedented value with Echo Hawk UAS

August 10, 2009

Aerocross Systems will showcase its Echo Hawk Unmanned Aircraft System (UAS) on Monday, 10 August 2009, at the US Navy's 5th Biennial Unmanned Systems Demonstration being held at Patuxent River Naval Air Station, Webster Field Annex in St. Inigoes, Maryland, USA.

Likely the smallest participant at this event, the two-man company will be displaying a not so small Unmanned Aircraft System. With a wingspan of over 40 feet (12 meters), the Echo Hawk is equivalent in size and performance to the MQ-1 Predator A.

However, Aerocross is offering Echo Hawk at an unprecedented value of less than one-tenth the cost.

Aerocross developed Echo Hawk using extremely limited funding from an Air Force Small Business Innovative Research (SBIR) contract to devise a method for performing test range instrumentation and communication relay support for the Air Armament Center's Eglin Test and Training Range. The challenge was to develop a cost-effective solution without sacrificing performance or reliability.

The SBIR program offered Aerocross the rare opportunity to integrate a full scale aircraft system, a task which is usually reserved for large prime contractors.

Through innovative development and rapid integration of Commercial-Off-The-Shelf (COTS) technologies, Aerocross produced the first Echo Hawk as a technology demonstrator. To reduce risk and enhance reliability, Aerocross elected to modify a proven high-performance airframe, the certified Cessna 441 light sport aircraft, rather than start with a new design.

Airframe enhancements include integration of a Rotax 914 powerplant and a constant speed propeller for better altitude performance. Structural modifications were also made to the baseline airframe to maximize payload volume and increase fuel capacity. System reliability is further enhanced through the use of Mil Spec components and subsystems with proven experimental manned aircraft and unmanned aircraft heritage.

To further reduce costs, Aerocross combined the requirements for a ground control station with that

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of a transporter into a single Ground Control Station/Transporter (GCS/T) configuration. A dual-use cargo trailer was outfitted with portable workstations and modified to accommodate airframe components for safe over-the-road transport.

The GCS/T workstations feature Hands On Throttle and Stick (HOTAS) controls, synthetic out-the-window visuals with real-time video and Head-Up Display (HUD) overlays, a vehicle subsystem status display, and a moving map. As designed, a two-person crew can disassemble the airframe, load it into the GCS/T (or single shipping container) for transport, and then reassemble and configure the system for flight operations at the deployment destination.

With the recent completion of integrated systems testing and successful slow-speed taxi demonstrations, Echo Hawk is currently awaiting test range coordination for high-speed taxi and flight test demonstrations.

During these fiscally challenging times, Aerocross is poised to offer unprecedented value to government as well as emerging commercial users requiring affordable medium altitude long endurance UAS capabilities.

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