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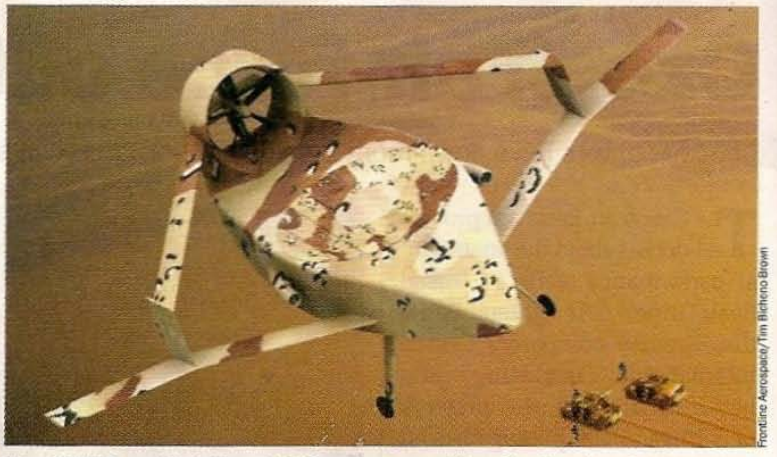

Frontline Aerospace/Tim Bicheno Brown

The VSTAR could deliver 180kg of ammunition, food and water

UNMANNED VEHICLES **ROB COPPINGER** SAN DIEGO

Half-scale VSTAR could fly next year

Design intended to resupply troops on the battlefield

A half-scale demonstrator of a ducted fan vertical take-off and landing unmanned air vehicle called the VTOL Swift Tactical Aerial Resource (VSTAR) could be flying next year, according to its developer.

Using two Rolls-Royce Model 250 series II C20B turboshaft engines, a diamond box wing and a ducted pusher propeller, the full-size VSTAR could cruise at 15,000ft (4,500m) and 288kt (155km/h) and have a range of 1,045km (565nm), says Colorado-based Frontline Aerospace. The design is intended to resupply troops on the battlefield with ammunition, water and food, with a maximum payload of 180kg (400lb).

The company says it has private funds for the demonstrator – expected to cost up to $1 million – and adds that it has already spent hundreds of thousands of dollars researching the design, now in its third iteration.

"We have done some windtunnel testing, and we intend to do more," Frontline founder and chief executive Ryan Wood said during the Association for Unmanned Vehicle Systems International North America 2008 convention in San Diego, California.

Frontline – which has a full-time engineering team of six working on the VSTAR – is seeking a major aerospace partner to build and test two full-size demonstrators, which Wood estimates will cost $30 million to develop over a 26- to 32-month period.

A patent pending heat exchanger called a recuperator is also planned to be used to recover some of the exhaust heat to aid engine specific fuel consumption. ■

BAE Systems

http://www.flightglobal.com/articles/2008/06/16/224615/ducted-fan-battlefield-resupply-uav-could-fly-in-2009.html

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Ducted fan battlefield resupply UAV could fly in 2009

By Rob Coppinger

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