

## G-NIUS moves on to Nahshon contract

G-NIUS Unmanned Ground Systems announced on 2 September that it has been awarded a development contract for its next-generation unmanned ground vehicle (UGV) from the Israel Defence Force (IDF).

Known as the 'Nahshon', the system follows on from experience G-NIUS has gained in developing and fielding its Guardium UGV, which has been operational with the IDF for the last seven months with both its Northern and Southern Commands.

"What we've learned in the last seven months is 10 times more than during the whole [Guardium] development process," G-NIUS Chief Executive Officer Erez Peled told *Jane's* at DSEi on 8 September. The main enhancements for the Nahshon, he explained, will be in improved autonomous movement and operational performance, an increased payload weight and improved navigational capabilities.

The Nahshon will operate in force protection, combat logistics and route-proving-type missions. The system, said Peled, would bring UGVs closer to operating in "non-structured environments".



The G-NIUS Guardium LS was shown at DSEi

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G-NIUS, a joint venture between Elbit Systems and Israel Aerospace Industries (IAI), chose DSEi to unveil the Guardium LS: a logistics support variant of the Guardium UGV that offers a payload of 1.2 tons and can be commanded from either mobile or portable terminals.

Peter Felstead *JDW Editor, London*

## Northrop Grumman displays Kodiak satellite-based tracking system

Northrop Grumman lifted the veil on a new satellite-based blue-force tracking (BFT) system at DSEi on 8 September.

The 'Kodiak' system provides a two-way BFT capability suitable for all levels of command from formation headquarters to tactical vehicles.

An evolution of Northrop Grumman's C2PC Tactical system, Kodiak is designed to be interoperable with existing US and International Security Assistance Force (ISAF) BFT systems.

The system runs over the Iridium L-band satellite network, providing a global BFT capability in a 'hub-and-spoke' architecture.

The company claims that one advantage of the use of satellite communications is that BFT data can be distributed to any location around the world, so the same equipment used for pre-deployment training at home can be taken on operations.

Filtering techniques are employed to ensure that only that part of the common operational picture (COP) relevant to the user is sent over the network reducing bandwidth pressures.

A Northrop Grumman representative told *Jane's* that the company was looking to pitch the system to countries operating in Afghanistan that had requirements for a BFT system but did not want to commit to the theatre-specific ISAF Force Tracking System (FTS).

The Kodiak system is interoperable with both the US FBCB2 (Force XXI Battle Command Brigade-and-below) BFT system and the ISAF FTS. The system is available on a range of military hardware, while the satellite communications system employs a circular omni-directional Iridium transceiver antenna mounted on the vehicle roof.

Tony Skinner

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## First British Warthogs to arrive imminently

CHRISTOPHER F FOSS *Jane's Land Consultant London*

The first three production Warthog armoured all-terrain vehicles (ATVs) will be delivered by manufacturer Singapore Technologies Kinetics (STK) to the British Army in September, with all 115 vehicles due to be delivered in 2010, the company announced at the Defence Systems & Equipment International (DSEi) exhibition in London.

The Warthogs will replace the BvS 10 Viking vehicles currently deployed in Afghanistan by the British Army.

Following an assessment of the STK Bronco armoured ATV carried out in Singapore in August 2008, the UK Ministry of Defence placed a GBP150 million (USD251 million)-plus contract for the Warthog programme late last year under an urgent operational requirement. Four versions are being procured: troop carrier, command post vehicle, ambulance and repair/recovery vehicle.

In order to meet the tight delivery schedule STK ordered long-lead items before the firm contract was placed, although, to de-risk the programme before production start-up, the company built

- STK will deliver the first three of 115 Warthog armoured ATVs to the British Army this month, with the remainder to follow by the end of 2010
- Derived from STK's Bronco, the Warthog has been upgraded to provide a high degree of protection against mines and IEDs

a Warthog testbed incorporating a number of improvements. Following initial trials in Singapore this underwent a successful 2,000 km-plus trial in the United Arab Emirates this year.

Blast tests have also been carried out on the Warthog and Ricardo in the UK has also been involved in further de-risking critical changes such as the cooling system.

The Warthog is the latest development of the Bronco, which has been in service with the Singapore Armed Forces since 2001 and has been fielded in large numbers and many configurations.

The Warthog has a gross vehicle weight (GVW) of up to 19 tonnes with a total internal volume of 13 m<sup>3</sup>. The standard Bronco

has a typical GVW of 16 tonnes, but, to meet the demanding UK Warthog requirement, the Bronco has been upgraded in many areas. These include installation of air conditioning, adding a high level of protection against mines and improvised explosive devices (IEDs) and a new armour package that includes spall liners, appliqué armour and bar armour. Also, the diesel fuel tanks have been repositioned from the floor.

On the Warthog's roof is a Platt mount that can be armed with a 7.62 mm or 12.7 mm machine gun or a 40 mm automatic grenade launcher, with the gunner provided with all-round protection. The vehicle has an enhanced cooling system, updated dust filtration system and an electrical system updated to 450 A.

A number of further improvements are already being studied by STK, including a new road-wheel design, and there is an ongoing process to seek out any weaknesses that have yet to be identified.

Thales UK is the systems integrator for the Warthog. STK will send the vehicles, complete with armour, to Swansea, where they will be fitted with UK-specific equipment such as the Bowman digital communications system and electronic devices to counter IEDs.

The Bronco is also competing for a French Army requirement for a similar vehicle, where it is up against the BAE Systems BvS 10 Mk II, which is expected soon to enter production.