New Material at EUROSATORY 2016

International launch for BlueBird's ThunderB

BlueBird Aero Systems of Israel unveiled their ThunderB small tactical UAV at a conference south of TelAviv in 2015. Eurosatory 2016 marks however the first international appearance of this long endurance ISTAR system, which has a maximum take off weight of around 28 kg and a wingspan of less than 4 meters. It can carry up to 3.5 kg nose mounted payload with full fuel; extra payload can be located in the fuselage with fuel trade off. Maximum endurance is 24 hours (but it flew a 25.5 hours mission), operational range being 100 km, extendable to 150 km. With a 16,000 ft ceiling, its best operational altitude is 3,000 ft. a Pushing propeller powered by an electronic injection fuel engine allows it to reach 72 Kts, cruise speed being 42 Kts. Catapult launched and parachute recovered, the standard payload is Controp's T-Stamp, with its three sensors, IR cooled, daylight HD and optional laser pointer. BlueBird UAVs are exhibited at stand D680.

MBDA turret goes light

Following the first successes with its MPCV turret, at Eurosatory MBDA unveils a much lighter solution aimed at its MMP antitank missile, which will soon enter service with the French Army. Known as Impact, the turret carries two missiles on the right side with a 7.62 mm machine gun on the low left side, the optronic system on the top left side. The latter is a repackaged version of the MMP launcher optronic, the HMI located inside the vehicle consisting of a screen and joysticks allowing to control the turret, missile modes and firing. Including the two missiles, the machine gun, ammunition and sensors, the Impact weighs only 250 kg. It will be ready just prior to the exhibition, thus we can only publish an artist impression. To see the real thing installed on a PVP light armoured vehicle take a stroll in the outside area to Stand D550.

Constant RCWS evolution by Kongsberg

Following its success in the US, the Army having selected and contracted Konsberg's MCT-30 fitted with the Orbital ATK Mk44 Stretched 30 mm gun, the Norwegian company is implementing new solutions for its RCWS, such as a combined 12.7/40 mm AGL version with side-by-side weapons, a low profile version for turret-on-turret solutions, and others. These include the integration of the Javelin missile, a version configurable to carry 12,7 or 40mm AGL in center and a 7,62mm or Javelin as the coaxial weapon having been recently delivered. The Javelin integrated version shown at Eurosatory has been recently through a thorough testing programme at the Armoured Trials and Development Unit in the UK, mounted on a Spartan tracked vehicle. Five missiles were fired, three Block 0 Javelin missiles at ranges of 1500, 2500, and 3200 metres and two Block 1 missiles at ranges of 3500 and 4300 metres. All five missiles successfully hit the target, including that at 4300 metres, one of the longest engagements to date.

Harris: 3-D virtual reality for soldiers

Following the acquisition of Exelis, Harris Corporation is now fully involved in the soldiers' equipment world. Its Tactical Mobility-Night Vision Google (TM-NVG) has evolved, the secondary II tube having become a weapon sight. Moreover it has been integrated with the ARC4 (Augmented Reality Command Control Communicate Coordinate), developed by Applied Research Associates, which provides augmented reality, injecting for example navigation waypoints, blue forces, target locations overlaid on the soldier's real-world view. Boresighted at 300 meters, the system gives a 3-D view down to the single soldier. A spin-off of DARPA's Ultra-Vis programme, Harris has developed a headborne demonstrator shown in the 1.0 version (see photo), which at Eurosatory is present in the 2.0 configuration, 30-40% lighter, the company aiming at halving the weight in the 3.0 production version.

Increased security with Speed-ER

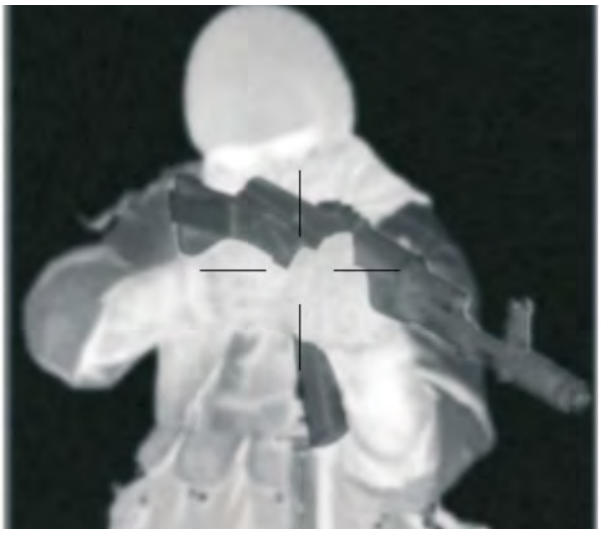
Deploying three different types of sensors to ensure maximum security to critical infrastructures, this the aim of Controp of Israel that unveils at the Paris exhibition its Speed-ER, an extended long range observation system. Gyro-stabilised, it includes a 3rd generation Medium Wave IR sensor with a x30 continuous optical zoom, a Short Wave IR sensor with x5 continuous optical zoom, and two colour TV sensors, one with a wide FoV and one with narrow FoV. To this we can add a laser rangefinder with a 20 km range and a laser pointer. Made of three line replaceable units, the thermal imaging one weighing 31 kg, the day one 18 kg, and the gimbal 35 kg, for a total of 84 kg, the Speer-ER can be fitted also with optional features such as panoramic scanning, automatic movement detection, digital recording, remote operations either via cable or radiofrequency, and can be interfaced with C4 systems. The Speed-ER is visible at Stand C517.

A new FCS from Rheinmetall

At Eurosatory Rheinmetall, Stand D211-261, unveils its Vingmate SL 1000, a fire control system dedicated to shoulder launched rocket systems (hence the SL). It was developed by Vinghøg AS, part of Rheinmetall Nordic, to answer a Norwegian requirement for a system capable of increasing the M2 and M3 Carl Gustaf 84 mm lethality. The SL 1000 can easily be used with the AT4, the PzF3 Panzewrfaust, RPGs, as well as with automatic grenade launchers. It includes a laser rangefinder with a 1.5 km range, that provides automatic superelevation, a tilt sensor, a meteorological sensor, IR and visible target markers, , and an IR illuminator. Engagement time is less than 3 seconds: the gunner acquires the target, engages the LRF, reacquires the target after the automatic elevation compensation system has rotated the sight, and fires. Cant information are shown on the SL 1000 screen. The system is fitted with a Picatinny rail that can host day sights as well as clip-on night sights. An output allows to interface the SL 1000 with a programming system to use airburst munitions. A compact item, 171 x 112 x 110 mm, the SL 1000 is powered by three CR 123 batteries that provide 24 hours run time and weighs 1,300 grams with batteries.

Thermal Targets from Israel

Reshet Graf from Israel presents for the first time its ThermaReal family of realistic thermal targets for live fire small arms training using thermal devices. These targets simulate objects such as people, tanks, and UAVs, improving shooting accuracy in the dark on the battlefield. They are based on photo realistic colour images combined with real thermal image, the image being based on real object thermography. For example in a human target the head and raveled parts of the body will look warmer, while in a vehicle the warmed part will be the engine. ThermaReal targets can be used both in the 3-5 and 8-12 µm bands. Adhesive backed repair stickers are available to extend targets use, both for hot and cold target zones. Vehicle size targets are available on flexible materiel which allows to roll them up, their size going up to 460 x 180 cm, making deployment and storage much easier. Reshet Graf products can be seen at Stand D 733.



SHIVA fight-off direct threats

Representing in Italy numerous leading companies in the of naval and land electronic, Angelo Podestà made a step forward proposing company-developed items. The first is the integration of numerous subcomponents, to generate a vehicle defensive suite against direct fire threats that can easily be installed on any vehicle. Known as SHIVA it is build around a combat proven fire control and command system, the Safe Strike by Rebel Alliance, that provides a series of capabilities such as blue force tracking, target generation, danger close areas, etc. Position in GPS-denied areas is ensured by Safran Defence & Electronics Epsilon 10 inertial measurement unit. The Argus laser warning, developed by PentaTec of Germany, provides an elevation coverage of ±105°, while acoustic warning comes from the Metravib Pilar V. Soft response allows to hide the vehicle thanks to Rheinmetall's Rosy obscurant system, hard reaction coming from the on-board RCWS, if available. A company-developed hard reaction item is in the pipeline, but for the time being remains undercover. To meet the Shiva people, pay a visit to Stand D482 in Hall 6.