

types of obstacles, enabling real-time course corrections without the intervention of an operator. Offering a selection of modular payloads, Guardium can be effectively utilised in a variety of force protection and homeland security applications, employing a dedicated set of operational tools.

Monitoring the vehicle operation through the Guardium command and control station, the vehicle

operator can adjust its mission's parameters, in the field and in real time, so as to adapt the performance to changing conditions.

Claimed to be the first operationally deployed autonomous UGV system, the Guardium UGV is the subject of great interest worldwide and already boasts a solid customer base among those who recognise the operational benefits of keeping valuable personnel out of harm's way. ■



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## RiotBot reduces risk



**F**rom Spain, the Technological & Robotics Systems (Technorobot) company features an innovative robotic product on Stand 1 1C 034, mainly oriented towards the security and defence sectors, for which it has applied a high degree of research and development.

The company's new RiotBot is described as an advanced security robot especially designed for remote operation in areas considered to be too dangerous to deploy personnel. RiotBot mounts a PepperBall TAC-700 carbine, customised and adapted for safe use on the robot, from which it can fire 700rds/min. The weapon has a total capacity of 450 PAVA balls, a non-lethal ammunition, and as the carbine can only be fired using a remote control, it is impossible for unauthorised people to use it.

Capable of speeds exceeding 20km/h and weighing less than 20kg, RiotBot can be deployed and used quickly and safely by a single operator at distances of more than 1.5km. The robot has a totally

ergonomic, lightweight remote that controls its movement, as well as the vertical and horizontal position of the gun turret before firing the carbine. It can be operated continuously for more than two hours, and compressed air recharging, replacement of batteries, and reloading the carbine with ammunition can all be achieved in less than five minutes.

Technorobot is confident that RiotBot is the best option for any risky intervention in the following scenarios:

- Riot control;
- Civil order;
- Disturbances in prisons;
- Area denial;
- SWAT team operations;
- Police round-ups;
- Boundary defence and intervention;
- Neutralisation of suspects;
- Dissuasive activities;
- Checkpoint security;
- Surrounding unit rescues;
- Interior inspections and securing;
- VIP protection;
- Urban warfare.

## A multi-tasking mini-UAV

ground station, which comprises a standard rugged laptop connected to a small antenna box. The UAV will generate geo-referenced video displays in real time out to a range of up to 3km, while cruising at 27 knots.

Usually mounting a CCD PAL day camera, Spy Arrow is capable of carrying many

different payloads weighing up to 70g, including sensors dedicated to probing the atmosphere to detect chemical or other threats. It can be safely flown over populated areas because the airframe is made from soft materials and is powered by a rear-mounted electric motor driving a propeller. This facilitates cost-effective covert surveillance, enabling this mini-UAV to live up to its name. ■