



# SOLDIER OF FUTURE TODAY

**A**gat – Control Systems JSC has developed the Soldier – Combat Systems information and technical system designed for use as part of the automated tactical-level command and control (C2) system on the company – platoon – squad – soldier level. The system integrates the TLE (4G) equipment with the electro-optics of the soldier's combat gear (wireless earphone, tactical glasses with the microdisplay, wireless electro-optical scope, soldier health parameters sensor) and a digital radio. The wireless equipment weighs 500 g at the most and is housed by a special quickly detachable case enabling the soldier to focus on fighting both in mounted and dismounted combat, including in the immediate contact with the enemy. At the same time, to operate successfully, the soldier receives the relevant information in the form of commands and signals both from sights and observation instruments, on the one hand, and intelligence, surveillance and reconnaissance (ISR) devices, on the other. The LTE gear allows the integration of the ISR and control equipment and weapons into a single network, thus turning the soldier into an independent fighting unit in the automated tactical-level C2 system.

The advantage and the ease of operation of the wireless hardware over the wire-equipped one have been proved by the operational test and evaluation by uniformed services.

The company's wealth of experience allows successful integration of in-house software and hardware and those from other manufacturers with the automated C2 system and the establishing of a common battlefield information environment with the use of intel obtained by ISR assets based on various physical principles.

The company will demonstrate the integration of the Soldier – Combat Systems information and technical system with the Berkut-1 unmanned aerial vehicle (UAV) and Adunok remote-controlled surveillance/weapon system from Belarusian company KB Display.

In addition, Agat-Control Systems JSC will display the Berkut-1E short-range UAV designed for round-

the-clock electro-optical reconnaissance as part of hunter-killer systems of infantry units and special operations forces. The UAV's operating radius is 15 km. It is launched by hand and operated in automatic mode. The drone lands by parachute. The Berkut-1E is capable of area surveillance and reconnaissance, provision of real-time still, television and thermal imagery, search for and positioning of surface targets, their automated tracking and real-time intel downlinking to tactical unit commanders.

In addition to complete products, Agat-Control Systems is ready to transfer to its customers the technologies stemming from the expertise gained from unmanned aircraft development.

Nowadays, the user needs valuable intel hinged directly on the timeliness of its provision to the end user. The principal problem is to adapt the algorithms of the UAV and automated C2 system. Agat – Control Systems JSC has developed its own algorithms for flight and navigation systems. The algorithms are unique because they are versatile and fit for controlling UAVs of various types with minor modifications. Developing the flight/navigation system, the designers were guided by both the latest advances in computer technologies and the

classic automatic control system standards set by Soviet scientists more than 30 years ago and used proactively in up-to-date aircraft. The flight/navigation system allows reliable automatic takeoff, en-route flight and automatic landing of the aircraft. To minimise the flight/navigation system's testing costs, the company has come up with a UAV flight dynamics simulating and modelling stand allowing adjustments to the basic parameters of the flight/navigation system while minimising the number of a real UAV's sorties required.



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