12th International Armament and Military Equipment Fair PARTNER 2025

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Introduction

MORE than two decades have passed since the largest international armament and military equipment fair in the Balkans was first held at the Belgrade Fair. This year, from September 23rd to 26th , the 12th International Armament and Military Equipment Fair, PARTNER 2025, took place under the auspices of the Ministry of Defense of the Republic of Serbia.

The Fair was jointly organized by the Military Technical Institute and Yugoimport–SDPR, a regional leader in the production, integration, and promotion of armament and military equipment, as well as a recognized participant in the global defense market. Technical organization and venue services were provided by the Belgrade Fair, which offers some of the most representative exhibition facilities in the region and supports high-profile, demanding international events.

The purpose of the event is to showcase advancements in defense technologies and industrial capabilities of the Republic of Serbia, along with recent scientific achievements and research activities. It also serves as an important platform for exhibition, networking, and the establishment of new contacts and cooperation with foreign companies and participants.

Figure 1. International Armament and Military Equipment Fair PARTNER 2025

It is always an expectation that meets the requirements and results in a positive outcome when it comes to the number of visitors which exceeded the results of the previous manifestations. Numerous representatives of manufacturers and business partners from more than 40 countries, 12000 visitors, 47 foreign visits and official delegations of the Ministries of Defense, armed forces and state institutions of partner countries and organizations were registered (Saudi Arabia, China, France, Germany, Australia, Turkey, Tunisia, Slovenia, Austria, Italy, Bahrein, Egypt, UAE, Spain, Kazakhstan, Lithuania, Russia, etc.), 203 exhibitors from Serbia and from: Austria, Turkey, Bosnia and Hercegovina, Slovakia, Italy, China, Germany, Finland, France, Montenegro, Slovenia, Sweden, Romania, Israel, UAE, Hungary, Belgium, Iran, Netherlands, Republic of Belarus, Bulgaria, Czech Republic, Switzerland, Cyprus, India, Finland and Russia.

The International Fair is visited by many high-ranking delegations from the whole world, as well as the representatives of NATO, European Defense Agency and other international military and security organizations. Among all of them prevailed the development projects of the Military Technical Institute (VTI), "Yugoimport SDPR" and Aeronautical plant “MOMA STANOJLOVIC” – Batajnica –

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today the most important military institutions in the Western Balkans.

The remarkable role for development technology within the Serbian Armed Forces have: Military Medical Academy (VMA), Military Geographic Institute (VGI), Technical Test Center (TOC) and Military Academy (VA). Each of the above-mentioned had a stand at the fair where they could present the activities from their domain. As always, the Military Academy attracted a lot of attention with the projects of young cadets and professors from the Mechanical and Electronics department as well as from the Aviation department. At the stand of the Military Academy, interested visitors could see the demonstration model of a remote operated machine gun combat station, didactic radar model, flight simulator for "Lasta" aircraft, weapons used in simulation pistol shooting hall as well as numerous books used for Basic Academic Studies at the Military Academy and the Military Medical Academy.

Also, a number of leading Serbian defense companies and weaponry and military equipment producers who have the enviable international reputation had the significant role at the Fair and the most prominent among them being: "ZASTAVA ORUŽJE" – Kragujevac, "PRVI PARTIZAN" – Užice, "KRUŠIK" – Valjevo, "SLOBODA" – Čačak, "MILAN BLAGOJEVIĆ" – Lučani, "IMK 14 OCTOBER" – Kraljevo, "FAP" - Priboj, "UTVA" – Pančevo, "PRVA ISKRA" – Barič, "TRAYAL" – Kruševac, "PRVA PETOLETKA" – Trstenik, "IRITEL" – Beograd, "EDEPRO" – Beograd, "EI OPEK" – Niš, "TELEOPTIK - GYROS" – Zemun, "Sova Night Vision" – Niš, "YUMKO" – Vranje, "MILE DRAGIĆ" – Zrenjanin, "KODŽIĆ & Co" – Beograd, "GEPARD" – Novi Sad, "TIGAR" – Pirot, "VLATACOM" – Beograd, etc.

Apart from the armament and military equipment manufacturers, several overhaul companies presented their capabilities: "TRZ" – Čačak, "TRZ" – Kragujevac, "MOMA STANOJLOVIĆ" – Batajnica, "ORAO" – Bijeljina, etc.

Visitors were able to see a wide range of modern defense and security equipment, including small arms and ammunition of various calibres and roles, artillery and missile fire-support systems, self-propelled and towed artillery, anti-armour systems, combat and support vehicles, tanks and armoured platforms, artillery and mortar fuse systems, mines, electronic reconnaissance and surveillance systems, telecommunications and radar-computing equipment, cryptographic protection devices, simulators, unmanned aerial vehicles, and armoured combat vehicles. The exhibition also featured a trainer aircraft for basic pilot training, light aircraft, river patrol boats, logistics and electronic systems, anti-terrorism and special operations equipment, personal ballistic protection, and fire-fighting equipment.

Particular interest was shown in newly developed and modernized systems that had not been presented at previous exhibitions at the Fair. Accordingly, the following sections of this paper will highlight some of the most recent, upgraded, and notable equipment displayed at the event.

Heavy self-propelled mortar system 203 mm

One of the VTI newly developed system is a heavy 203 mm self-propelled mortar TSMV. This system is developed from a modified M-65 howitzer and re-barreled to an elongated caliber. This type of solution, combined with a wheeled chassis is designed to provide the system with the mobility to engage fortified positions, bunkers and entrenched targets. The system offers the ability to fire up to three rounds per minute, launching 100 kg projectile to ranges 6-12.5 km. An onboard ballistic computer and inertial system are installed to provide firing accuracy. The system offers an azimuth traverse of 23.5 °, enabling the weapon to shift fire without requiring relocation. An integrated automatic loader simplifies the gunner and assistant gunner's task. As for the ammunition, this 203 mm mortar caliber is uncommon so the developers created a complete munition-system package. A standard 100 kg shell consists of 27 kg of plastic explosive, reaching maximum range of 12 km with a muzzle velocity of approximately 400 m/s. This projectile can create a continuous damage zone of 75 m on impact. Planned munitions include cluster, thermobaric and active-reactive (rocket-assisted) rounds to extend range. System is mounted on a FAP 6x6 wheeled chassis with an armored cabin, aiming to balance protection and mobility and it is crewed with four people: driver, commander, gunner and assistant gunner.

Figure 2. Heavy self-propelled mortar system 203 mm at PARTNER 2025

Modernized BTR-80A

Modernized version of the BTR-80A, featuring new armored plates, a stabilized 30 mm cannon and a counter-drone jamming system, while retaining its amphibious capability was unveiled at the PARTNER 2025 exhibition. Adding new armored plates mounted to the frontal arc and along both sides of the hull is a key feature of this modernization. These plates offer enhanced ballistic and fragmentation resistance without compromising flotation. Internally, the modernized system follows the traditional configuration. System is crewed by three people: driver, commander and gunner. This modernization retains the side entry design, a single door split into two parts (an upper and a lower half) located on each side of the hull. This layout allows troops to exit while the vehicle remains partially covered. Firepower has been sharply improved. The stabilized 30 mm 2A72 automatic cannon, fed by a dual-feed system can engage armored targets at up to 2 km in day light and around 800 meters at night, while high-explosive rounds reach out up to 3 km. The coaxial 7.62 mm machine gun provides suppression at 1500 meters. Full 360° traverse and elevation from -5° to +70° enable engagements across varied terrain, from urban zones to elevated targets. The vehicle is also wired for the integration of Kornet anti-tank guided missiles extending strike capability to ranges up to 8 km. One of the most notable addition is a counter-drone jamming system mounted across the roofline and rear part of the vehicle. Designed to disrupt UAV control links and data transmission, it can be operated by a commander without interfering with mobility or weapon system.

Figure 3. Modernized BTR-80A armored personnel carrier at the military parade in Belgrade

Military Technical Institute presented a combined Vrabac–Osica drone package on Isuzu platforms at the Partner 2025 exhibition. The setup pairs Vrabac for short-range reconnaissance and target cueing with Osica, a loitering munition using a shaped-charge derived from the M79 Osa, providing precise anti-armor strike from a light vehicle team.

Osica is described as an autonomous drone intended for action against opposing forces. The text presents it as a precision solution to defeat armored vehicles, using a shaped charge derived from the OSA anti-tank system. In order to search for and engage targets, Osica carries a fixed ultra compact Full HD camera and a video processor. Target detection relies on artificial intelligence techniques, and the attack can be fully autonomous through video tracking. Take-off is automatic from a light pneumatic launcher.

Vrabac is a compact air vehicle intended for reconnaissance, surveillance, and monitoring of the airspace by day and night. The institute cites wildfire detection, surveillance of sensitive road corridors, and inspection of power lines and oil pipelines. Guidance is autonomous. Take-off is automatic, either by hand launch or with an elastic rope depending on available space. In flight, the aircraft follows waypoints, it can orbit over a designated point, and transmit stabilized imagery under camera control. Recovery uses a parachute or an airbag, with an emergency landing mode provided.

Figure 4. Vrabac reconnaissance UAV and the Osica loitering munition integrated on a light Isuzu vehicle

Tactically, the set forms a small unit package carried on a truck, quick to deploy, and intended for local ranges. A patrol can hand-launch Vrabac to look beyond a terrain mask or examine a road segment, then keep it over a point of interest. If a target that meets the rules of engagement appears, the Osica system is fired from the pneumatic rail, with video processing and assisted detection designed to reduce operator workload. Short ranges simplify links and keep the air vehicles close to the support truck.

Bringing two different solutions onto a single launcher creates a useful tactical switch at platoon or company level. The Vrabac sensor provides persistent observation, route search, and target confirmation, while Osica delivers the immediate terminal effect with a shaped charge. Sharing the same rail and the same fire control reduces idle time between detection and shot, limits logistics and training, and avoids multiplying specialized kits. The team keeps a common architecture, moves from one to the other without reconfiguring the console, and retains continuity of video data for identification and then engagement. This continuity shortens the decision loop, which matters when windows of opportunity are brief at choke points, road ramps, or in the vicinity of infrastructure.

A similar concept was also applied to the Stršljen system. Stršljen is a mobile loitering munition system consisting of four single-use loitering drones, four launch/storage containers, and a control station. The system is designed for tactical mobility and rapid deployment in various operational environments. Each drone has a take-off weight of about 16 kg, it is electrically powered, it reaches speeds of up to 160 km/h, operates at altitudes up to 500 m, and has an endurance of over one hour with a range exceeding 50 km. It carries a warhead weighing more than 5 kg (HEAT/fragmentation) and is equipped with an electro-optical sensor for target search, identification, and autonomous engagement. Flight control is provided by an onboard computer developed by the Military Technical Institute, with interoperability with other domestic systems (Vrabac, Osica, Senka). The system can be launched on the move, improving crew survivability and reducing exposure time.

Figure 5. Stršljen launcher mounted on an ISUZU vehicle

Mounted on a commercial Isuzu pickup truck, Stršljen emphasizes mobility, ease of logistics, and operation from secondary roads. While this improves flexibility and redeployment speed, it also limits crew protection and off-road performance. Operationally, Stršljen is intended for precision strikes against tactical targets such as light armored vehicles, temporary command posts, and troop concentrations, particularly when air or artillery support is unavailable.

Counter UAV systems

The KOBAC family of counter-UAS systems is conceived as a modular and scalable solution, comprising several variants adapted for integration on different platforms and operational needs. In addition to the fully featured Kobac-1 configuration, the concept includes lighter and more compact variants designed for installation on a wide range of vehicles, combat platforms, and systems.

Kobac-1 is an integrated counter-UAS system that combines an MHR radar, radio-reconnaissance sensors, and AI-supported software for automatic detection and classification with a modular radio-jamming suite. The system is designed to establish a protective zone of roughly 4 km and it can apply jamming either directionally (by sector) or omnidirectionally, allowing commanders to balance coverage and emission control.

Figure 6. Kobac-1 counter UAV systems

The kit links multiple sensor types to shorten the detection-to-engagement cycle and increase detection probability. It includes a reconnaissance radar, radio-reconnaissance and jamming subsystems, an antenna array, and two operator workstations with dedicated software. Surveillance and radio reconnaissance cover the 400–6000 MHz range with fine frequency resolution, while jamming is implemented through six modular bands (400–470 MHz, 800–1000 MHz, 1164–1610 MHz, 2200–2500 MHz, 3400–3800 MHz, and 4900–5900 MHz), each with approximately 50 W output power. Supported techniques include sweep, multisweep, external carrier, and deception jamming, enabling disruption of UAS command-and-control links, telemetry, and navigation signals.

A dedicated navigation-band jamming module provides GNSS denial capability by targeting satellite navigation frequencies between 1164 and 1610 MHz. This allows Kobac-1PR to degrade or deny positioning and timing information relied upon by many commercial and tactical UAS, potentially forcing simpler platforms into failsafe modes such as return-to-home or landing. In operational use, GNSS denial is combined with command-and-control disruption and multi-sensor detection to reduce the effectiveness of drones employing inertial navigation or alternative guidance methods and to avoid unpredictable behavior caused by GNSS disruption alone.

Within this framework, the Kobac-2 system is intended for the automatic detection and identification of UAV communication and control radio links, as well as for radio jamming of communication, control, and navigation channels used by short-range UAVs. Kobac-2 is optimized for integration onto various combat vehicles, armored platforms, and mobile systems, providing a flexible counter-UAS capability tailored to unit-level protection.

The Kobac-3 kit, also referred to as an anti-drone rifle, represents a lightweight and man-portable variant within the KOBAC family. It is intended for the detection and neutralization of short-range unmanned aerial vehicles and is optimized for close-range force protection and point defense.

The system integrates a radio-frequency sensor for threat detection with a radio jammer designed to disrupt UAV communication and navigation links. In addition to electronic countermeasures, Kobac-3 incorporates a 40 mm RBG hand-held grenade launcher using specialized counter-drone ammunition, providing a kinetic engagement option when the electronic effects alone are insufficient.

Figure 7. Kobac-3 counter UAV systems

By offering multiple configurations with differing levels of sensor integration and jamming power, the KOBAC family enables forces to select solutions ranging from simplified vehicle-mounted systems to more comprehensive, multi-sensor installations. This approach allows effective protection of maneuvering units, critical assets, and columns on the move, while denying or degrading the enemy's ability to employ UAVs for reconnaissance, targeting, or attack.

RAVEN 145 Loitering area denial weapon

This weapon represents a low cost and long-range surveillance/strike weapon intended for real time surveillance and strike on a wide range of targets beyond the forward edge of the battle area, with powerful tandem shape charged warhead with penetrability of more than 1000 mm armored steel, behind ERA. The use of this weapon is the destruction of tanks and other armored vehicles, common posts, artillery fire positions, live force and other moving or stationary targets, patrol boats and drones.

The main characteristics of this weapon are:

Range 150+ km at 150 km/h (45 m/s)

- Max. flying height (ceiling) 2000 m
- Initial mass 36 kg, loaded (21 kg, unloaded)
- Load/Workload, mass 15 kg
- Drive Launching powered by a rocket motor
- Flight powered by petrol motor
- Drone dimensions Length 2.2 m Wing span 4.2 m Height, with booster 0.4 m.

Figure 8. Raven 145 Loitering area denial weapon

KOMARAC-2 FPV drone

Komarac-2 is a FPV drone armed with tandem charge heat warhead of 90 mm calibre. Designed as a single-use, first-person-view (FPV) attack drone, the Komarac-2 allows its operator to guide the munition to target via live video feed before executing a precision strike using a shaped-charge warhead. In addition to armour-piercing capability, the warhead incorporates an external fragmentation sleeve embedded with steel balls, enhancing lethality by producing localized anti-personnel effects upon detonation. A light quadrotor chassis with carbon plates carries the 2.2 kg warhead on the centreline, with a compact electric power module and a nose camera providing the view. The baseline characteristics: at least 2 km of range and a minimum of 3 minutes of flight time, for a particular mission profile, point-to-point, low altitude and minimal loitering.

Figure 9. Komarac FPV Drone

Conclusion

Those interested in exploring more beyond the equipment displayed at the exhibition were invited to the Conference Hall for additional lectures. For the second time at this event, alongside the standard static demonstrations of recent innovations, an academic program was introduced, featuring lectures on topics of high relevance to both technical and military audiences.

Renowned professors from various universities delivered presentations, while local and international industry representatives showcased developments in modern warfare technologies. This combination of academic insight and practical demonstrations generated significant interest and contributed to the overall success of the exhibition.

All lectures and presentations were open to both local and foreign participants, with materials prepared in English and Serbian. The program was organized into thematic sections throughout the week, complementing the activities in the main exhibition hall.

PARTNER 2025 proved to be an outstanding platform for promoting the Serbian defense industry, resulting in numerous productive contacts and the initiation of cooperation on several projects with foreign partners. The Fair further confirmed its role as the leading event of its kind in the region.

The next PARTNER Fair is scheduled for 2027, when the realization of several projects currently in development or testing phase is expected. These future exhibitions are anticipated to showcase systems and solutions that were not yet ready for presentation at the 2025 exhibition.

12. sajam naoružanja i vojne opreme ”PARTNER 2025. ”