

DEFENSE & SECURITY



Whatever You Need



BARS

ROBOTIC COMPLEX



The robotic complex “BARS” is a reconnaissance-command vehicle designed for passive reconnaissance and combat robots control.

The workplaces of the complex operators are equipped with an automated monitoring and control system “Alliance Bars”, which creates a real-time photo-target situation on an area digital map, and communicates with higher-level and interacting command posts.

The interaction of the complexes is based on the MESH topology, which transfers control of combat robots among reconnaissance-command vehicles to concentrate the efforts of operators on the most important direction.

Wired and wireless communication lines support (Ethernet, Optical SFP, xDSL, RS-232/422/485, VHF, HF, Wi-Fi) allows the complex to be easily integrated into existing automated control systems of any level (for example, mobile unified battery command station “Ranzhir-M”, “Polyana-RB” and others) for the exchange of data on the air situation in 24/7 mode, thereby preserving the service life of the reconnaissance equipment of air defense system.

The complex creates a protected perimeter in the shortest possible time, providing the possibility of covering not only stationary, but also mobile objects, due to the mobility of combat robots.

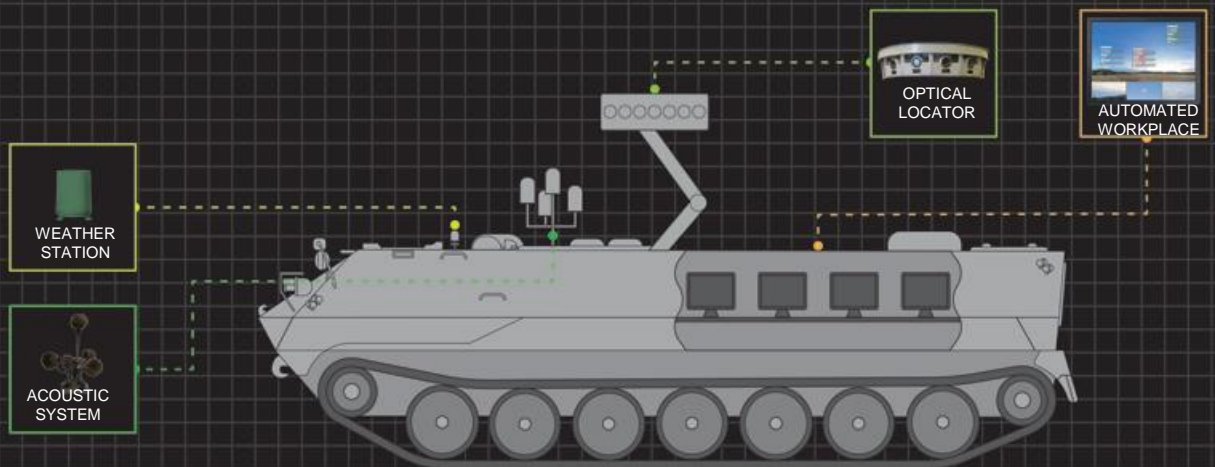
The system consists of:

- reconnaissance-command vehicle, performing the role of a mobile command and reconnaissance station;
- combat robots providing fire destruction of air and ground targets;
- communication facilities, exchanging data both within the system and with interacting and higher command posts;
- transport filling machine, providing transportation of combat robots and ammunition.

System tasks

- reconnaissance in the interests of the fire destruction means included in the system;
- reconnaissance in the interests of interacting units;
- defense of important stationary objects, air defense positions, fire support of artillery and temporary troops deployments;
- fire support of mobile groups and columns;
- counter small UAV actions.

RECONNAISSANCE-COMMAND VEHICLE «BARS»

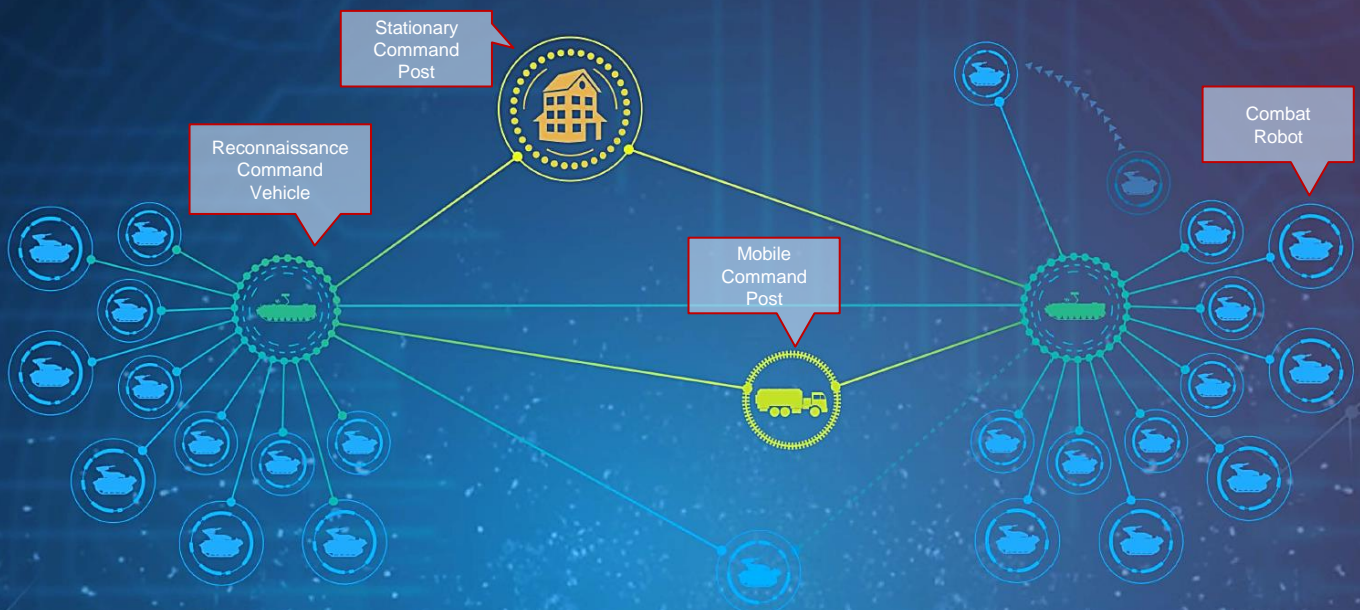


The **optical locator** is a passive system for airspace reconnaissance around the clock in an instantaneous field of view of $360 \times 10^\circ$, as well as automated detection, identification and targets tracking with their exact coordinates.

The **acoustic system** is designed to monitor noise events and identify air targets with real time positioning of an accuracy sufficient for their fire destruction. The circular reconnaissance sector allows the system to quickly detect multiple targets from different directions.

Unified **automated workplaces** of operators solves the following tasks:

- search, acquisition and tracking of air targets;
- target designation and target distribution;
- remote control of combat robots;
- data exchange with a higher command post.



OPTICAL LOCATOR «BARS»

The **optical locator** is a multispectral system that performs reconnaissance of air and ground spaces 24/7, automatically detects, identifies and tracks targets at distances up to 20 km with their exact coordinates.

These features preserve the service life of radar detection means.

Cutting-edge software processes multiple targets and generates data about them in the form of target designation for attached firepower and external subscribers.

Channel	Television	Thermal Vision
Type of receiver	CMOS NIR-Enhanced	Uncooled micro bolometer 17µm
Spectral sensitivity	0.4-1.1 µm	8-14 µm
Receiver resolution	52000x1200	21000x480
Instantaneous field of view (IFO)	360°x10°	
Tilt scanning	-10°..70°	
Frame rate	10 Hz	
Power supply	19-32 V	
Operating temperature range	-40°C..+50°C	
Locator lift height	up 6 m	
Coordinate accuracy:		
- angular accuracy	±0.05°	
- range accuracy	±10%	



Coordinates
52.818291°
25.714596°
 Azimuth: **287.5°**
 Distance: **6056.4**

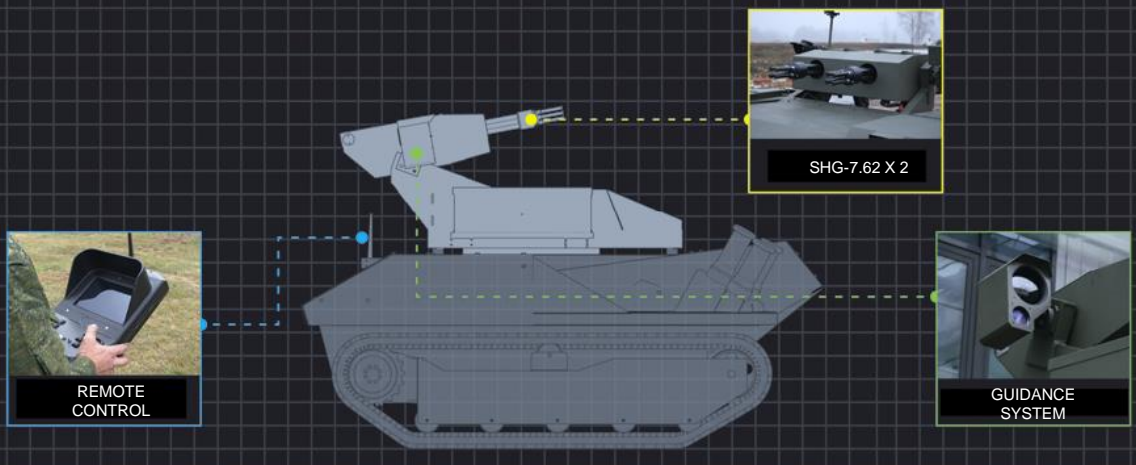


Coordinates
52.818291°
25.714596°
 Azimuth: **287.5°**
 Distance: **6056.4**



Detection
 Recognition
 Identification (on the STANAG 4347)

COMBAT ROBOT «BARS»



Optical guidance system detects air and ground targets in a wide field of view around the clock in a passive mode. Cutting-edge software automatically locks on a target and calculates its parameters for fire destruction

Twin aircraft machine guns GSHG-7.62 have a high rate of fire and destroy:

- small-sized UAVs;
- low-flying air targets;
- enemy manpower.

Remote control is carried out by remote or stationary device at distances up to 5 km with the display of the exact position of the robot, speed and direction of its movement, as well as the status of all modules and systems.

The combat robot "BARS" performs the tasks of cover fire and defense of important stationary objects, air defense positions, artillery positions, fire support of ground assault groups.

Due to the highest rate of fire (12,000 shots / min) and high accuracy, the combat robot quickly and effectively destroys suddenly emerging small-sized UAVs, as well as the firing points and enemy manpower at ranges up to 1000m.

The turret of the robot is an independent combat unit and can be used autonomously, as a stationary firing point.

Destruction range

