



ALAS

Missile system launcher



The launcher is integrated onto a high mobility vehicle with off-road load capacity of 5t. Launcher crew consists of 2 members who are positioned in the vehicle cabin.

The main launcher subsystems are the Missile launcher set and the Ground control station - GCS.

Missile launcher set consists of:

- Load platform integrated with the vehicle chassis,
- Automated launcher support legs with hydraulic servo system for automatic, and back up mechanism for manual supporting legs motion,
- Launching platform traverse mechanism with hydraulic servo system for automatic traverse motion. Traverse angles $\pm 100^\circ$ respect to longitudinal vehicle axis. Angular laying speed in traverse motion is from 3 to 5 $^\circ/\text{s}$
- Launching platform with elevation mechanism powered by hydraulic servo system for automatic elevation of the platform. Elevation angles obtained are between 0° and 60° . Angular laying speed in automatic mode in elevation is from 0.5 to 3 $^\circ/\text{s}$.
- Sensor set - position and navigation (GPS positioning and north finding system, and INS), slope indicating sensors for the vehicle and the azimuth and elevation sensors (encoders) for launch platform
- Launch platform servo drives control electronics
- Automated launcher cover with mechanism.
- Electrical power supply system with the supply panel in the vehicle cabin
- Electronic and manual trigger for missile launching from the vehicle cabin or remotely, up to 50m from the launcher, by cable
- Meteorological probe with automatic data transfer to GCS
- VHF/UHF radio within BCP network

Ground Control Station (GCS)

The GCS is located in the launcher vehicle cabin in front of the co-driver's seat. It is carrying out activities related to commands, target and other data received from BCP, firing mission verifying and its distribution to the missiles onboard computers, implementation of missile prelaunch procedures, launcher platform positioning, and missile containers controlling, firing and missile guiding. The operator of the GCS is also the launcher commander.

The GCS is equipped with two consoles, the first is the client of the battle management system (BMS) and is connected via vehicle radio set to the BCP, and the second is ALAS-C Mission computer-console for controlling all ALAS-C subsystems, i.e. missile, launcher and containers mechanisms.

GCS system hardware consists of the next main parts:

- Ruggedized BMS(Battle Management System) computer
- Ruggedized ALAS mission computer with special peripherals needed for interfacing with missile and launcher equipment
- Multifunction display with 28 control programmable buttons and 2 encoders
- Missile control joystick (utilizes homing head and manual control mode flight)
- Missile throttle control
- Seeker control panel
- Missile container selector
- Devices for launcher and missile container controlling:
- Position control joystick
- Switch for launching platform laying automatic/manual mode and manual lock control
- Fiber-Optics on-board communication system
- Flight recording system (intended to be used in post flight processing)
- Power distribution and commutation electronics
- Software packages of the GCS provides intuitive user interface for easy learning and fast response on threats in hazardous environment and situations.

