HBA SCOUT® is a robot designed for quick reconnaissance of field and hard-to-access places. Owing to its modular structure, it is possible to use it as a mobile platform for inspection of, e.g. vehicle chassis or narrow rooms. When the manipulator is mounted on the mobile base, the robot lifts objects up to 5 kg.

Special features of the robot include: excellent manoeuvrability and high speed (7 km/h). Owing to its specific drives, the robot efficiently travels across uneven terrain and obstacles of inclination angle up to 45°. The robot’s wheels are easily removed, which allows for a reduction of the robot’s overall dimensions. Small weight and compact size facilitate transportation and enable carrying the robot in, e.g. a backpack.

The robot is equipped with 4 cameras with IR LED illuminators or white LED light, therefore it is able to carry out operations in various lighting conditions. Optional use of fibre optic transmission enables the robot to operate at significant distances, even in an environment of high electromagnetic noise level.

HBA SCOUT® mobile robot is designed to work with a variety of accessories, which include: disrupters (e.g., RE 70M3 Plus - Chemring, Proparms Recoiless 12.5 mm and 20 mm), shotgun (e.g., Benelli), X-ray, explosives trace detector, chemical contamination sensor, active winder with fibre optic cable, main for remote detonation of explosives.
HBA SCOUT® mobile robot

Dimensions (L x W x H):
in stowed position:
  with wheels, manipulator and camera: 67x54x57 cm
  with manipulator and camera, without wheels: 66x40x56 cm
  height of mobile base:
    without manipulator and camera 21 cm
    without manipulator, camera and wheels: 20 cm
Weight (without accessories):
of the robot with manipulator, main camera and battery: 27.5 kg
Radio transmission range: up to 800 m
Operating time (mission-dependent, possibility of quick battery change): approx. 2 h
Speed (two ranges):
  operating mode: up to 1.8 km/h
  normal mode: up to 7 km/h
Protection class: IP 65
Battery: LiFePo4; 33 V
Battery capacity: 5 Ah
Approximate charging time:
  (batteries identical for robot’s mobile base and control panel batteries, possibility of quick replacement) 2 h
Drive system: track-wheel with articulated front flippers

Mobility:
  Overcoming vertical obstacles: up to 20 cm
  Climbing stairs: up to 30°
  Climbing slopes: up to 45°
  Acceptable lateral tilt: up to 35°
  Clearance:
    with wheels 6 cm
    without wheels 5 cm
Manipulator:
  Maximum lift capacity
    close-in at the front: 5 kg
    fully extended at the front: 2.5 kg
  Maximum reach
    vertical:
      from the ground: 1.5 m
      leaning on front flippers: 1.65 m
    horizontal:
      from the edge of the tracks: 0.84 m
      from the rotation axis: 1.17 m
  Number of degrees of freedom (remote-controlled): 2
  + clamp of gripper, optional manually extended telescopic arm and movable wrist of gripper
  Clamp opening: 20 cm
Cameras:
  4 pcs.
  - Main: moving PTZ camera, colour, 22x optical zoom, with IR LED illuminators or white LED light, with variable focal length
  - Motion range of the camera: 350° on the vertical axis, 150° on the horizontal axis
  - Gripper: colour, with IR LED illuminators or white LED light, with integrated heater, with a possibility of quick removal or change of position
  - Front: drive, colour, with IR LED illuminators or white LED light, with integrated heater

Additionally, the mobile base is equipped with:
  a waterproof microphone 2 pcs.
  a waterproof speaker 1 pc.

Connectors:
  For accessories, manipulator, fibre optic, diagnostics

Control Panel

Dimensions (L x W x H):
during operation: 52x50x50 cm
when closed: 52x36x18 cm
Weight of control panel: 12 kg
Operating time: 4 - 5 h
Battery: identical with mobile base batteries, equal parameters
  LCD screen: colour 15"

Connectors:
  Audio/Video In/Out, fibre optic, headphone, microphone, diagnostics

Standard equipment:
  - External mobile base and control panel battery charger
  - Diagnostics device
Optional equipment:
  - Handle for recoilless disrupter with a camera and laser pointers (RE 70M3 Plus – Chemring, Proparms Recoilless 12.5 mm and 20 mm *)
  - Handle for shotgun with a camera and collimator sight (Benelli M4 Super 90*)
  - Handles for X-ray (Vision-X MK5, Dimap *)
  - Handle for explosives trace detector (M0-2M *)
  - Handle for chemical contamination sensor (AP2C*)
  - Interchangeable jaws (shaped)
  - Manipulator with manual extension and movable wrist of gripper
  - Passive fibre optic winder, up to 300 m
  - Active fibre optic winder, up to 300 m
  - Main for remote detonation of explosives
  - Set of external antennas
  - Negotiation kit (requires fibre optic control)
  - Digital audio/video recorder
  - Remote control - small control panel
  - Spare battery for control panel and mobile base
  - AC power adapter for control panel 110 V - 230 V
  - Relay station (requires the installation of fibre optic cable or passive fibre optic winder)
  - Device for breaking windows
  - Transport basket

* other on request

We declare willingness to modify the robot and optional equipment according to the user's needs.