



**SIZE AND WEIGHT – VEHICLE:**

Weight (without payload or accessories) - 63kg  
 Broken down into:

Chassis ..... 27kg  
 Battery Pack ..... 8kg  
 Extending Arm and Payload Head ..... 28kg

Size

Width ..... 417mm max  
 Length ..... 758mm max (in drive configuration)  
 Height ..... 504mm max (in stowed configuration)

**MANOEUVRABILITY AND SPEED:**

Stair Climb/ Descend capability, using auto configuration, stair angle +45 ° with max raiser & tread of 300mm. Steep angles possible with manual configuration

Single obstacle climbing height of 400mm. Greater heights achievable with suitable driver training.

Ground clearance: Tracked 60mm, Wheeled 70mm.  
 Auto braking when drive command released.  
 Ability to turn within its own diagonal length.

Speed (proportional control):  
 Tracked 0 to 5kph in forward & reverse  
 Wheeled 0 to 7kph in forward & reverse

**PAYLOAD CARRYING AND DEPLOYMENT:**

Extending Arm:

Maximum vertical reach "tiptoe" mode - 2.6m, drive mode 2.1m.  
 Maximum horizontal reach - 2.1m

Position of arm:- Adjustable from +80 degrees (Vertically upwards) to minimum -7 degrees (below horizontal).

Turntable:- ± 180 ° from centre axis

Data port to allow communication with externally mounted sensors or accessories.

12V and 24V DC power supplies for externally mounted sensors or accessories

Payload Carrying Head (situated at end of Extending Arm):

Elbow joint provides additional degree of freedom of movement with 400mm reach provided, allowing reach over obstructions or into voids (overhead lockers, car trunks etc).

Auto head level facility:

Payload Head allows quick change mounting of disruptors, de-armers, manipulators, sensors and other accessories. Disruptor or other accessory can be moved independently to provide clear working space for the manipulator

Maximum payload 10kg arm extended, 40kg arm retracted.

Four firing circuits to allow initiation of disruptors or other accessories.

Manipulator has jaw capable of opening from 0 to 100mm. Continuous rotation capability, grip force - 10kgf/cm<sup>2</sup>  
 Optional manipulator 0 to 230mm jaw opening.

**POWER SYSTEM:**

Vehicle - 24V Ni mh battery system, endurance approx 2 hours from full capacity. Optional Li-ion battery pack available for greater endurance.  
 Control Station - Li-ion battery system, min 2 hours continuous use.

**VISION / CAMERA SYSTEM:**

Four cameras as follows:

Colour, wide angle with integral LED IR lighting in 3 positions:  
 1 forward facing drive camera, 1 rearward facing drive camera both mounted in chassis, 1 forward facing situation awareness camera mounted in base of mast.

1 Pan & Tilt colour zoom (300 X) task camera mounted in the Payload Head with white and IR LED light ring. Auto I/R configuration at low light levels.

Optional extra camera position on chassis lid (if no turntable fitted).

**CONTROL STATION KEY FEATURES:**

Brief case style Control Station:

Weight ..... 24kg (inc battery)  
 Size ..... W - 440 mm, L - 570 mm, H - 291mm

Hard controls:

- Dedicated drive joystick
- Arm / Head selectable control joystick
- Firing Circuit Control
- E-Stop

10.5" (265mm) Touch Screen for sub functions, vehicle status and sensor feedback (including 3D mimic).

17" (430mm) TFT monitor, with 4 way picture in picture display facility for video images.

The Control Station can be powered between the ranges 10V to 36V DC or 110V to 230V ac.

Other facilities include:

- Video & Audio out (2 way audio with COFDM radio system)
- Fibre Optic connection
- Speaker/headphone/microphone connection
- Ethernet connection
- USB connection
- Antenna connections

Vehicle mounted microphone, 2 way audio with COFDM radio system.

**COMMAND DATA LINK:**

Radio control or fibre optic cable link. The COFDM radio system can be configured to meet user requirements, operational range of greater than 300m LOS. With suitable antenna up to 1Km can be achieved.

Fibre optic cable is 150m as standard, with passive "feed under friction" spooler. Optional "intelligent" spooler to manage cable release and retraction.

**SERVICE PACKS:**

ABP are able to offer engineering solutions to incorporate user specified accessories and equipment. Various different standard sensor / accessory packs are also available:

**X-ray system** – Integrated into vehicle system via fibre optic cable. Various mounting options. Results can be displayed at the Control Station.

**Chemical Detector** – Available with a bespoke mount. Results can be displayed at the Control Station.

**Laser Range Finder**

**Quick Fit Wheel Kit**– 4 Wheels that fix quickly and simply onto the outside of the track system.



# GUARDIAN REMOTELY OPERATED VEHICLE

## TURNING VISION INTO REALITY

NSN 1385-99-173-8187

GUARDIAN is ABP's "next generation" small ROV.

It's unique combination of size, payload capacity, reach, dexterity, manoeuvrability, operability and ability to negotiate a wide variety of urban and rural terrain combined with its "future proof" modular/open architecture construction, eclipse the capabilities of current competitors.

It will provide a capable, versatile and upgradeable platform to meet the ever more demanding requirements encountered by its users.



