

# GUARDIAN MINI ROV



## KEY FEATURES

2.6m vertical reach or 2.1m horizontal reach for opening doors, searching aircraft overhead lockers or underneath bus seats

Wide range of EOD accessories and attachments such as cameras, X-ray systems, disrupters, CBRN sensors

Lifting / payload capacity of 30kg arm retracted or 10kg arm extended

Tracked or wheeled option to suit task and terrain

360 degree turning circle

Top speed of 4.5kph

Gap crossing upto 500mm

Climbs and descends stairs (only with tracks)

Four on-board cameras and GPS as standard

Control station with portable hand controller. 3D vehicle mimic interface.

Future proof open architecture and modular design

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**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 (can be disabled).  
 Ability to turn within its own diagonal length.  
 Speed (proportional control):  
 Tracked 0 to 2.7kph in forward & reverse  
 Wheeled 0 to 4.5kph in forward & reverse

**POWER SYSTEM:**

Vehicle - 24V NiMH battery system, endurance min 2 hours from full capacity.  
 Control Station - Li-ion battery system, min 2 hours continuous use.

**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).  
 Lifting capacity:  
 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, 30kg arm retracted.  
 Four firing circuits to allow initiation of disruptors and 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.

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## 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.

One extra camera socket for additional camera.

## 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. (3D mimic)

17" (430mm) TFT monitor, with 4 way picture in picture display 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
- Fibre Optic connection
- Speaker/ headphone / microphone connection
- Ethernet connection
- USB connection
- Antenna connections
- Vehicle mounted microphone

## 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:

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

Any accessory with serial data output.

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

