



## Intelligent ROV small sized iRobot „Packbot® 510 HazMat“ Art.-No.: 160267



### PackBot® 510 HazMat

The PackBot ROV is described in more detail in brochure 160268. In this case iRobot designed a configuration especially for dealing with HazMat situations detecting and identifying dangerous chemicals, radiological and organic compounds providing war fighters with critical stand-off information on range of missions:

- „HazMat“ Detection
- Surveillance/Reconnaissance
- Route clearance“
- Bomb Disposal ED-/EOD-

### Main features:

#### **Gas-Detection meter**

A combination of a PID (Photo ionization Detector) and a confined space monitor, the gas meter detects oxygen, combustible gases, volatile organic compounds, carbon monoxide, nitrogen dioxide, chlorine, hydro cyanide, ammonia and phosphine, (Manufacturer RAE Systems)

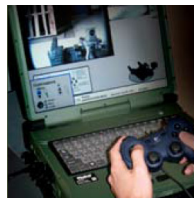
#### **Chemical Warfare Agent Detector**

Constantly samples the air for traces of nerve, blister, toxic industrial compounds, blood and choking agents. (Manufactured by Smiths Detection).

#### **Gamma Radiation detector**

Provides real-time constant sampling and alerts for gamma radiation. (Manufactured by Canberra)

Operation is carried out via a 15“ „Rocky“ MILSpec Laptop (AMREL) in conjunction with a hand controller. Modelled after video-game style controllers, these make the ROV easier to use, resulting in less training time and faster operation in the field. Pre-set poses, available at a touch of a button enable fast positioning of the ROV. Plus, the robot operator always sees the operating environment and knows the position of the robot thanks to on-screen views of real-time video from multiple high resolution cameras and 3-D graphics showing the robot's orientation



AMREL (Rocky) OCU



PackBot510 HazMat



## Technical Data

<b>Chassis</b>	
<b>Height</b>	407 mm, Manipulator stowed 2.210 mm, Manipulator extended
<b>Width</b>	406 mm without Flipper 520 mm with Flipper
<b>Length</b>	670 mm with Flipper stowed 870 mm with Flipper extended
<b>Weight</b>	32 kg, complete incl. BB2590 Batteries
<b>Environment</b>	All weather
<b>Speed</b>	2,2 m/s crawling 9,3 km/h maximum
<b>Microelektronics, Sensors</b>	Mobile Pentium® PC, Compact-Flash-memory SDRAM with overheat protection compass, accelerometers and inclinometers
<b>Totale capacity</b>	Up to 21 + kgs for variable accessory modules
<b>Battery endurance</b>	8+ hrs depending tasks and batteries Up to 10 km of travel
<b>Communication</b>	RF: Digital 2,4 GHz Up to 500m/1.000m LOS with long range antenna (optional)
<b>Manipulator</b>	
<b>Reach</b>	2.082 mm horizontal
<b>Lifting capacity</b>	4,5 kgs fully extended 13,6 kgs in distance of 0,5 m from chassis
<b>Sensors, Accessories</b>	8 pay load ports 1 Firing option
<b>8 Freiheitsgrade</b>	Shoulder rotation: cont. Shoulder pitch: 220° Joint 1: 340° Joint 2: 340° Gripper rotation: Cont. Gripperopening: 180° Head rotation: Cont. Head tilt: 220°
<b>Video-System: 4 light enhancing video CCD cameras</b>	
<b>Main camera</b>	Head mounted pan/tilt :cont./220°, CCD-color, zoom 312x, Autofocus, stabilized, Low light enhancement.
<b>Drive camera</b>	Chassis mounted, wide angle for forward, up, and reverse. Can view arm position from below.
<b>Arm camera (2)</b>	Provide enhanced views and operation. Ont camera points at the head allowing for maneuvering in tight situations. The second camera points at the gripper on the manipulator, enabling easier handling of objects.
<b>Illumination</b>	Variable intensity LED provide both white and IR LED arrays for illumination in all ambient light conditions



<b>OCU</b>	
<b>Laptop (MIL)</b>	AMREL "Rocky"
<b>Dimensions</b>	351 mm x 116 mm x 78mm (W x L x H)
<b>Weight</b>	Approx. 6 kgs
<b>Environment</b>	All weather
<b>Screen</b>	15,1" XGA, anti reflective TTF LCD
<b>Input devices</b>	Keyboard and two hand controller
<b>Portabilität</b>	Pouch with carrying handle

<b>Software</b>	
	Aware 2,0
	Multi image display
	3D-active model of vehicle
	Gauge display of batteries and fiber
	Image-capture capability to USB
	Aux. USB, Ethernet, VGA
	2-way audio radio communication
	Power-saving sleep mode
	Multi speed ranges
	Multiple pre-set manipulator positions



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**Specifications are subject to change without notice!**