



Enhanced Awareness Payload (EAP) as shown on the iRobot PackBot 510 with FasTac Kit

The modular, mission-configurable, tactical unmanned ground vehicle

Modular Expansion

- Standard chassis and software
- Mission-dependent payloads and accessories
- Facilitates logistic, training and product support

Multiple Missions

- Surveillance / Reconnaissance
- Explosive hazard Identification and Disposal (IEDs / UXOs)
- Route Clearance

Fast Tactical Maneuvers

- Night and low-light maneuvers
- Gap bridging
- Stair climbing

- Identify roadside explosives and other IEDs...
- See and assess dangerous areas from safe standoff distances...
- Clear routes for infantry troops and convoys on the move...

The iRobot PackBot 510 with FasTac Kit, powered by iRobot's Aware 2.0 robot intelligence software, is a highly adaptable robot, quickly reconfigured based on the needs of the mission and the operator's preferences.

Enhanced Features

- Wide-angle drive camera
- Two-way audio
- Improved IR capability
- Improved lighting
- Improved Graphical User Interface (GUI)
- Optional accessory ports
- Modular expansion



PackBot 510 FasTac

Adaptable and expandable, the PackBot 510 FasTac is a mission-configurable robot that accommodates a wide range of payloads and sensors, including a dexterous manipulator. The robot's modular design enables ease of use, improved mission execution and flexible expansion.

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System Contents

- PackBot 510 Chassis
- Enhanced Awareness Payload (EAP)
- Attack Head Side Plate with accessory connector
- Small Arm Manipulator
- Camera Arm
- Two BB-2590/U Lithium Ion Batteries (RCV BB-2590/U Battery Kit included) or Two NiCad batteries
- 4.9 GHz Radio or 2.4 GHz Radio
- Picatinny Rail Clamp
- Rugged Laptop Operator Control Unit
- 2 Hand Controllers
- Rugged Equipment Case
- User Documentation
- Commercial License for Aware 2.0 robot
- Intelligence Software

EAP Specifications

Payload Dimensions: 10"Wx2.3"Hx9.75"L
Measurement on light:

- White: 90 lumens per LED, 2 total
- IR: 10 mW/sr per LED, 4 total

Camera:

- Color wide angle, 120° FOV
- Low light capable with IR sensitivity
- Primary video resolution, 320x240
- Secondary video resolution, 256x192

Connector:

- PackBot accessory connector (Video, USB, Power)

Specifications

- Microelectronics & Sensors
- Onboard mobile Pentium® PC, 256 MB
- SDRAM, onboard overheat protection, compass accelerometers, inclinometer
- Rugged Laptop OCU
- Length: 27" (68.6 cm)
- Width: 16" (40.6 cm) w/o flippers 20.3" (51.6 cm) w flippers
- Height: 16" (40.6 cm)
- Weights, Configuration Dependant: Approx. 46 to 60 lbs (21 kg to 28 kgs)
- Speed: up to 5.8 mph

Total Capacity

- Up to 5 available Payload Ports

Battery Endurance*

Configuration Dependent

Two (2) BB-2590/U Lithium Ion Rechargeable batteries

- 4+ hours of continuous runtime on one charge
 - Up to approx. 10 miles (20 km) of travel
- Two (2) Rechargeable NiCad Batteries
- 2+ hours of continuous runtime on one charge
 - Up to approx. 5 miles (10 km) of travel

Communications*

- RF: Fully digital 4.9 GHz
 - RF: Fully digital 2.4 GHz
- * Long Range Antennae (optional)

Small Arm Manipulator (SAM) Specification

- Extension: 42" (106.7 cm)
- Lifting Capacity: 5 lbs (2.3 kg) through full range of motion
- Degrees of Freedom: 4
- Shoulder Pitch
- Elbow Pitch

Wrist Rotation

- Gripper Open/Close
- Gripper Rotation: Continuous
- Gripper open: 180°

Camera Arm Specification

Targeting Head and Neck Specification

- Extension: 25" (63.5 cm)
- Able to view heights up to 41" (104.1 cm)
- Degrees of Freedom: 3
- Shoulder Pitch
- Pan
- Tilt
- Head Rotation: Continuous
- Head Tilt: 220

OCU Specifications and Capabilities

The ruggedized, lightweight 15" OCU provides operators with pre-set manipulator positions and 3-D active robot on-screen display, enabling operators to easily position and visualize the robot.

Size

13.5" (35.1 cm) W x 11.6" (29.4 cm) L x 3.1" (7.8 cm) H

Weight

Approximately 14 lbs (6 kg)

Environmental

All Weather Operation

Screen

15.1" (38.4 cm) XGA (1024 x 768) anti-reflective TFT LCD

Power

Removable 11.1V/660mAH Lithium-Ion

Battery

AC Adaptor 90V~240V 50/60Hz input. Complies with military power source AC 115V 400Hz

Software

- Multi-image display with full screen option
- Multiple pre-set manipulator positions
- Auxiliary USB, Ethernet, video output
- Two way audio communications
- Power-saving sleep mode
- 3-D active model of vehicle
- Image capture capability
- Gauge display of batteries
- Gauge display of fiber
- Multiple speed ranges
- Targeting-head tracking gripper
- Improved Graphical User Interface (GUI)
- Improved-Ease-Of-Use



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