



# PeopleBot

PeopleBot is a high-quality, differential-drive robotic platform designed for service and human-interface projects. Its elevated chassis and available power and I/O ports make it the perfect platform for interactive sensors and effectors.

The PeopleBot platform comes with 10 bumper elements, lower and upper SONAR arrays and IR break beams to detect objects between the elevated platform and the robot. With optional Laser Mapping & Navigation System and MobileEyes software, PeopleBot can map buildings and localize within a few centimeters while traveling within mapped areas. With the appropriate accessories, you can see the robot's view remotely, speak, play and hear audio, and send the robot on patrol.

## Product Features and Benefits

- **Easy to Use** - Comes assembled and integrated with its accessory packages. Software and hardware comes fully documented with additional help available through our product support team.
- **Pioneer Software Development Kit** - All Adept MobileRobots platforms include *Pioneer SDK*, a complete set of robotics applications and libraries that accelerate the development of robotics projects. Pioneer SDK is backed by our product support team.
- **Customizable** - Easily accessorize by choosing from dozens of supported and tested accessories that integrate with the robotic platform. Additional help is available for future upgrades or added accessories

## Available Packages

**Autonomous Touchscreen PeopleBot with Pan/Tilt/Zoom Camera** - PeopleBot Base, Onboard Computer with Wireless Ethernet, Laser Navigation and Guidance System, Speech and Voice Recognition Package, Pan/Tilt/Zoom Color Camera, Touchscreen Interface, Gyroscopic Correction System, Joystick, 3 Batteries, and High-Capacity Charger.

**PC PeopleBot with Gripper** - PeopleBot Base, Onboard Computer with Wireless Ethernet, Speech and Voice Recognition Package, Pan/Tilt/Zoom Color Camera, 2 DOF Gripper, Gyroscopic Correction System, Joystick, 3 Batteries, and High-Capacity Charger.

**PeopleBot Base** - Chassis, Power Train and MicroController only; includes elevated platform, 2 IR break beam sensors, 10 Element Bumper Array, Front and Rear SONAR Arrays and Front-Facing Upper SONAR Array, and one battery.

## Specifications

Construction	Body: 1.6 mm aluminum (powder-coated) Tires: Foam-filled rubber
Operation	Base Robot Weight: 21 kg Operating Payload: 8 kg
Differential Drive Movement	Turn Radius: 0 cm Swing Radius: 33 cm Max. Forward/Backward Speed: 0.8 m/s Rotation Speed: 150°/s Max. Traversable Step: 15 cm Max. Traversable Gap: 5 cm Max. Traversable Grade: 11% Traversable Terrain: Indoor, wheelchair accessible
Power	Run Time: 8 hours with 3 batteries (with no accessories) Charge Time: 2.4 hours Available Power Supplies: 5 V @ 1.5 A switched 12 V @ 2.5 A switched
Batteries	Supports up to 3 at a time Voltage: 12 V Capacity: 7.2 Ah (each) Chemistry: lead acid (sealed) Hot-swappable Batteries: Yes <i>* Batteries are accessible through hinged latched access panel for hot-swapping (continuous operation).</i>
MicroController I/O	System Serial 32 digital inputs 8 digital outputs 7 analog inputs 3 serial expansion ports <i>* Some ports may not be available if certain accessories are included with the robot.</i>
User Control Panel	MIDI programmable piezo buzzer Main power indicator Battery charge indicator 2 AUX power switches System reset Motor enable pushbutton

## Core Software - included with all research platforms

**ARIA** provides a framework for controlling and receiving data from all MobileRobots platforms, as well as most accessories. Includes open source infrastructures and utilities useful for writing robot control software, support for network sockets, and an extensible framework for client-server network programming.

**MobileSim** open-source simulator which includes all MobileRobots platforms and many accessories.

**MobileEyes** graphical user interface client for remote operation and monitoring of the robot.

**Mapper 3-Basic** tool for creating and editing map files for use with ARIA, MobileSim, and navigation software.

**SONARNL** provides sonar-based approximate localization and navigation.

## Accessory Support Software - bundled with purchase of robotic accessory

**ARNL** enables robust, laser-based autonomous localization and navigation.

**Robotic Arm Support** Pioneer arms are packaged with integrated software support.

**Speech Recognition and Synthesis Library:** Easy-to-use C++ development library for speech recognition based on the open source Sphinx2 system. Speech synthesis (text-to-speech) based on Cepstral synthesizer.

**ACTS Color Tracking System:** Software application which reads images from a camera and tracks the positions and sizes of multiple color regions. Information can be incorporated into your own software via ARIA.

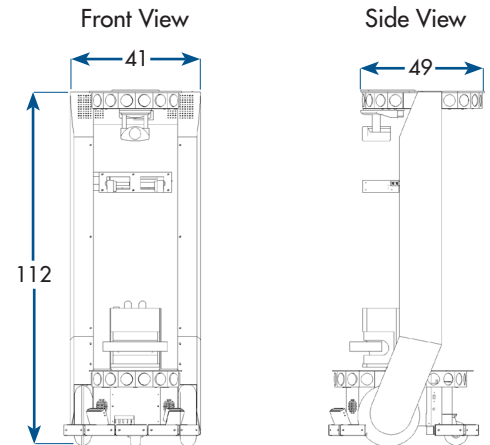
## Optional Industrial Grade Internally Mounted Computers

Mamba EBX-37 (Dual Core 2.26 GHz - 2-8 GB RAM)
6 X USB2.0 Ports
2 X PC/104+ Slots
4 X RS-232 Serial Ports
2 X 10/100/1000 Ethernet Ports
Onboard Audio & Video
Solid State Drive
Optional Wireless Ethernet

## Available Accessories:

- Laser-range finders
- Gyroscope
- Mono- and stereo-vision cameras
- Speakers and microphones
- Wireless serial to Ethernet for remote operation
- Joystick
- Robotic arms and grippers
- Many more...

## Dimensions (cm)



## Include our integrated and supported accessories with your PeopleBot.



## More Information:

See our website [www.mobilerobots.com](http://www.mobilerobots.com) for a full range of supported accessories or contact our sales department to discuss your application.



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