

## Seekur

Seekur is a large, all-weather robot that can traverse rugged terrain. Its four independently controlled wheels allow the platform omnidirectional steering capability. Seekur can easily be outfitted with heavy payloads supported with power and I/O accessibility. Choose from available accessories or easily mount your own custom instruments. The base robot comes complete with battery set and charging system, segmented bumper array, emergency stop switches, remote control unit, and a microcontroller with SeekurOS robot control firmware, as well as Pioneer SDK advanced mobile robotics development software.

Adept MobileRobots research robots are the world's most popular intelligent mobile platforms for education and research. Their versatility, reliability, and durability have made them the preferred platform for advanced intelligent robotics.

	Specifications
Construction	
	Body: Powder-coated aluminum
	IP Rating: IP-54
	Tires: 16 inch Pneumatic
Operation	
	Robot Weight: 300 kg
	Operating Payload: 70 kg
	Temperature Rating: -20° to $50^\circ$ C
Omnidirection	nal Steering
	Turn Radius: 0 cm
	Swing Radius: 83 cm
	Max. Forward/Backward Speed: 1.8 m/s
	Max. Traversable Step: 17 cm
	Max. Traversable Slope: 35% (unladen)
	Traversable Terrain:
	Indoor use: tile and flooring
	Outdoor use: pavement, grass,
	light snow, rocky terrain, and sand
	All-weather capable.
Power	
	Run Time: 3-8 hours
	(w/laser and 2 computers)
	Charge Time: 8 hours
	Battery Capacity: 100 Ah
	Battery Chemistry: NiCad
Software-Swit	rchable Power Supplies
	2 x 5 V @ 2 A regulated
	4 x 12 V @ 2 A regulated
	2 x 24 V @ 1 A regulated
	2 x 24 C @ 5 A raw battery
Wireless Con	nmunications Options
	2.4 GHz 802.11 b/g
	900 MHz Long Range Ethernet Bridge

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Microcontroller: Phytec MPC-565

#### **Product Features and Benefits**

- **Customizable** Includes mounting rails, readily accessible I/O and power ports for custom sensors and effectors. Easily accessorize by choosing from our line of supported and tested computers, cameras, lasers, and positioning instruments.
- Available Outdoor Navigation Package includes popular localization sensors such as GPS, IMU, laser range finder, and wheel encoder derived odometry. Included MobileRobots Outdoor Guidance System (MOGS) software library provides continuous localization, navigation, and dynamic path planning with obstacle avoidance.
- Holonomic Steering The Seekur is capable of driving forward like an automobile, or turning in place like a differential drive robot. The vehicle can move in any direction while independently controlling its orientation. Watch a video of the robot's steering functions on our website!

### Seekur

#### **Dimensions (mm)**





#### 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

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

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

**MOGS** fuses robot and GPS sensor data to guide your mobile robot outdoors.

**Robotic Arm Support** Robotic arms are packaged with integrated software support (inquire for details).

**ACTS Color Tracking System:** Software application to read images from a camera and track the position and sizes of multiple color regions. Information can be incorporated into your own software via ARIA.

#### Optional Industrial-Grade Internally-Mounted Computers (can support up to 5)

Mamba EBX-37 (Dual Core 1.2 GHz - 1 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 - 40 GB		
5 Port Ethernet Switch included		
Optional Wireless Ethernet		

#### **Optional Accessories:**

- Laser-range finders
- Mono- and stereo-vision cameras
- WiFi wireless Ethernet
- Robotic arms
- Joystick

- GPS & DGPS
- 6 DOF Inertial Measurement Unit
- Wireless 900MHz radio
- Many more...

# Include our integrated and supported accessories with your Seekur.

Here are some popular options to choose from:



**Outdoor Navigation** 



Vision and Mapping



Radio and WIFI

#### More Information:

See our website www.mobilerobots.com for a full range of supported accessories or contact our sales department to discuss your application.



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#### Specifications subject to change without notice.

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