



Seekur Jr

OUTDOOR RESEARCH PLATFORM

Seekur Jr is an all-terrain, all-weather four wheel skid-steer robot ideal for laboratory experimentation or outdoor operation. Seekur Jr is easily outfitted with large payloads, including sensor packages, robotic arms, or your own custom accessories. The robot comes complete with one battery and charger, segmented bumper array, emergency stop switches, joystick, a microcontroller with SeekurOS firmware, and 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. All research platforms are pre-assembled, customizable, and upgradeable, and will last through years of continued use.

Product Features and Benefits

RELIABLE - Construction is durable and rugged. Seekur's powerful motors can climb through rough terrain and its sealed aluminum body protects against severe weather. Easily handles the gaps, bumping, jarring, and other obstacles that hinder other robotic platforms.

EASY TO USE - Comes fully assembled and integrated with its accessory packages.

CUSTOMIZABLE - Includes mounting plates with tapped holes and readily accessible user I/O and power ports for custom sensors and effectors. Easily accessorize by choosing from many supported and tested accessories that integrate with your robotic platform.

TECHNICAL SUPPORT - Software and hardware come fully documented with additional help available through our product support team.

Specifications

Construction

Body: Powder-coated aluminum
IP Rating: IP-54
Tires: 16 inch Pneumatic

Operation

Robot Weight: 77 kg
Operating Payload: 40 kg
Temperature Rating: -5° to 35° C

Skid Steering Drive

Turn Radius: 0 cm
Swing Radius: 52 cm
Max. Forward/Backward Speed: 1.2 m/s
Max. Traversable Step: 12 cm
Max. Traversable Grade: 75%
Traversable Terrain:
Indoor use: tile and flooring
(may damage carpet)
Outdoor use: pavement, grass, snow,
rocky terrain, and sand
All-weather capable

Power

Run Time: 8 hours (tested with Computer and Laser)
Charge Time: 3 hours
Software-Switchable Power Supplies:
5 V @ 2 A regulated
12 V @ 2 A regulated
24 V @ 1 A regulated
20 A Unregulated Battery Power
(24 V Nominal)

Batteries

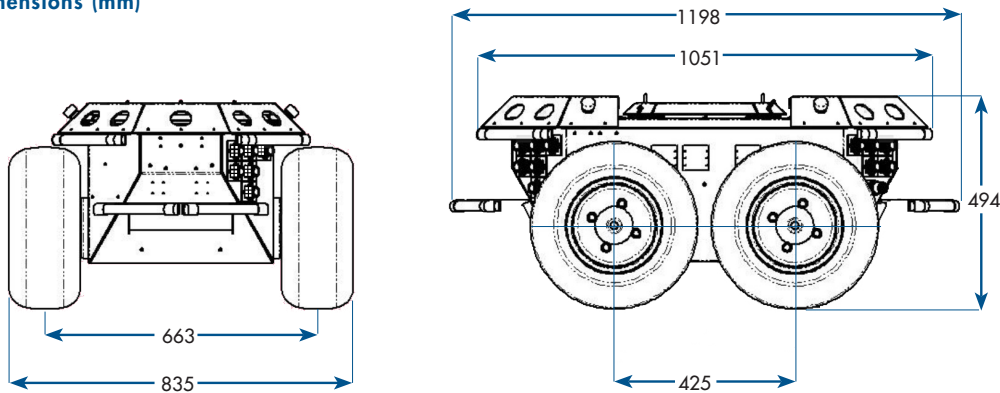
Supports up to 3 at a time
Capacity: 10 Ah (each)
Chemistry: NiMH

Note: Batteries are accessible through latched access panel for hot-swapping (continuous operation)

Microcontroller: Phytex MPC-565

SEEKUR JR

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 autonomous localization and navigation

MOGS fuses robot and DGPS sensor data to guide your mobile robot outdoors

Robotic Arm: Installed interface libraries allow joint-level commands, velocity configuration, status updates, and feedback

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 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 2)

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

Optional Accessories:

- Laser-range finders
- Mono- and stereo-vision cameras
- WiFi wireless Ethernet
- Robotic arms
- Speakers and microphones
- Joystick
- GPS & DGPS
- 6 DOF Inertial Measurement Unit
- Wireless 900MHz radio
- Many more...

Choose accessories to go with your Seekur Jr!

All accessories come integrated and supported. Here are a few popular configurations to choose from...

Outdoor Navigation Package



Integrated Manipulator Package



Vision and Mapping



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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