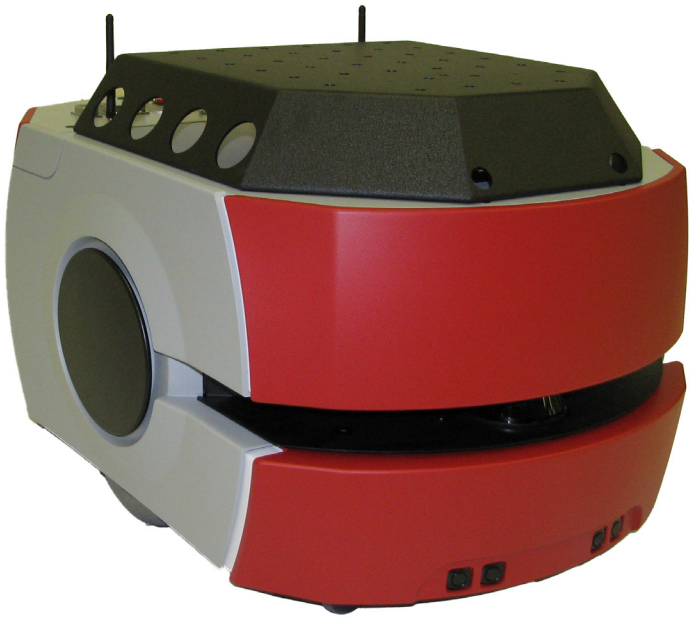


Pioneer LX
Mobile Research Platform

The Pioneer LX is an advanced mobile research platform based on the Adept Lynx AIV (Autonomous Indoor Vehicle). The robot is programmable, and easy to equip with sensors, effectors or custom accessories. The rugged Pioneer LX is designed to last for years of continuous service, carrying payloads of up to 60 kg.

As with other MobileRobots research platforms, developers can easily access the robot's on-board computer. Software libraries and tools are provided to speed the development of custom applications, and accessible I/O and power supplies make hardware integration easy.

With included laser guidance and navigation software, onboard computer and docking station, the Pioneer LX can be tasked with a continuous duty/charging cycle. It can map buildings and localize within a few centimeters while traveling in mapped areas.

Product Features and Benefits

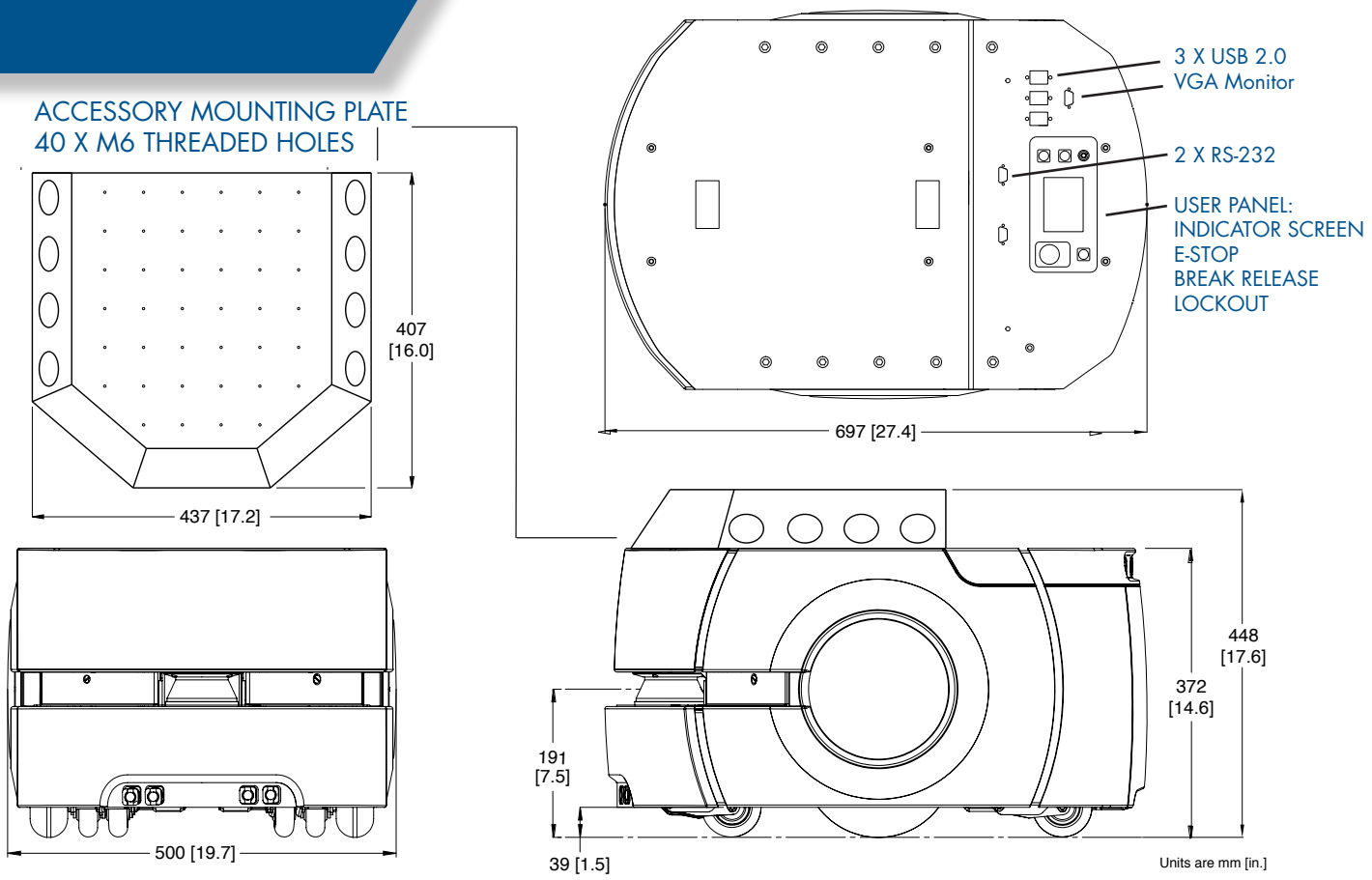
- **Reliable** - Designed for continuous industrial use, construction is very durable and rugged. Pioneer LX smoothly traverses power cords, elevator gaps, and ramp transitions which hinder other robotic platforms.
- **Pioneer Software Development Kit** - All Adept MobileRobots platforms include *Pioneer SDK*, a complete set of programs and libraries that accelerate the development of robotics applications. Pioneer SDK is backed by our product support team.
- **Customizable** - Expand the Pioneer LX's capabilities by choosing from a selection of supported and tested accessories that integrate with the robotic platform. Help is available for future upgrades or added accessories.

Specifications

Weight	**60kg (132lbs)**
Payload	
Level Surface	60kg (132 lbs)
20% Grade	20kg (44 lbs)
Power	
Battery	24VDC LiFePO4
Capacity	60Ah
Run Time	13 hours (Continuous)
Recharge Time	3.5 hours (5:1 ratio)
Battery Life	7 years
	16 hr/day, 5 days/wk
Charging Station	Automatic or Manual
Auxiliary Power	5,12, 20 VDC
Mobility Overview	
Maximum Speed	1.8 m/sec
Tire Composition	Non-Marking Rubber
Steering	Differential
Wheels	2 Drive Wheels
	4 Casters
Swing Radius	343 mm (13.5 in.)
Turning Radius	0
Traversable Gap	15 mm (0.6 in.)
Traversable Sill	15 mm (0.6 in.)

PIONEER LX

DIMENSIONS



Pioneer LX includes:

- Autonomous Navigation and Mapping Software
- SICK S300 Laser Scanner
- Joystick (used for Mapping, Re-location)
- Front and Rear Sonar, Forward Bumper Panel
- On-Board Computer (Linux or Windows)
- Wireless Ethernet Communication
- Color LED Status Indicator Rings
- Accessory Mounting Deck (Removable)
- Docking station for Autonomous or Manual Charging
- Speakers & Voice Synthesis Software
- Pioneer Software Development Kit

Optional Accessory Packages

- Digital Pan/Tilt/Zoom Camera
- Robotic Arms
- Pan Tilt Positioning Unit
- Speech Synthesis Package
- GPS Systems
- Precision Compass
- Configured Wireless Access Point
  (for multi robot systems management)

Integrated On-Board Computer

Intel D252 64-bit Dual Core 1.8 GHz Atom	
Integrated Graphics Processing Unit	
2GB DDR3-1066 RAM	
Available with Windows or Linux OS	
802.11 a/b/g Wireless	Gigabit Ethernet (2x)
USB (3x)	RS-232 (2x)
16 In / 16 Out Digital I/O	4 In / 4 Out Analog I/O

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Specifications are subject to change without notice.

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