Waypoint Vector

Industrial-Strength Autonomous Mobile Robot

WaypointRobotics.com
Designed for the workforce, built for the real world.

Waypoint Robotics’ Vector is the most advanced and intuitive AMR built for workers to deploy in real-world, industrial environments.

Vector is easy to use for the entire workforce, so you can immediately put it to work moving parts, materials, and tools even in the most unpredictable and changing conditions. You can focus on more rewarding, valuable tasks while Vector is moving materials for you.

The result? Using great tools means you can be more engaged in work you are proud of. You can go home daily with more energy for your friends and family, and have a longer, safer, more productive career.

Vector: A powerful, easy to use tool to get more done.

**WORKFORCE FIRST**
Robots built for the people who put them to work – easily set up, operate, and reconfigure.

**OMNIDIRECTIONAL**
Vector can move in any direction and in any or orientation with precision and speed so it will dock into a workcell any way you want.

**SUPERIOR NAVIGATION**
Vector is designed to reliably move in real-world environments without infrastructure changes.

**BUILT TOUGH**
Vector’s all-metal construction easily withstands the daily grind of industrial environments.
**15:00**
**MINUTES TO AUTONOMY**
Easy to set up & get working in under 15 minutes

**600**
**POUND PAYLOAD**
High payload capacity in a compact footprint

**3D**
**ENVIRONMENTAL AWARENESS**
Powerful long range sensors for real world navigation

**1:1**
**SPEED TO ACCURACY**
Omnidirectional means no speed is sacrificed to precisely hit a spot

### COMPARE MODELS

<table>
<thead>
<tr>
<th></th>
<th>VECTOR</th>
<th>VECTOR HD</th>
<th>VECTOR 3D</th>
<th>VECTOR 3D HD</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>CARRYING CAPACITY</strong></td>
<td>300 lb (136 kg)</td>
<td>600 lb (272 kg)</td>
<td>300 lb (136 kg)</td>
<td>600 lb (272 kg)</td>
</tr>
<tr>
<td><strong>NAVIGATION SENSORS</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dual 2D LiDAR</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>360 degree FOV 20 meter range</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3D LiDAR</td>
<td></td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>360 degree FOV 90 meter range</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>3-STAGE SAFETY SYSTEM</strong></td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td><strong>DIMENSIONS</strong></td>
<td>30 x 20 x 11.5 in</td>
<td>30 x 22.25 x 11.5 in</td>
<td>30 x 20 x 20 in</td>
<td>30 x 22.25 x 20 in</td>
</tr>
<tr>
<td>L x W x H</td>
<td>76.2 x 50.8 x 29.2 cm</td>
<td>76.2 x 56.5 x 29.2 cm</td>
<td>76.2 x 50.8 x 50.8 cm</td>
<td>76.2 x 56.5 x 50.8 cm</td>
</tr>
<tr>
<td><strong>RUN TIME</strong></td>
<td>8+ hours</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>TRAVEL SPEED</strong></td>
<td>1.2 m/s</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>SAFETY SYSTEM</strong></td>
<td>3 stage</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>DRIVE TYPE/WHEELS</strong></td>
<td>Mecanum</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### NAVIGATION & CONTROL
- **Waypoint Embedded**: High performance, real-time, 32 DOF, robot controller
- **Dispatcher**: Intuitive mobile robot set-up and fleet management software
- **Whistle**: Common sense robot control to call and send robots on missions

### BATTERIES & CHARGING
- **LiFePO4 Batteries**: 1 kW of reliable and intrinsically safe onboard power
- **Battery Charger**: Plug-in 240 Watt, 100-240 VAC adapter
- **EnZone**: Wireless 300 Watt, efficient, non-contact, maintenance-free RF resonance charging

### PAYLOAD STORAGE & HANDLING
- **Kingpin**: Dual purpose cart hitch AND payload lift deck
- **Cobot Arm**: Seamlessly integrated Mobile Manipulation payload
- **Conveyor Deck**: Autonomous docking to input/output conveyor stations
- **Vector Shelf System**: Seamlessly integrated robust shelving system custom built for Vector

### MACHINE VISION & AI
- **Data Camera**: For live view and still frame photo capture
- **Driving Camera**: Remote Tele-Operation with reticle driving aids
- **A-Eye Camera**: Advanced image processing capability for cart ID and adaptive precision docking

### INTEGRATION & PROTECTION
- **General Purpose I/O**: Onboard programmable digital input/output for system integration
- **Auxiliary Power**: Independent power for Actuators and Control circuits managed by the Waypoint embedded system
- **High Current Aux Power**: Soft-start power management for high power payload integration
- **Harsh Environment Package**: LiDAR air curtains and chassis sealing with IP 52 rating

Included Upgrade
Deploy a robot in 15 minutes. Intuitive and powerful, facility mapping and mission set-up has never been easier. Make changes in minutes to adapt to your evolving needs.

Initiate missions at the push of a button. Easy and intuitive device to call a robot when you need it and send it where you want it to go. Whistle is automatically set-up and custom configurable.

Forget about batteries and charging. EnZone enables the robot to take charge of its own batteries. Opportunity charging with EnZone allows robots to operate continuously.

Have your robot automatically load and unload materials and move carts all with one device; Kingpin enables Vector to do two critical jobs with one simple top module. Adding a Waypoint Crown to any cart to turns it into an autonomous mobile robot accessory when used with Kingpin.

Automate machine tending with Waypoint’s integrated cobot arm. This general purpose Mobile Manipulator is great for machine tending, automatic handling, loading, or unloading; and it’s never been easier to set-up and use.

Bridge the gap between conveyor systems. Automate the loading and unloading to workcells with input/output conveyors.

Move your materials with confidence. The Vector shelf system is custom designed for Vector to hold your goods securely during transport.

Document material movements with Waypoint’s data camera. View a live stream or have Vector snap a photo at any point during mission.

Remotely drive Vector safely and confidently thanks to the calibrated optics and on-screen reticles provided by the Waypoint driving camera.

Take Vector’s autonomy to the next level with advanced visual data processing for automated object identification, adaptive precision docking, people following, and much more...

Customize your Vector mobile robot by using Waypoint’s GPIO module to interface with on-board devices or external devices such as building infrastructure, automation controls, or elevators.

Safely integrate devices using dual auxiliary power channels independently controlled by the Waypoint embedded system.

Add high power payloads to your Vector with Waypoint’s soft-start power management system.

Use Vector in dirty and dusty environments by adding Waypoint’s harsh environment package that includes LiDAR air curtains and chassis sealing.

Superior mapping and unrivaled navigation made possible by high speed, real time, sensor fusion within Waypoint’s proprietary robot controller.