SEEGRID

Palion™ Lift

Transform material handling with Seegrid Palion Lift, the intelligent AMR for autonomous transport, vertical handling, and placement of goods.

Palion Lift provides end-to-end task automation for low-lift processes across facilities, further driving material flow efficiencies.

Automate. Optimize. Achieve.

Consumer expectations and supply chain pressures continue to become more demanding and complex. Now more than ever, material handling automation solutions are a necessity for manufacturing, warehousing, and distribution facilities to increase safety, gain a competitive edge, tackle growing challenges, and continuously improve.

Does Your Operation:

- Change and innovate processes?
- Adopt new work shifts?
- Move equipment between facilities?
- Experience peak seasons?
- Launch new product lines?

- Experience labor shortages?
- Make changes to floor layout?
- Operate with just-in-time delivery?
- Experience downtime?
- Have safety incidents?

- Encounter product damage?
- Have social distancing regulations?
- Need to improve throughput?

Achieve your automation goals and take your business to the next level.

Industry-Leading Solutions for Today—and Tomorrow

Seegrid is the leading provider of connected AMRs for material handling with millions of production miles driven. With flexible and reliable AMRs, enterprise software, actionable analytics, and best-in-class services and support, Seegrid offers a complete connected solution for end-to-end autonomous, safe, and reliable material movement.

Achieve Your Goals.
Advance Innovation Initiatives.

Seegrid Palion AMRs integrate into your workflows during live operations, prove quick ROI in just 6-24 months, and seamlessly scale across your entire network of facilities.

Proven, Predictable Performance

Seegrid Palion AMRs do exactly what you train them to do—delivering goods on time, every time.

Safety First

Seegrid Palion AMRs create a safer work environment—driving millions of production miles without a single safety incident.

Reduce Operating Costs

Seegrid robots optimize workflow processes and cut costs out of your operation with consistent and efficient delivery of goods.

Automate Repetitive Tasks

Make the most of complementary strengths: Seegrid Palion AMRs do monotonous hard labor, working alongside humans focused on value-add, cognitive tasks.

Quick Time to Value

Seegrid robots can be immediately dispatched or redeployed while production is running for unparalleled flexibility and the lowest total cost of ownership.
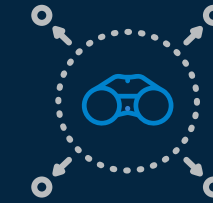
Intelligent. Aware. Transformative.

Seegrid Palion AMRs are vision guided and see the world just like humans do. Fusing our unique computer vision system with real-time sensor data, our proprietary algorithms create a fully autonomous robotic fleet with an unmatched ability to see, understand, and learn.

Material Automation Starts Here

Our technology is a continuation of breakthrough robotics pioneered by world-renowned roboticist Dr. Hans Moravec, our chief scientist. After decades of perfecting vision technology, Hans founded Seegrid in 2003, bringing mobile robotics to material handling. Seegrid's navigation technology is proven and unique, protected by 100+ patents, trade secrets, and proprietary information.

3D COMPUTER VISION

Individually equipped with our proprietary computer vision system, Palion AMRs see a three-dimensional world just like humans do. Seegrid's AI-based algorithm collects and prioritizes massive amounts of real-world, live data points, enabling Seegrid robots to reliably navigate in busy, ever-changing industrial environments.

SENSOR FUSION

Palion AMRs see and process more data, collecting a higher density of information for an extremely accurate understanding of their immediate surroundings.

RELIABILITY

With thousands of data points, Palion AMRs navigate seamlessly in high-traffic, dynamic facilities.

FLEXIBILITY

Route changes can be made while production is running by simply driving the robot to train the new route.

Proven to Understand and Perform—Safely

By fusing sensor data with our unique computer vision system, Palion AMRs have an enhanced understanding of their environment with the ability to comprehend and make decisions across a greater number of situations.

Millions of production miles driven. Zero personnel safety incidents.

Seegrid Palion AMRs are the market leader in robust navigation, and go above and beyond ANSI B56.5 safety standards, as well as satisfy all applicable safety requirements of ANSI R15.08. Our robots work seamlessly—and safely—alongside their human coworkers.

Emergency Stop Buttons

E-stop buttons ensure the safety of your facility at all times. When pressed, the motor brake is immediately applied, bringing the robot to a stop.

Turn Signals

Indicator lights atop the Palion AMR indicate direction of travel during turns, so your personnel always know which way the AMR is going.

Horn Honks and Motion Alarms

Palion AMRs notify teams how they are working—with distinct alerts when beginning autonomous travel, while traveling, and when traveling in reverse.

Palion Lift

Seegrid Palion Lift is an autonomous mobile robot that utilizes proven proprietary navigation technology to fully automate the movement of material to and from storage and staging areas across the enterprise, transporting up to 3,500 pound payloads at heights up to 6 feet.

Precise Vertical Material Movement

Autonomously detect and pick up pallets and bulk containers to deliver payloads to the right location every time. Palion Lift features side shifting forks that precisely adjust to minor variations in load placement—eliminating manual touches, reducing material damage, and increasing units per hour.

Intelligent Lane Staging

Autonomously identifies lanes and locates payloads within the lanes for precise, efficient pick-up and drop-off of goods, enabling efficient delivery to and from inbound receiving, putaway, processing, and shipping processes.

Key Applications for Seegrid Palion Lift

Easily integrating into workflows, Palion Lift executes autonomous material movement from inbound to outbound, and between work areas for lean material processes and maximum throughput. With vertical and horizontal material movement capabilities, scale to add applications in your process across one or multiple facilities, and integrate with warehouse management systems (WMS) and manufacturing execution systems (MES) for a fully connected solution.

STAGING/SORTATION

Sequence and deliver materials for just-in-time processing.

CROSS DOCKING

Move product from the shipping to receiving area, receiving to shipping area, or from/to the staging area.

VERTICAL PLACEMENT

Deliver materials to elevated surfaces up to 6 feet in height for end-to-end material orchestration.

PRODUCT SPECIFICATIONS

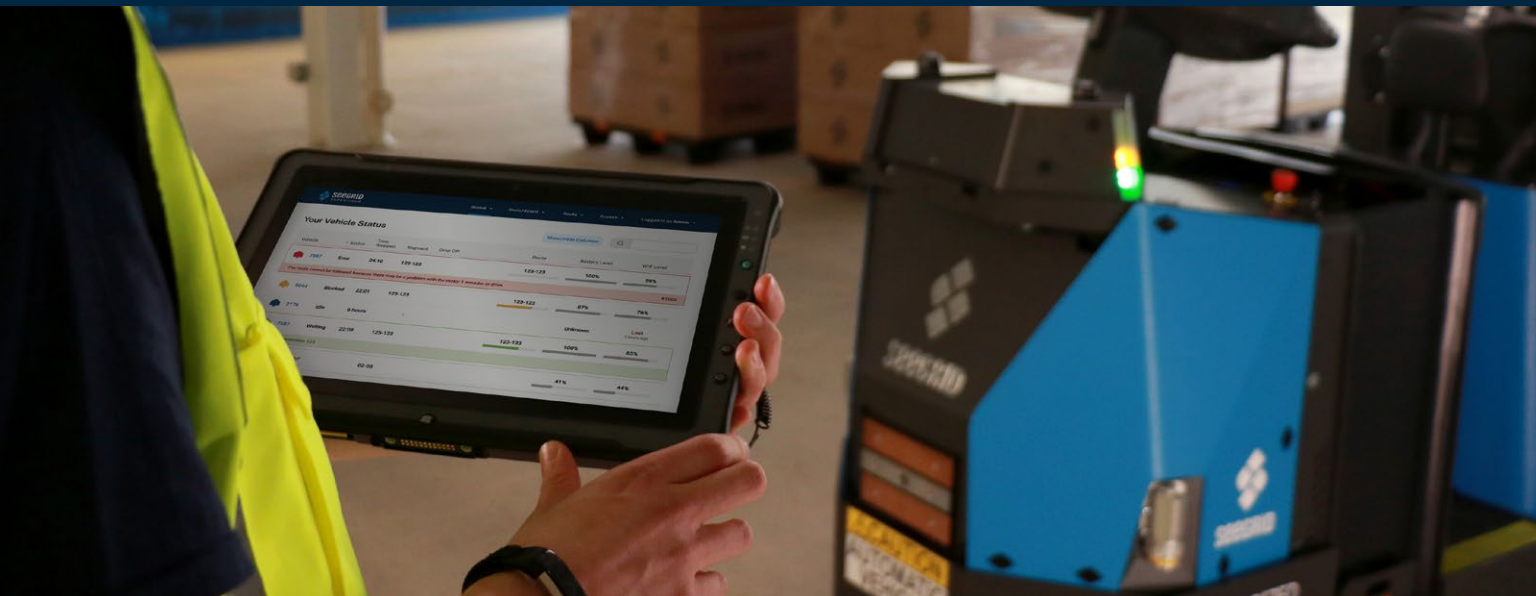|	
Maximum Capacity	3,500 lbs.
Maximum Automatic Speed	Up to 4.0 mph Reverse -0.7 mph
Width	50"
Length	92" (Forks Retracted)
Lift Height	72"
Reach	23"
Wheels	Polyurethane
Forks	42" ITA Rated

Environment	Only indoor operation Temperature 32°F min, 104°F max Humidity 20-95% RH (non-condensing) Floor conditions should be free from oils, moisture, and debris Floors should not be uneven/cracked
Features	Pallet / Free Space Detection: IFM PDS with enhanced Seegrid Vision Maximum pallet size: 48" x 48" Flexible, infrastructure-free navigation Route transfer between robots: train one and transfer route knowledge to all Supervisor for connected fleet management and enterprise intelligence
Battery	Voltage: 24V Max. capacity: 510 Amp x Hr Compartment: (LxWxH) 32"x 13"x 24.8" Weight: 1,078 lbs.

Safety	Primary personnel detection safety system Secondary object detection system (Volumetric) Fork-mounted object detection system 3 emergency stop buttons LED lightbar Acoustic warning system
Standard Safety Behaviors	Slows down during turns Stops if it detects an object in the primary personnel or secondary object detection systems and resumes travel once object is removed Always sounds horn before beginning or resuming automatic travel
Trained Behaviors	Timed pauses at intersections where other traffic has right of way Wait to start until operator presses Push to Work button Sounding the horn in busy areas, near walkways, in turns, etc.

Supervisor

Real-time fleet management at your fingertips.

Monitor your fleet and control the movement of materials throughout your facility. Our powerful fleet management software oversees your Seegrid Palion AMR workforce—maximizing the operational efficiency of your fleet and material flow.

Transform into a factory of the future, where everything is connected, material movement is automatic, data is reported back, and everything is in sync.

Track From Any Device

Monitor the flow of materials throughout your facility from any smart device. Map and status views show where your Palion AMRs and materials are going.

Dispatch On-Demand

Dynamically re-route Palion AMRs to any location with remote calling, or dispatch available robots to a different task to support changing demand.

Instant Notifications

Customize your notifications to ensure Palion AMRs are always top performers. Automatic text and email alerts can inform when a robot has a low battery, completes a delivery, and more.
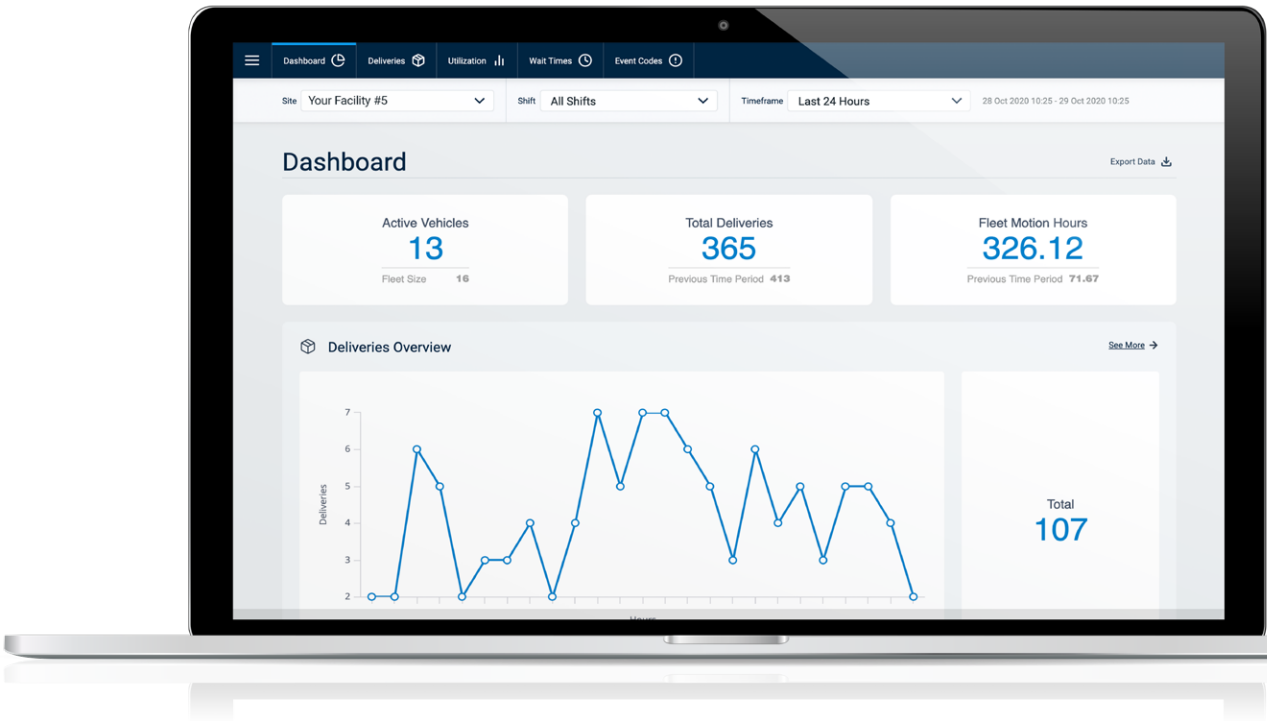
Material Transit Tracking

Alert assembly operators that Palion AMRs are en route with subway-style estimated time of arrival projections. With Supervisor's ETA views, team members on the floor know exactly when their material will arrive.

Fleet Geek™

Deliver results with actionable insights.

Fleet Geek, Seegrid's cloud-based fleet analytics solution, provides virtualized reporting of your Palion AMR fleet performance to deliver the intelligent insights needed to maximize business value and drive continuous improvement. With real-time insights, users can ensure the fleet is hitting key performance indicators and operating effectively.

Ensure your automation project is effective, on track, and successful.

Accelerate adoption of Palion AMRs within your facility.

Better understand fleet performance with up-to-the-minute delivery views.

Streamline processes and reduce downtime with insights into robot activity.

Seamlessly monitor your fleet's movement with insight into overall distance traveled.

Fast-track your ability to scale with proven, data-driven success.

We Work and Win Together

When you work with Seegrid, our team becomes your team.

Seegrid advises and supports you from the initial application scope to daily analysis of your fleet and everything in between. We are passionate about making you successful.

Proven, Low Risk Implementation

With more than 1,000 AMRs running in live production, Seegrid has a proven track record for integrating into complex customer environments.

Scope and Consultation

Our team of application engineers will work closely with you to develop custom recommendations aimed at optimizing operations to achieve your goals while maximizing the value of your investment.

Training and Education

Seegrid Palion AMRs are intuitive and easy to use. Our specialists work directly with your employees, making them feel comfortable and confident to work alongside the robots. Seegrid provides classroom style, hands-on training to help your employees understand how to operate Palion AMRs, manage the fleet, report on success, and continuously improve to deliver even more value.

Ensuring Success

Seegrid's customer success team will support you from project kick-off through implementation and beyond. Post-install, they will keep tabs on your fleet, measuring productivity, and suggesting ways for your facility to continually innovate.

Dedicated Support

We are passionate about your success. Our team is available to assist you at any point in time to ensure you are operating as efficiently as possible without disruptions.

SEEGRID

Turnkey automation for the
most challenging environments.

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