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SMART MOVING

Precise · Safe · Efficient



NO.1

Global AMR market share for 3 consecutive years*

Trusted by 500+ global industry leaders

500+ \$300m+ 900+

patent applications submitted globally

Technical Advantages



Excellent AMR Performance

Stable, reliable, flexible, and efficient.



Business-Driven Platform

Orders in 2021

Can be integrated with RMS, WES, WCS, WMS, and other business software.



Al Algorithm and **Data Platform**

Large-scale accumulation of edge machine and cloud business data.







*Source: Interact Analysis

Rapid Return on Investment

Reduces costs. increases efficiency. and enhances competitiveness.

Increased

Efficiency

Rapid Deployment

Accuracy

Enhances supply chain stability.



Resilient

Ensure business and supply chain continuity.



Fast

Respond quickly to business requirements.



Flexible

Flexibly adapt to sudden business changes.

Award-Winning Industry Pioneer



Supply Chain Excellence Award 2018, 2019 & 2021



Top 50 Robotics Company -2019-2020 Robotics Business Review.



Fast Company Award 2021

Trusted by the Best

With High Customer Satisfaction Geek+ Solutions are integrated with e-commerce, retail, footwear, logistics, pharmaceutical, automobile, and 3C manufacturing industries. Its high-quality products and technologies have been successfully implemented in a wide range of business scenarios.

E-commerce









Apparel









Retail









Pharmaceutical











Manufacturing









3PL













Sales, Operations, and Services in 30+ Countries and Regions

Service packages

Preventive maintenance

Residential services

((o)) Remote technical support

Spare parts supply

System maintenance and upgrade

(1) 24/7 help desk

Training and certification

On-site repair



Geek+ Moving Products





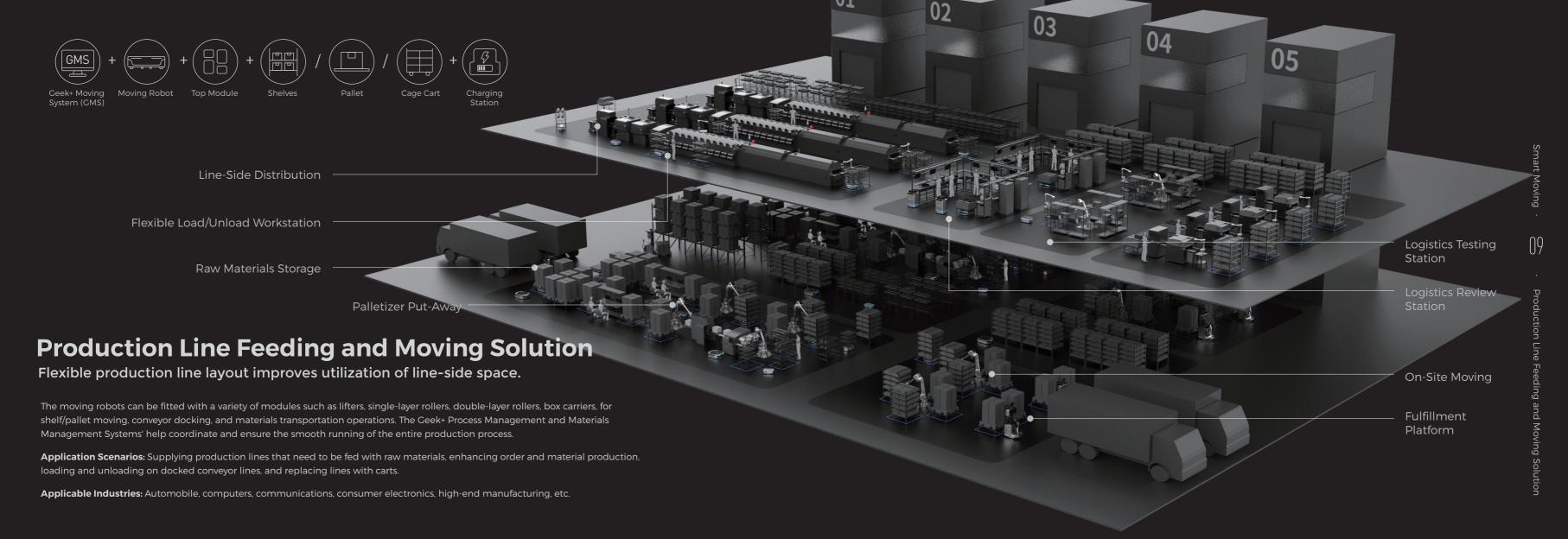






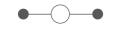
AMR Moving Solutions





Industry Challenges

Though on-site manufacturing automation is high, most materials management is handled manually, leading to high operational error rates.



Human-machine interaction and a variety of transportation equipment are necessary for industrial scenarios with complex operational conditions. The efficiency of production operations rely on the overall safety of the process.



Traditional conveyor lines are inflexible and have high refitting costs. If problems are found, the entire production line must be shut down for maintenance.



easy to deploy. Maintenance and repair can be downtime, improving efficiency, and optimizing production.

The Geek+ Impact



100% Management Accuracy

Seamless integration between internal processes ensures timeliness of production.



Extremely Safe

Powerful safety and performance solutions ensure smooth operations throughout the entire production and logistics processes.



Flexible Deployment and Transformation

Rapid deployment period (within 2 weeks), low maintenance costs, and isolation of failure points from the production line.

Automated Solutions

Smart materials management: The Geek+ Smart Moving System includes both materials and containers management functionality. Data is transferred in a synchronized manner to ensure on-time and on-demand distribution of materials.

Comprehensive Safety Testing and Certification: K29 industrial-grade design and CE, FCC, ETL certification safety standards; all robots are subject to high-intensity indexed vibration testing. Accurate Multi-Sensor Positioning: Robots are equipped with a variety of sensors, ensuring safety and suitability for human-computer interaction scenarios.

The smart moving solution is highly flexible and carried out on a unit by unit basis without affecting the entire production line, reducing



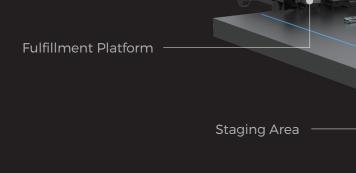


Warehouse Transfer and Moving Solution

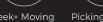
Smart management of fully automated operations throughout the entire process.

Uses Geek+ picking and moving robots to move shelves, pallets, large carts, and special parts between warehouses. The solution coordinates with the Geek+ Process Management System to transfer items between warehouses, dock warehouses conveyor lines, and collection and delivery personnel.

Application Scenarios: Warehouse docking, cross-warehouse operations, platform moving, and internal warehouse moving. Applicable Industries: Pharmaceutical, footwear, retail, food, FMCG, household goods, etc.









Picking Robot Moving Robot



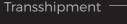




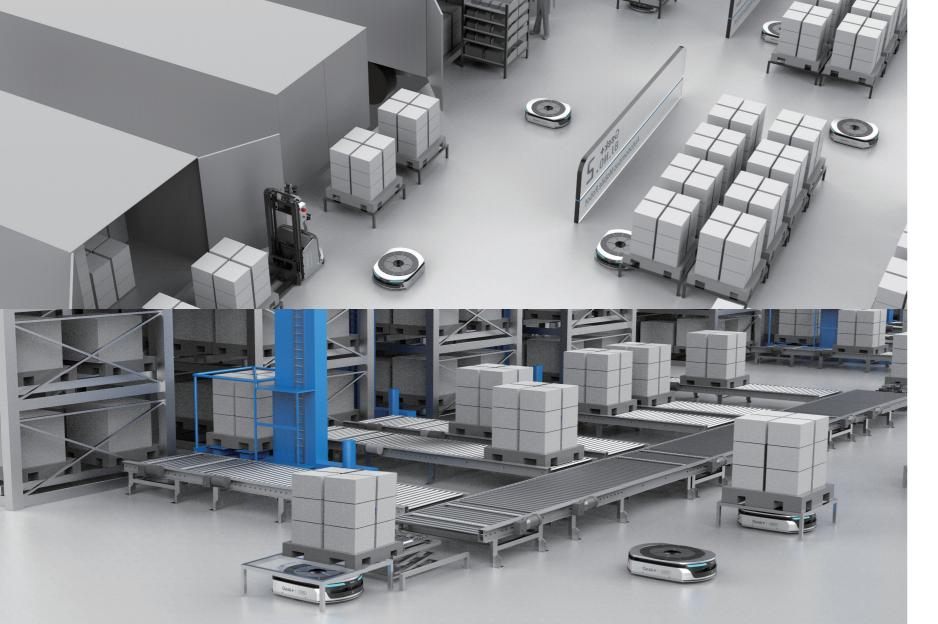




Single Item Order Picking







The Geek+ Impact



Flexible Deployment Manages **Business Fluctuations**



Autonomous Moving Minimizes Damages

by human error.

Supports flexible planning according to production line and business requirements, ensuring maximum operating efficiency.



Fast Deployment Accelerates Capital Turnover

Deployment period of only 2 weeks ensures fast project implementation and accelerates capital turnover.



Efficient Layouts Improve Space Utilization

Reduces loss and damage rates caused

Improves storage efficiency and reduces storage costs.

Industry Challenges

Transformation of traditional automation equipment is expensive; even partial operations, leading to at least six

Automate Solutions

- transformation may affect business months of operating losses.
- Flexible Planning: Flexible motion planning with 100+ operation and configuration policies, enabling quick layout adjustment, expansion, upgrades, and more.

- Manual logistics management is high; human error is inevitable.
 - Traditional magnetic rail solutions are not flexible enough to completely replace manual labor.
- Flexible and Fully Automated Docking: Robots can flexibly dock with warehouses/lifters and automate the raw material transportation, production line distribution, temporary storage, and fulfillment processes.

Warehouse space utilization is low: storage capacity must be improved.

Balanced Storage and Efficiency: Supports high-density storage methods, maximizes the use of warehouse space, and coordinates with flexible delivery strategies to meet high efficiency requirements.

M200C

M600C

M1000C

MP1000R









| Dimensions (L×W×H) | 760×520×210mm (main body) / 313mm (with jacking module) | 1100×700×210mm (main body) / 316mm (with jacking module) | | 1090×830×275mm |
|-----------------------------|---|--|--|--|
| Self Weight | 90kg (main body) / 106kg (with jacking module) | 102kg (main body) / 182kg (with jacking module) | 102kg (main body) / 182kg (with jacking module) | 164kg |
| Maximum JackingPayload | 200kg (with shelf and jacking module) | 600kg (with shelf and jacking module) | 1000kg (with shelf and jacking module) | 1000kg |
| Maximum LiftingHeight | 50mm (with jacking module) | 60mm (with jacking module) | | 60mm |
| Minimum LiftingTime | 4s (with jacking module) | 5s (with jacking module) | | 4s |
| Maximum Speed | 1.5m/s without load: 1.5m/s full load | | | |
| Maximum RotationSpeed | 90°/2s,180°/3s | 90°/3s, 180°/4s | | 90°/2s, 180°/3s |
| Stop Accuracy | <±10mm, 1° (end auxiliary positioning) | | | |
| Navigation | Laser SLAM navigation + reflector navigation + visual navigation (visual module) | Laser SLAM navigation + reflector navigation + QR code navigation + visual navigation(visual module) | | Laser SLAM navigation + reflector navigation + QR code navigation |
| Obstacle Avoidance Range | 360°, 40m LIDAR | 360°, 40m LIDAR | | 360°, 25m LIDAR |
| Battery Type | Lithium-ion | | | |
| Battery Life | >2000 cycles | | | |
| Operating Time | Charging for 10 minutes, working for one hour (*customizable charge and operating time) | | | |
| Certification | CE | CE, FCC, ETL | CE, FCC, ETL | CE, FCC, ETL |
| Operating Temperature | 10°~ 40°C | | | |



Smart Factory for InlayLink

InlayLink is a leading international manufacturer of RFID tag antennas, and one of the few providers of RFID data collection solutions. The company specializes in the design, R&D, production, and sales of RFID tag antennas and inlays; and is trusted by many global tag and smart card manufacturers. As of 2014, InlayLink had shipped a total of 15 billion RFID products.

Challenges

- · Process management of materials is necessary; manual transportation of materials is connected to the MES.
- · Large-volume manual transportation of materials requires high manpower and cannot scale with future growth.
- Comparatively high material costs require time-consuming recordkeeping

Solution

- The factory was equipped with 12 MP1000R robots with SLAM + QR hybrid navigation (different navigation methods are used in different areas) to meet high-density storage and automated material distribution requirements. The small fleet of robots can fulfill multiple job requirements, realizing standardized and on-time distribution of materials.
- The Geek+ Process Management System is directly connected to elevators, creating a fully automated smart factory.



Before Deployment

After **Deployment**

Every step must be checked, verified, signed, and delivered manually.





ntegration of the GMS with the WMS and MFS reduces verification steps and greatly reduces management

Maintenance and transformation require a stop in production.





repairs can be carried out independently, ensuring high efficiency and optimized production.

Overreliance on manual operations make on-time distribution difficult.





Overall moving efficiency increased by 30-50%.

Manufacturing Center for Konica Minolta

Founded in 1936, Konica Minolta is an innovative optical products company with 44,000 employees and offices across 49 countries.



Industry Challenges

- Manual transportation of materials to production line leads to low efficiency.
- Demand for flexible production of multiple product types in small batches is increasing. Greater emphasis on customization means that the factory must be able to rapidly adjust its production processes.

Automated Solutions

- Geek+ Production Line Transfer Solution: P800 and M100 robots coordinate with GeekFlow and Geek+ iWMS to dock with the customer's upper-level systems.
- Laser and visual SLAM navigation technology allows for easy adaptation of moving routes during adjustment of production line layouts, with a positioning accuracy of ±10mm.
- Identifies and recognizes short obstacles of up to 50mm, ensuring the safety of on-site personnel and equipment.

materials increases efficiency by 42%.

