Intelligent Robot Solutions for Logistics
Driven by Artificial Intelligence ("AI") and robotic technologies, Geek+ provides one-stop robotic solutions to enhance efficiency for users in the logistics field and warehouse management. Largely perfecting the warehouse storage and simplifying order fulfillment, the techniques also bring a labor-free environment in terms of efficient parcel consolidation, effective inventory’s management, accurate correlation of SKUs and optimized warehouse operation process.

About Geek+:

In 5-year development path, over 70 successful cases and 6000+ units of robots working in some well-known enterprises’ warehouses. Geek+ has already been a leading provider in warehousing and logistic automation solution. In Oct 2018, Geek+ received UK Supply Chain Excellence Award in robotic innovative category to mark our milestone.
Our Customers

E-Commerce  Retail  Express  Pharmaceutical  Apparel  Manufacture  3PL

Geek+ Cares

7 x 24 Hours  Cloud Based Service Desk  Multi-language Customer Interface  Geek+ Regional Service Center  Domestic & Overseas Authorized Service Partner

Distributor Network:
"Goods To Person" Picking

**Geek+ Picking System** realizes "Goods to person" picking by enabling robots to carry shelves, which breaks the traditional person to goods Law. It reduces travel path for workers and achieves fast, accurately and efficiently order delivery.

Order Grouping & Multiple Picking

The robots are powered by machine learning algorithms which increase hit rate from storage to order and improve pick performance. Inventory analysis has always been accessible.

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**Benefits**

- **Rapid ROI**
  - 2-3 years payback period
- **No Single Point of Failure**
  - High availability and keep 24 hour operation
- **Artificial Intelligent**
  - Flexible intelligent schedule
- **Increased Accuracy**
  - Accuracy up to 99.99%
- **Improve Productivity**
  - Triple labor picking rate
- **Fast Deployment**
  - 1-3 months

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**Empower Case Study**

With an aim of improving productivity and efficiency, Empower, a 3PL provider, deployed with 65 geek+ robots in a 8,000 m² warehouse to handle 20,000 daily orders. The picking rate is about 300-600 pcs per hour per workstation. It will bring a reduction of 30% in labor cost.
Moving Robot leverages advanced SLAM laser navigation method to identify factory’s environment and schedule the route independently. The robots are able to avoid the obstacle to deliver pallet / rack to the destination in a flexible and smooth way.

Pallet moving:
Robots carry pallet to achieve automatic material handling, which improves production flexibility.

Flexible workbin moving:
Robots realize automatic moving and manual handling assisting for light loads with SLAM navigation.

Flexible roller joint:
Equipped conveyor, robots realize flexible roller joint to production line with SLAM navigation.

Benefits

Flexible Module for Various Scenario
Grippers, rollers, tools and special equipment

Secured Safety
Multi-sensor infusion to minimize risk

PLC (Programmable Logic Controller)
Integrate with all kinds of machinery systems

Artificial Intelligent
Flexible intelligent schedule

No Single Point of Failure
High availability and keep 24 hour operation

Case Study:
A manufacturer of unmanned aerial vehicles, DJI, deployed sets of M100 at 4200 m² warehouse. With SLAM technology, the robot moves freely at unmanned zone and the operation turns to full automatic warehouse.
Geek+ Sorting Robot uses a strong AI algorithm and flexible system scheduling to figure out the most effective path and reduce convergence. The robot could do fast sorting automatically and send parcels to the corresponding shipment port.

S20 sorting system is without steel platform. The robot uses QR code navigation, determine the direction of parcel by scanning QR code on parcel. Also, it has good flexibility and scalability.

### Benefits

<table>
<thead>
<tr>
<th>Benefit</th>
<th>BEFORE</th>
<th>AFTER</th>
</tr>
</thead>
<tbody>
<tr>
<td>High Throughput</td>
<td>6k - 8k parcels/hr</td>
<td>10k - 15k parcels/hr</td>
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<tr>
<td>Lower Labor Cost</td>
<td>Up to 10,000 - 12,000 pcs/hrs</td>
<td>80% labor saving</td>
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<tr>
<td>Increased Accuracy</td>
<td>Accuracy up to 99%</td>
<td>99%</td>
</tr>
<tr>
<td>Fast Implementation</td>
<td>1-3 months</td>
<td>ROI within 1 year</td>
</tr>
<tr>
<td>Convenient Relocation</td>
<td>Flexible layout</td>
<td>Rapid ROI</td>
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</tbody>
</table>

### Case Study:

In December 2017, VIP.com deployed 200 sorting robots for warehouse 24-hour operation. The sorting efficiency reached 10,000 parcels/hr and has successfully gone through Global Shopping Festivals such as Double-12, Lunar New Year, and other large-scale promotional activities, which has greatly improved the sorting efficiency of warehouse.
**Geek+ Automated Forklift** has realized self-driving through SLAM navigation and is capable of automated storage and retrieval. Its sensors can detect the measurement and position of the goods on the shelves, pinpoint the pallet slots accurately and carry the goods to the appointed area under the instruction from the scheduling system.

### Benefits

- **Labor Reduction**  
  Perform loading, unloading and moving pallets automatically

- **Space Utilization**  
  Work in warehouses with narrow aisles, block storages, deep-lane stacking

- **Low Risk and High Safety**  
  Cater complex working environments

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**Real-time Inventory Management**  
Integrating with various kind of WMS with Geek+ system simultaneously

**Artificial Intelligence Optimization Strategy**  
Dynamic storage and relocation of goods by frequency of purchase

**Customer Values**

- **Rapid ROI**  
  2 – 3 years payback period

- **Boost Productivity**  
  Increase 300 to 700 picks/hr

- **Flexible & Scalable**  
  Scaled up or down easily 3 months implementation time

- **Space Utilization**  
  Up to 30% space saving
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<thead>
<tr>
<th>Parameter</th>
<th>P800</th>
<th>P500</th>
<th>M100</th>
<th>S20T-H</th>
<th>S20C-H</th>
<th>F14L</th>
<th>F16L</th>
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<td>130 kg</td>
<td>68 kg</td>
<td>70 kg</td>
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<td>Width</td>
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<td>Two-wheel differential drive</td>
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<tr>
<td>Speed</td>
<td>1.5 m/s</td>
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<td>Lift Height</td>
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<td>3010 mm*more</td>
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<td>Battery</td>
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<td>Li-ion, 38.5 ah</td>
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<td>Li-ion, 12 ah</td>
<td>Li-ion, 12 ah</td>
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<td>2D bar code visual or others</td>
<td>SLAM</td>
<td>2D bar code visual</td>
<td>2D bar code visual</td>
<td>SLAM or others</td>
<td>SLAM or others</td>
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<td>Obstacle Avoidance</td>
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<td>Infrared laser/ultrasonic(opt.)</td>
<td>Laser radar</td>
<td>Laser radar and others</td>
<td>Laser radar and others</td>
<td>Laser radar, 3D camera and others</td>
<td>Laser radar, 3D camera and others</td>
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<tr>
<td>Control/ Stop</td>
<td>&lt; 10 mm</td>
<td>&lt; 10 mm</td>
<td>&lt; 20 mm</td>
<td>± 10 mm</td>
<td>± 10 mm</td>
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<tr>
<td>Precision</td>
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