SOLOMON

Vision with Intelligence

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JustPick

For Next Generation Intralogistics

JustPick

Advanced AI-3D Solution for the Smart Warehouse

DISCOVER THE INFINITE POSSIBILITIES OF VISION AND INTELLIGENCE

As e-commerce gains traction globally, managing shipment is proving to be a challenge with retailers and 3PLs facing constant pressure to deliver more in less time. Yet, automated warehouses still rely on manual operations to process high-volume SKUs, because teaching machines to recognize them one by one is neither time nor cost-efficient.

Featuring the latest AI deep learning and 3D imaging technologies, JustPick enables robots to navigate the production floor on their own just as if they had eyes and cognitive function. Having such perception capabilities means they can classify even the most complex objects, pick and place, analyze insights for space utilization and more, without any prior programming.

The versatile solution for smarter logistics – JustPick.

Why Solomon JustPick?

- Process large, random inventories without programming
- Automated sorting to increase throughput
- Compatible with over 20 major robot brands
- Reduced overhead costs & uninterrupted operations

Applicable Industries

Courier Services & Post Offices

Large inventories arrive at these facilities each day and often require operators to unload and reload on to conveyors or delivery vehicles. Without any training, JustPick helps robots singulate parcels from mixed piles, before picking and placing them in their designated spot within the shortest possible time.

Application: parcel singulation, loading/unloading stations

E-Commerce Distribution Centers

JustPick facilitates visual recognition for robots to detect, grasp, and operate a precise grip on an extensive range of items. The AI algorithm can also configure pathways that allow gentle pick-and-place to prevent product damage, as well as maximize use of warehouse space.

Application: transfers between bins or to shipping boxes

Vertical Storage Units

Robot agility is a priority and essential when working in restricted spaces. By applying its advanced path planning module, JustPick can simulate trajectories and help the robot avoid potential obstacle collision as it handles the SKU.

Application: small workstations, tightly-arranged storages

Warehouse Depalletizing

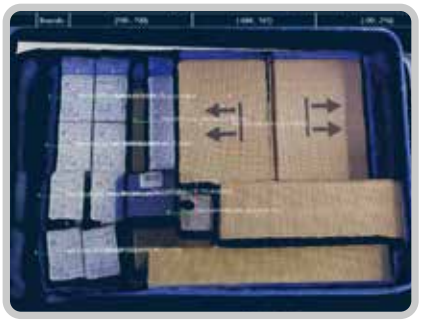
Robots no longer need to be programmed to understand pallet location and dimensions, regardless of whether they arrive in structured or mixed arrangements, saving both engineering time and costs.

Application: cross-docking, multi-box dispatching

AI-3D Visual Recognition System

Solomon's distinctive AI and 3D imaging technology utilizes neural networks to equip robots with vision and cognitive function, allowing them to process random and complex items without needing to learn beforehand what they are.

- **Real-Time point cloud Captures**



Densely packed objects

Reflective packaging

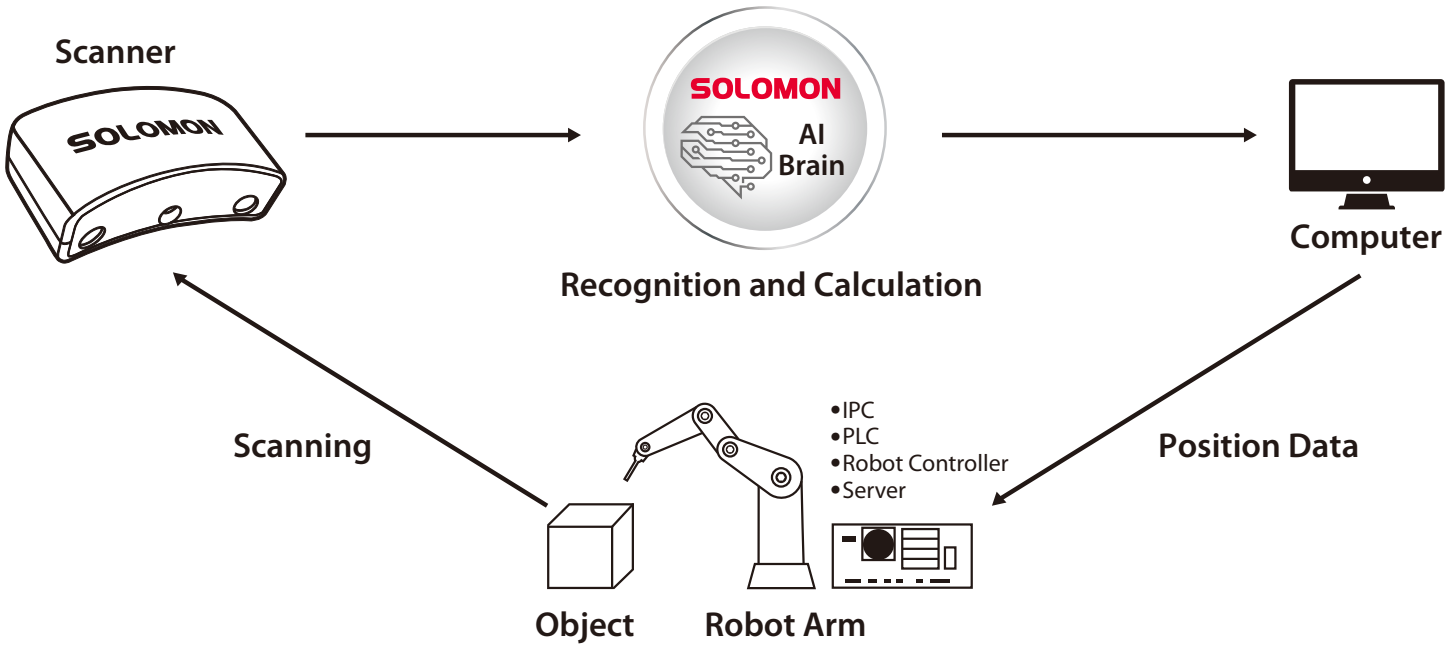
Textile packaging

Complex surfaces

Flaccid packaging

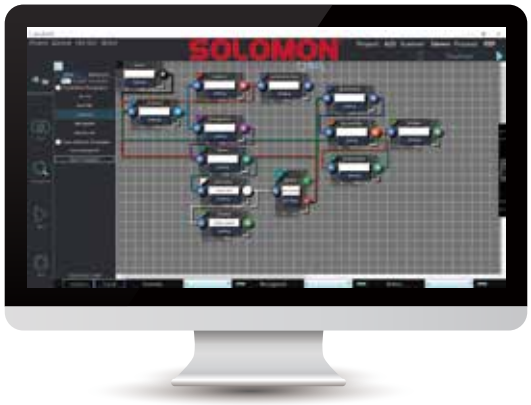
Layered objects

JustPick Workflow



JustPick Next Generation Solution for Automated Intralogistics

JustPick's Key Features



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Intuitive Interface – No Programming, Easy to Deploy

Our graphic-based interface allows users to customize their workflow by drag and drop of function blocks, eliminating the need for programming or CAD files to train the robot. In just 30 minutes, the robot can operate entirely on its own, from configuring gripping patterns to pick-and-place tasks, making JustPick an accessible tool for even automation beginners.

VCG | 4kg Four-Jaw Vacuum | Standard Gripper | Vacuum Cup (Large) | Vacuum Cup (Small)

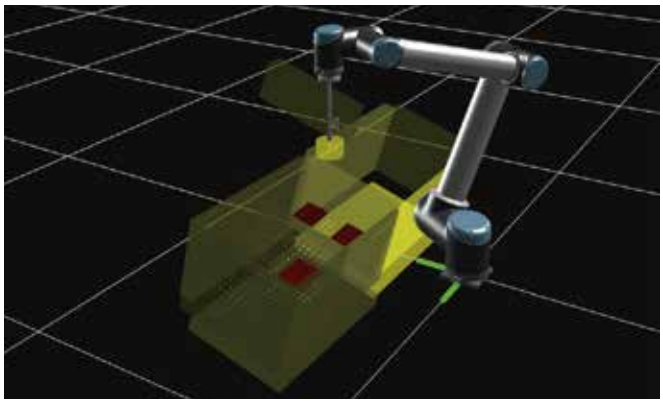
Vision Controlled Gripper (VCGs) – AI-Based Detection

A one-size-fits-all gripper does not exist when it comes to unpredictable inventories. Upon locating an item, JustPick determines the suitable gripping approach and if needed, adjusts the number of active suction cups. The system then communicates with Solomon's VCG to secure the object – this coordination ensures flexibility to handle a wide range of items.

UNIVERSAL ROBOTS · Kawasaki · STÄUBLI · YASKAWA · mecademic · DENSO · ABB · KUKA · FANUC · MITSUBISHI · NACHI · DOOSAN · OMRON · TOSHIBA MACHINE · OTC · YAMAHA · AUBO · TM · EPSON · rethink robotics

Open Platform Solution – Easy Integration & High Compatibility

JustPick supports over twenty major robot brands (with more coming soon) and PLC brands such as Rockwell Automation, Siemens, Mitsubishi, and Omron. It is also compatible with multiple 3D camera technologies – time-of-flight, structured light, stereo vision – and different robots including six-axis, SCARA, Delta, and Cartesian.



Intelligent Motion Path Planning – Collision Avoidance

With JustPick's motion planning module, robots can intuitively maneuver around obstacles by adjusting its angle based on bin or pallet dimensions. This is handy for preventing collision, especially in warehouses with randomly stacked piles and outsized bins.

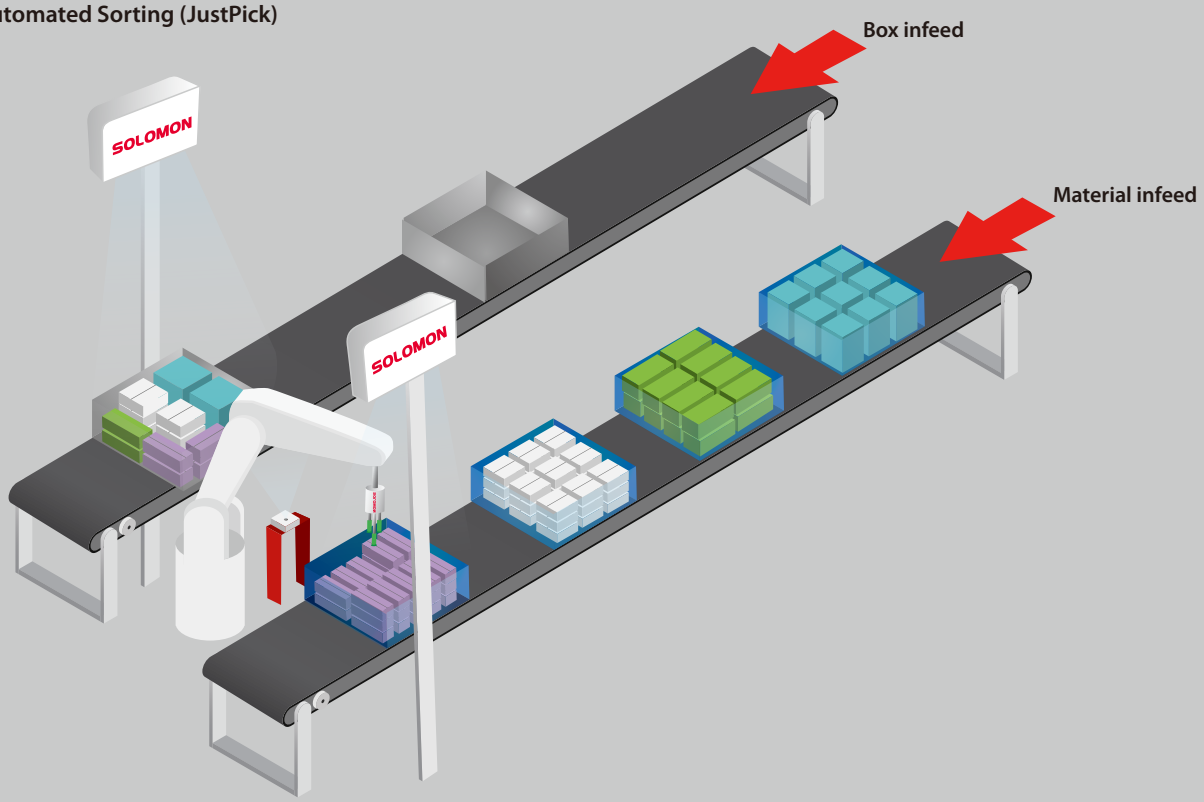
What's Next?

Intelligent Packaging Solution - SmartPack

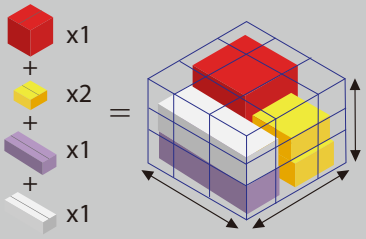
After applying JustPick, Solomon's state-of-the-art packing solution SmartPack can ensure objects are systematically placed and parcels are filled optimally with minimal misused space.

- Robotize multi-SKU packaging
- Improve social distancing in the warehouse
- Save on dimensional weight
- Go green reduce packaging materials

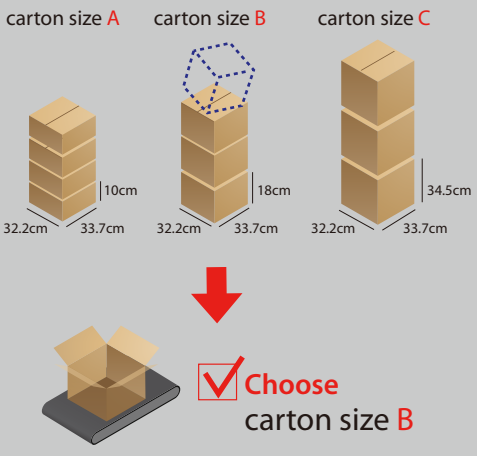
Step1 Automated Sorting (JustPick)



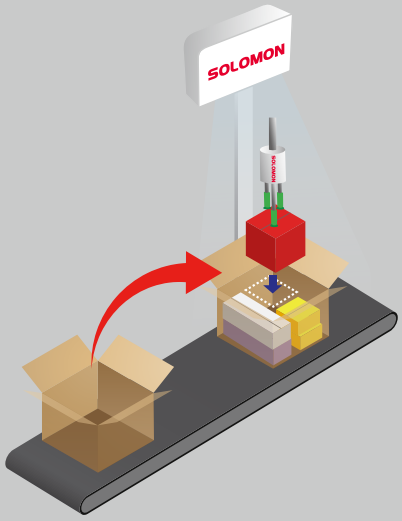
Step2 Fast Dimensioning (SmartPack)



Step3 Identify Box Size



Step4 Precise Placement (SmartPack)



Specifications


Module Name	SLM 3DRBP-0231C	SLM 3DRBP-0501C	SLM 3DTFK-0100C	SLM SVRBP-0092C
3D Technology	Structured light		Time of fly	Active stereo vision
Pixels	2.3 M	5 M	2D : 12M, 3D : 0.37M	0.92 M
Camera Resolution	1920 x 1200	2590 x 2048	2D : 4096 x 3072 3D : 640 x 576	1280 x 720
Field of View ★★	285 x 195 ~1050 x 810 mm	295 x 220 ~1230 x 950 mm	1000 x 890 ~ 3000 x 2500 mm	520 x 330 ~ 1220 x 730 mm
Working Distance	450 ~ 2000 mm ★★		700 ~ 2000 mm	450 ~ 1000 mm
Spatial Resolution ★	0.24 ~ 2.6 mm	0.15 ~ 1.8 mm	0.5 % ~ 2 %	≤ 2%
Scanning Time (Minimum)	0.3 Sec	0.8 Sec	0.033 Sec	0.033 Sec
Scanning Technology	Static		Static	Static
Projector Light Source	LED		IR Laser	IR Laser
Interface	USB 3.0		USB 3.1	USB 3.0
Dimensions (L-W-H)	363 x 202 x 120 mm		103 x 39 x 126 mm	110 x 49 x 22 mm
External Power Adapter	Input : 100V AC ~ 240V AC / 50 ~ 60Hz Output : 12V DC / 8.5A,102W		5V DC	USB 3.0
AccuPick Input	12V DC / 7A		5V DC / 2.5A	USB 5V
Weight	3 kg		0.44 kg	0.2 kg
Operating Temperature	0°C - 40°C (32°F - 104°F)		10°C - 25°C	0°C - 40°C (32°F - 104°F)

Hardware Requirements : Operating System Windows 10 (64 Bit) (RAM : minimum 16GB, recommended 32GB)
GPU: Nvidia GTX 1070 (recommended ≥8GB)

★★ Optional

★ The product is not applicable to the transparent objects or objects with over 50% light reflection rate.

Features

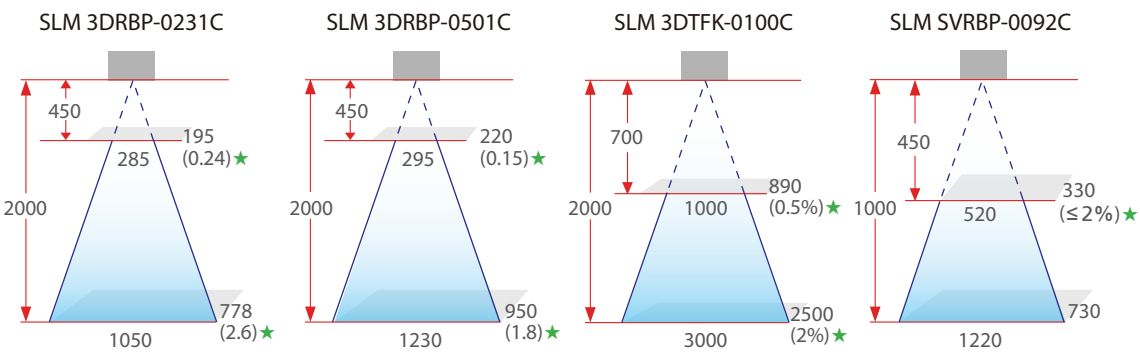
Color Camera	✓
Import CAD File	✓
No CAD File	✓
Point Clouds Match	✓
Deep Learning Recognition	✓
Bin Collision Avoidance ★★	✓
Motion Planning ★★	✓
After-sales training	✓

★★ Optional

Specifications subjects to change without notice.

3D Scanner Field of View (FOV)

unit : mm



★ Resolution 0.24 ~ 2.6 mm

★ Resolution 0.15 ~ 1.8 mm

★ Resolution 0.5 % ~ 2 %

★ Resolution ≤2%

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