

SRC-powered

Laser SLAM Multi-layer Picking Robot

SPK-HAI-A42-3

- **Laser SLAM**

Freely switch between Laser SLAM and QR code navigation, easy to deploy.

- **Flexible docking**

Flexibly interact with various equipment, including roller, shelf, latent AGV, manual workstation, and other operating platforms, which can realize unlimited docking and more extensive application scenarios.

- **Precision picking and placing**

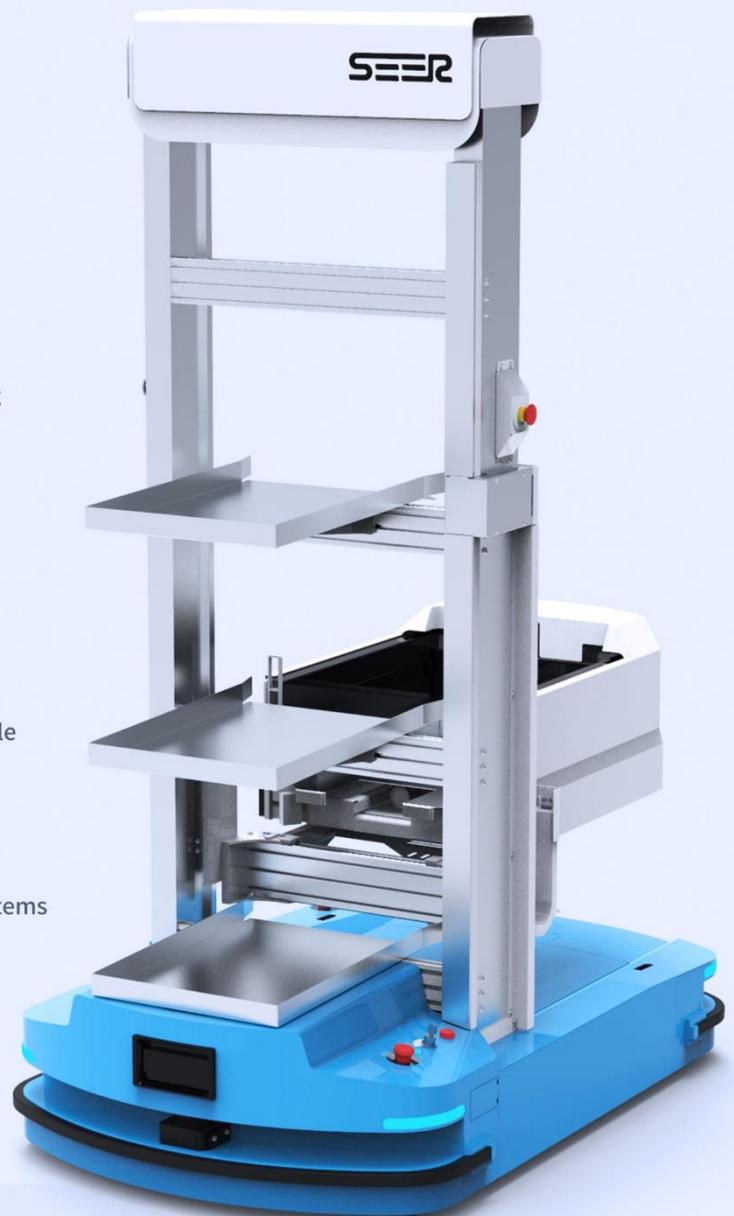
Accurate picking and placing of goods by 2D/3D visual recognition.

- **Efficient handling**

It can be highly customized to store and move multiple bins efficiently at one time.

- **System Access**

Seamless access to dispatching and warehousing systems to further manage and optimize business.



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Specifications

Basic Parameters

Model	SPK-HAI-A42-3
Driving mode	Differential/wheel
Color	Blue+white
Dimensions (L×W×H)	1600*1000*2220mm
Mechanical rotation	1600mm
Weight	400kg
Maximum load of robot (5 cases)	150kg
Maximum load of robot (3 cases)	90kg
Lowest height of the fork pallet (lower limit is triggered)	360mm
Highest height of the fork pallet (higher limit is triggered)	1920mm
Ground clearance of the first case	400mm
Case spacing	450mm
Number of cases	3
Case type	Plastic
Dimension of cases (L×W×H)	600*400*300mm
Minimum picking height	400mm
Maximum picking height	1860mm
Maximum load of case	30kg
Height of fork inner plate	204mm
Distance between fork rotation center and chassis rotation center	337.5mm
Navigation mode	SLAM+QR code(optional)
Pick up method	Rotating arm + Code

Deployment Parameters

Shelf layer spacing	≥400 (300+50+50) mm
Roadway width	1110mm
Flatness of ground	±4mm/2.25m ²
Ground slope	≤2° or 3.5/100
Ground friction coefficient	≥0.45
Maximum clearance	7mm
Maximum step	3mm
QR code angle tolerance	1.5°
Cases left and right spacing	110mm
Cases back-to-back spacing	110 or 55mm(dispatching control to avoid two simultaneous pick-up cases)

Performance Parameters

Chassis drive wheel diameter	220mm
Chassis motor model	Kinco SMC80S-0075-30MBK-3DSU
Chassis motor rated power	750w
Chassis motor rated torque	2.39Nm
Chassis reducer model	Lihua PLF080-16
Reduction ratio	16
Lifting speed	0.5m/s
Lifting acceleration	0.4m/s ²
Fork extension/reduction time	2s
Fork rotation 90° time	2s
Localization accuracy	± 5mm, ± 0.5°
Navigation speed	≤1.5m/s
Map area (single frame)	≤ 200000m ²

Other Parameters

Battery type	Lithium iron phosphate
Battery voltage	48V
Battery capacity	35Ah
Maximum charging current	30
Battery charge and discharge time	90min
Fast charge strategy	30%~80%
Fast charging time	≤45min
Charging method	Automatic
Battery charge and discharge cycles	≥2500
Battery life	≥6h
Anti-collision	one safety bumper in front and one behind
Emergency button	One on all sides
Lifting limit	Electromechanical limit switch on upper and one on lower
Lifting and falling	Electromechanical interlock switch
Navigation/obstacle avoidance laser	One in front and one behind
Sound and light indication	Tri-color light + speaker
Temperature	0~45°C
Humidity	5%~95%, no condensation
Altitude	-60m~3000m
IP rating	IP20
Wireless network	WiFi 2.4/5GHz 802.11 a/b/g/n
Wireless module	Wi-Fi 802.11 a/b/g/n/ac

Dimensions (mm)

