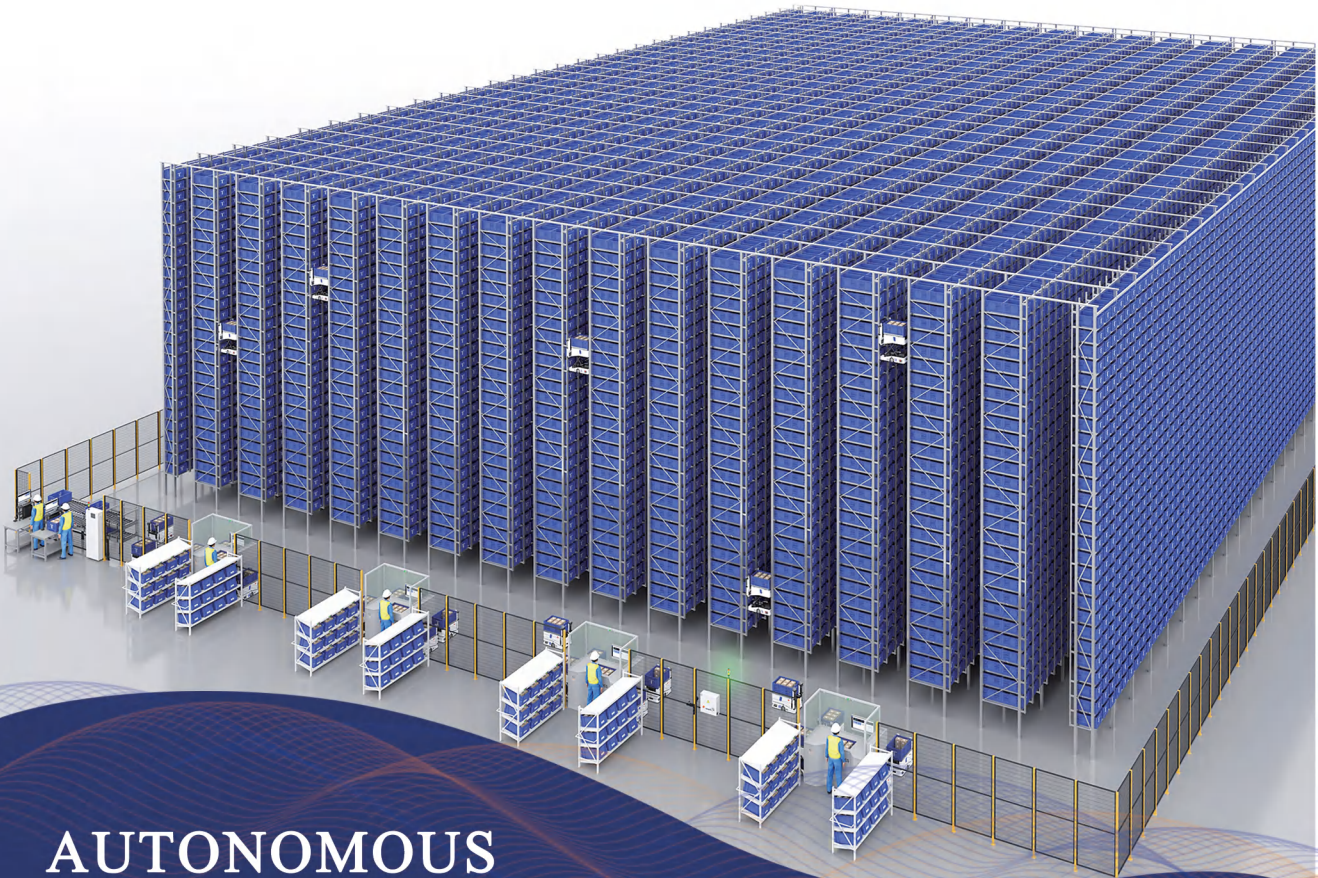




GUANGDONG ORION INTELLIGENT EQUIPMENT LIMITED

广东奇力智能设备有限公司



AUTONOMOUS CASE-HANDLING MOBILE ROBOTS 箱式机器人



Jasmine

Web : <https://www.orionrack.com>
E-mail : jasminezhao@orionrack.com
lucky@orionrack.com
Tel:+86 13424131725
Sevrice Hotline:+86-400-801-8665



Lucky

The Case-handling Automated Storage system integrates warehousing robots, management platforms, multifunctional workstations and combined solutions, which can be customized according to customers' scenarios and renovation demands. As a goods-to-person robot system, it realizes automatic storage, retrieval, transportation, intelligent handling and order picking of goods, simplifies inventory management and order fulfillment, features high efficiency and throughput, flexibly adapts to operational needs, and boosts business growth.

箱式仓储自动化系统集成仓储机器人、管理平台、多功能工作站及组合方案，可按客户场景与改造需求定制。作为货到人机器人系统，实现货物自动存储、检索、输送、智能搬运与拣选，简化库存管理及订单履约，高效高吞吐、灵活适配运营需求，助力业务增长。



High-density storage with a vertical height of up to 12 meters.
高密度存储，垂直高度可达12米。



Batch picking of 9 plastic bins per cycle, improving efficiency.
单次批量拣选 9 个料箱，提升效率。



Compatible with turnover boxes, plastic bins, pallets, bulk materials and more.
适配周转箱、料箱、托盘、散料等。



Picking accuracy of over 99%.
拣选准确率99%以上。



Seamless integration with WMS/WES systems.
可与WMS/WES系统无缝集成。



Automatic charging enables 24/7 operation.
自动充电，24 小时不间断作业。

Robots Classification | 机器人分类

Multi-Layer ACR

多层料箱机器人

It enables intelligent case picking, storage and retrieval, as well as simultaneous transportation of multiple cases, with a maximum single-trip load capacity of up to 300KG.

可实现料箱智能拣选、存取，多料箱同时搬运，单趟承重最高可达300KG。

• Pick-up height 取货高度 0.4-5.2m	• Case Capacity 承载箱数 8+1	• Battery Endurance (Full Charge) 满充续航 ≥6.5h
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Telescopic Lift ACR

伸缩升降料箱机器人

Designed for warehouses with a 10-meter ceiling height, greatly improving vertical space utilization in storage.

为 10 米层高仓库设计，大幅提升仓储的垂直空间利用率。

• Pick-up height 取货高度 0.35-10m	• Case Capacity 承载箱数 8+1	• Battery Endurance (Full Charge) 满充续航 ≥6h
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Fork-Lifting ACR

托举式机器人

Suitable for transporting materials of various specifications and forms.

适用于多规格多形态的物料搬运。

• Pick-up height 取货高度 0.33-3.6m	• Case Capacity 承载箱数 5	• Battery Endurance (Full Charge) 满充续航 ≥6.5h
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Integrated Solution for ACRs Systems

箱式机器人系统组合方案

Comparison Dimension 对比维度	System1 系统1	System2 系统2	System3 系统3
System Positioning 系统定位	Carton and bin mixed picking goods-to-person system, focusing on efficient fulfillment of split-case picking. 纸箱料箱混拣货到人系统, 专注拆零拣选的高效履约。	Same-site storage of large, medium and small items + one-stop picking, realizing integrated processing of multiple types of goods. 大中小件货物同场存储 + 一站式拣选, 实现多类型货物一体化处理。	Two robots perform division of labor and collaboration, ACR is responsible for storage and retrieval in the rack area, AMR is responsible for the flow between workstations and buffer positions. 双机器人分工协同, ACR 负责货架区存取, AMR 负责工作站与缓存位流转。
Core Components 核心组成	ACR robots, workstations, racks, bins, warehouse management platform. ACR 机器人、工作站、货架、料箱、仓储管理平台。	ACR + heavy-load AMR, warehouse management platform, multi-functional workstations. ACR + 大载重 AMR、仓储管理平台、多功能工作站。	ACR + high-speed AMR, warehouse management platform. ACR + 极速 AMR、仓储管理平台。
Applicable Industries 适配行业	Footwear & apparel, retail, 3PL, e-commerce, pharmaceuticals 鞋服、零售、3PL、电商、医药	Footwear & apparel, retail, 3PL, e-commerce 鞋服、零售、3PL、电商	Suitable for various industries with needs for high-density storage, multi-specification goods processing. 适配有高密度存储、多规格货品处理的各行业。
Applicable Scenarios 适配场景	Mixed picking of cartons and bins, multi-specification split-case picking (to B/to C). 纸箱料箱混拣、多规格拆零拣选 (to B/to C)。	High-volume or irregular item processing, full-case picking + split-case picking. 大流量或异形件处理、整箱拣选+ 拆零拣选。	Multi-form goods processing, high-density storage, full-process digital intelligence. 多形态货品处理、高密度存储、全流程数智化。
Core Advantages 核心优势	1. Wide bin type compatibility; 2. Storage height: 0.35-12m; 3. Strong business flexibility. 1. 箱型适配广; 2. 存储高度: 0.35-12m; 3. 业务柔性强。	1. Single station multi-capability compatibility; 2. High storage density; 3. Maximum efficiency improvement by 6 times; 4. Compatibility with large, medium and small items. 1. 单站多能兼容; 2. 存储密度高; 3. 效率最大提升6倍; 4. 大中小件兼容。	1. Storage density: 43,000 bins can be stored in 1,000; 2. Bin type compatibility: 300×300- 850×650mm; 3. Hook-type storage & retrieval; 4. Dynamically adjustable width forks. 1. 存储密度: 43000个/1000 2. 箱型兼容: 300×300-850×650mm; 3. 勾连式存取; 4. 动态调宽货叉。

Conveyor workstations | 输送线工作站

For order picking or line order delivery. Available in system 1/3.

用于订单拣选或按订单行交付。适用于系统1/3。



- 180 cases/h piece picking rate | 拣选效率：180箱/h
- Single & double U-shaped layouts | 支持单/双U型布局
- Work efficiency increased by 4 times | 工作效率提升4倍
- Compatible with any container type | 兼容所有类型容器

On-Robot Picking Workstation | 人机直拣工作站

Designed specifically for compact spaces with a small footprint, and easy deployment and relocation. Robots deliver plastic bins to the workstation, allowing operators to handle picking and placing with minimal walking and high efficiency. Ideal for piece-picking scenarios with limited space.

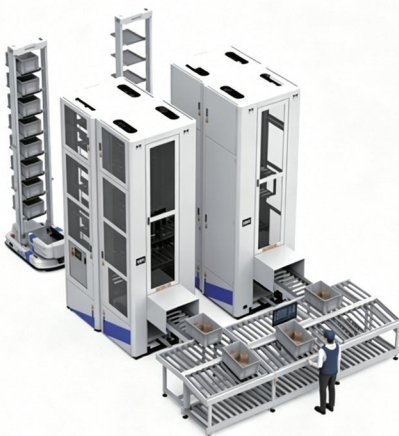
专为紧凑空间设计，占地面积小，易部署易搬迁。机器人将料箱送达操作位，操作员完成取放拣选，走动少、拣选快。适用于空间受限的拆零拣选场景。



Port Picking Station | Port 拣选工作站

Seamless docking with ACRs robots, for high throughput operations. Available in system 1.

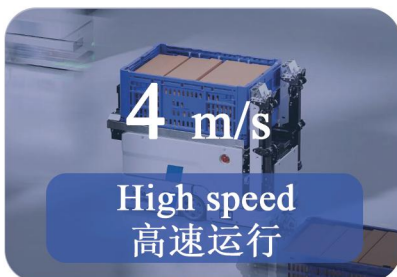
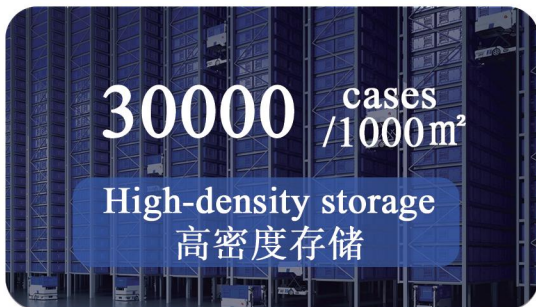
与ACRs机器人无缝对接，适用于高吞吐量作业，适用于系统1。



- 600 cases/h piece picking rate | 高效率：600 料箱/小时
- Loads 8 cases in 3 seconds | 3 秒内完成 8 箱装载
- Compatible with any container type | 兼容所有类型容器

Pick Climb | 闪攀系统

- The Pick Climb is primarily designed for piece-picking scenarios.
 - It operates via a three-in-one system: high-speed ground shuttle movement + unilateral guide rail climbing + intelligent case picking and placing;
 - Capable of both horizontal travel and vertical climbing, it efficiently transports bins from the storage area to workstations;
 - It features autonomous navigation, active obstacle avoidance, and automatic charging;
 - Its compact design enables ultra-narrow aisle layouts, achieving space-optimized rack arrangements and maximizing the utilization of existing floor space.
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- 闪攀机器人主要针对拆零拣选的场景；
 - 通过“地面高速穿梭 + 单侧导轨攀爬 + 智能取放料箱”三合一方式运行；
 - 可水平移动与垂直爬升，高效完成货箱从库区到工作站的搬运；
 - 具备自主导航、主动避障、自动充电功能；
 - 小巧的机器人支持超窄巷道设计，实现极致节省空间的货架布局，最大化利用现有场地。



System Components | 系统组成

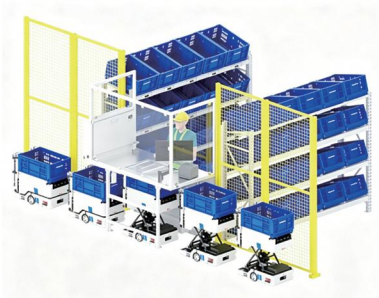
Climber | 闪攀机器人



With its compact body, exceptional speed and agile travel paths, it enables automated order picking.

以灵巧机身、极致车速、敏捷行驶路径等优势，实现订单自动化拣选。

Workstations | 工作站



The picking workstation features a compact structure, which effectively improves storage space utilization in the warehouse.

拣选工作站结构紧凑，可有效提升仓库存储空间利用率。

Racking | 货架



Adopts single-sided guide rails and standard pallet racking; height up to 12m, aisle width as narrow as 850mm, maximizing storage density.

采用单侧导轨和标准横梁式货架；高度可达12m，通道宽度低至850mm，使存储密度最大化。

Management platform | 管理平台



The management system centers on order management, efficient dispatch and data visualization, achieving optimal scheduling and full scenario coverage.

管理系统以“订单管理”“高效调度”“数据可视化”为核心，实现最优调度和场景覆盖。

Pick Climber Specifications

闪攀机器人技术规格

Type 类型	Item 项目	Technical Specifications 1 技术规格1	Technical Specifications 2 技术规格2
Specifications 规格	Bin Dimensions (L×W×H) 货箱尺寸	650×450×300 mm	650×450×400 mm
	Climber Dimensions (L×W×H) 机器人尺寸 (mm)	• Low 低位: 838×467×720 • High 高位: 838×467×1067	• Low 低位: 838×467×815 • High 高位: 838×467×1162
	Lifting Stroke 举升行程	340 mm	
	Net Weight 净重	74 kg	74.5 kg
	Max. Load Capacity 最大负载	30 kg	
	Climbing Height 爬升高度	800~11600 mm	900~11600 mm
	Pickup Height at Docking Conveyor 对接输送线取货高度	460mm (Customizable 可定制)	
	Navigation Method 导航方式	QR Code + Inertial Navigation 二维码导航+惯性导航	
Mobility performance 运动性能	Max. Chassis Straight Speed 底盘直行最大速度	4 m/s	
	Max. Vertical Climbing Speed 垂直爬升最大速度	1 m/s	
Battery performance 电池性能	Battery type 电池类型	48V, 15Ah LiFePO ₄ 磷酸铁锂	
	Cycle life 循环寿命	≥ 1200 times	
	Full Charge Time 满充时间	≤ 0.95 h	
	Full-load & Full-charge Endurance Time 满载满充续航时间	≥ 4.3h	
Deployment Requirements 部署要求	Aisle Width 巷道宽度	900 mm	
	Turning Diameter 转弯直径	980 mm	
	Floor Flatness 地面平整度	±4 mm/2.25m ²	