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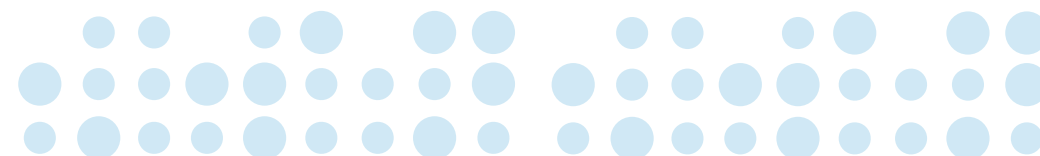
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iLoabot-X 自主作业机器人

Autonomous operation robot



自主作业机器人

iLoabot-X

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聚焦于工业智造与智慧物流的重载人形机器人，以端到端 VLA 垂直大模型为核，支持自主学习。高频作业中持续进化，技能与性能同步升级。

广泛覆盖工业制造、智慧物流、医疗实验等场景，可自主完成部件装配、分拣递包、重货搬运，并延伸至实验辅助、精密加工。用机器人替代重复、高强度人力劳动，为企业降本增效。

Focus on heavy-duty industrial automation and intelligent logistics, our humanoid robot is powered by an end-to-end VLA vertical large model that enables autonomous learning. With every task cycle, it refines its skills and elevates operational performance. Seamlessly adaptable to manufacturing, smart logistics, medical laboratories, and beyond, the robot autonomously executes component assembly, sorting & delivery, and heavy-load handling—while extending its reach to lab assistance and precision machining. By taking over repetitive, high-intensity labor, it empowers enterprises to cut costs and boost efficiency.



功能亮点

Feature Highlights

自研多自由度双机械臂：双臂负载最大60kg，精度±1mm；根据业务场景支持快速更换抓手、吸盘等末端执行器，满足多种复杂作业需求，实现一机多用。

Self developed multi degree of freedom dual robotic arm: Dual arm load of 30-40kg, accuracy ± 1mm; supports quick replacement of end effectors such as grippers and suction cups according to business scenarios, meets various complex job requirements, and achieves multi-purpose use of one machineuse.

多传感器融合：融合 3D 视觉、激光雷达与多模态力控，实现动态避障与目标逆解精定位。实时感知环境变化，自主调径调姿，保障作业安全高效。

Fusing 3-D vision, LiDAR, and multi-modal force control, the system delivers dynamic obstacle avoidance and precision inverse-kinematics positioning. It perceives environmental shifts in real time, self-adjusting path and posture to guarantee safe, high-efficiency operations.

灵活部署：标准化调试流程，1 小时内完成上线；可视化编程界面降低操作门槛，非专业人员亦可快速上手，配置效率倍增。

A standardized commissioning workflow brings the robot online within one hour. The intuitive, visual programming interface slashes the learning curve—no expertise required—doubling configuration speed.

单次续航 8-12 小时，支持有线/无线双模充电，电池热插拔设计，换电不停机，支持自动换电。

Non-stop Operations: 8-12 hours of continuous runtime, compatible with both wired and wireless charging, plus hot-swappable batteries for zero-downtime power changeovers.

应用场景

Application Scenario



标准物流箱子抓取与搬运：拥有先进的3D视觉系统、高精度力控传感器，以及强大负载能力，能够精准识别标准箱尺寸，并平稳抓取和搬运至指定位置，满足物流场景中的常见需求。

Standard logistics box grabbing and handling: has an advanced 3D vision system, high-precision force control sensors, and powerful load capacity, which can accurately identify the size of standard boxes and smoothly grab and transport them to designated positions, meeting common needs in logistics scenarios.



超宽超长货物搬运与运输：专为超大货物设计，支持宽1*1.5米极限尺寸，360°全向旋转与精准导航，在货架密布、通道狭窄、人车混行的复杂场景中依旧穿梭自如，保障超长超重物料安全高效转运。

Ultra wide and ultra long cargo handling and transportation: specially designed for ultra large cargo, supporting extreme dimensions of 1.5 * 1.5 * 2.5 meters in width, 360° omnidirectional rotation and precise navigation. It can still shuttle freely in complex scenarios such as dense shelves, narrow passages, and mixed traffic of people and vehicles, ensuring safe and efficient transportation of ultra long and overweight materials.



非标箱体类抓取：支持快速更换末端执行器，不仅能处理标准物流箱，还可精准抓取大圆桶、袋子等非标准产品，根据不同形状和尺寸的货物自动调整抓取方式，确保抓取的稳定性和可靠性。

Non standard box grabbing: supports quick replacement of end effectors, not only can handle standard logistics boxes, but also accurately grab non-standard products such as large drums and bags. The grabbing method is automatically adjusted according to different shapes and sizes of goods to ensure stability and reliability of grabbing.



笼车搬运：能够轻松搬运笼车，进一步拓展了其在物流领域的应用范围。该机器人支持自主导航和自动充电，可在物流中心实现不间断作业，有效提高物流效率。

The handling of logistics cages and freight vehicles: It can easily handle logistics cages and other freight vehicles, further expanding its application scope in the logistics field. This robot supports autonomous navigation and automatic charging, and can achieve uninterrupted operations in logistics centers, effectively improving logistics efficiency.

设备参数

Equipment parameters

尺寸 size	L852mm (上肢) 700mm (底盘) *W800mm*H1900mm
重量 weight	300KG
工作温度 operation temperature	-10-55℃
驱动模式 drive mode	轮式差速轮 Wheel differential wheel/全向轮 Omni wheel
带货尺寸 Shipping size	最小尺寸minimum size: 30mm 最大尺寸 Maximum size: L1500mmW*1000mm*H1000mm
货物重量 Weight of goods	默认双臂最大支持60kg Both arms support a maximum default load of 60 kg
货物形状 Shape of goods	盒、袋、软袋等形状，根据货物尺寸定制 Box, bag, soft bag and other shapes, customized according to the size of the goods
供电方式 Power supply mode	电池供电DC48V On Battery DC48V
导航方式Navigation method	跟随、遥控、自主导航 Follow, remote control, autonomous navigation
行驶速度 driving speed	0-7.2km/h