

松灵机器人

AgileX Robotics Co., Ltd.

公司简介 | 基本情况、机器人业务&客户案例简介

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AgileX

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www.agilex.ai

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Beyond Borders

以移动机器人架构与具身智能技术为核心引擎，专注服务全球机器人科研教育以及创新市场，加速机器人市场化进程与技术变革。

With mobile robotics architecture and embodied intelligence technologies as our core engines, we are dedicated to serving the global research education and innovation markets, accelerating the commercialization and technological evolution of robotics.

AgileX Robotics Technology Co., Ltd.

东莞松灵科技有限公司



松灵机器人，作为机器人领域技术深耕者，以移动机器人架构与具身智能技术为核心引擎，专注服务全球机器人科研教育以及创新市场，加速机器人市场化进程与技术变革。我们与全球顶尖学术机构、高校、科研单位、创新公司建立深度合作，通过全栈机器人技术与开源生态，推动机器人从单一任务执行体向具身智能体进化。

Founded in 2016, is a leading provider of mobile robot chassis and customized unmanned driving solutions, aiming to enhance productivity and efficiency across industries through innovative robotic technology.

2016年 创立时间 Founded	深圳 Shenzhen 全球总部 Global Headquarters	东莞 Dongguan 制造中心 Manufacturing Center	北京·上海 Beijing · Shanghai 区域办事处 Regional Offices
150+ 员工数量 Num of employees	8000+ m² 生产面积 Production & Testing space	120+ 专利数量 Num of patents	10000+ PCS 量产产能 Mass Production



Development Milestone

发展历程

以自研多模态移动底盘技术为根基，松灵持续突破运动控制、环境感知与智能决策的技术边界。通过自主研发的机械臂、数据采集设备、移动复合机器人等核心产品，为学术研究与行业创新提供机器人解决方案。

Rooted in self-developed multi-modal mobile chassis technology, AgileX continuously pushes the boundaries of robots - including robotic arms, data collection devices, and cobots - delivering cutting-edge solutions for academic research and industrial innovation.

规模量产

MASS
PRODUCTION

技术研发-场景验证-商业落地

TECHNOLOGY R&D - SCENARIO VALIDATION -
COMMERCIALIZATION

2025



New business exploration towards embodied intelligence

发布Pika、Tracer 2.0、Ranger Air、Ranger Delta等产品，构建敏捷高效的具身智能产品矩阵。

2024



Cost-effective robot data collection solution

发布斯坦福Mobile ALOHA同款机器人Cobot Magic、全自研轻量化六轴机械臂PIPER。

2023



Agile Tools Accelerating Robotics Development

发布全新通用机器人Ranger Mini3.0、UMR及全自研低速轻量级导航平台Navis套件。

2022



Continuous innovation to reach a wider user base

发布Ranger、Hunter SE、Tracer Mini等产品，持续完善移动机器人产品线。

2021



Based on Robotics, building full product matrix

发布Ranger Mini 1.0、开发套件R&D Kit、AutoKit、Autopilot、协作移动机器人开发套件Cobot Kit。

Business System

业务体系

松灵自主研发体系已全矩阵覆盖全行业场景，全栈技术自研，涵盖“入门”到“高阶”的机器人方案，赋能全行业应用客户，加速移动机器人场景应用开发。

AgileX Robotics' self-developed technology system delivers comprehensive matrix coverage across industry sectors. With full-stack in-house technologies spanning from entry-level to advanced robotic solutions, we empower clients worldwide, streamlining mobile robotics application development for diverse scenarios.



ROBOTICS CHASSIS

移动机器人底盘

全地形通行覆盖



ROBOTICS R&D KIT

机器人开源套件

聚焦ROS生态建设



EMBODIED INTELLIGENCE

具身智能

铸造智能坚实地基



DATA SERVICES

数据服务

AGI的高质量燃料



ODM SERVICES

定制服务

个性化定制软硬件

研发与创新

松灵拥有机械结构、电机设计、驱动设计、运动控制及导航系统、电池电源设计等多项核心机器人技术研发与创新能力。

AgileX Robotics possesses in-house R&D and innovation capabilities across multiple core robotics domains, including mechanical structure, motor design, drive systems, motion control and navigation, as well as battery and power design.

CE MARKING SYSTEM

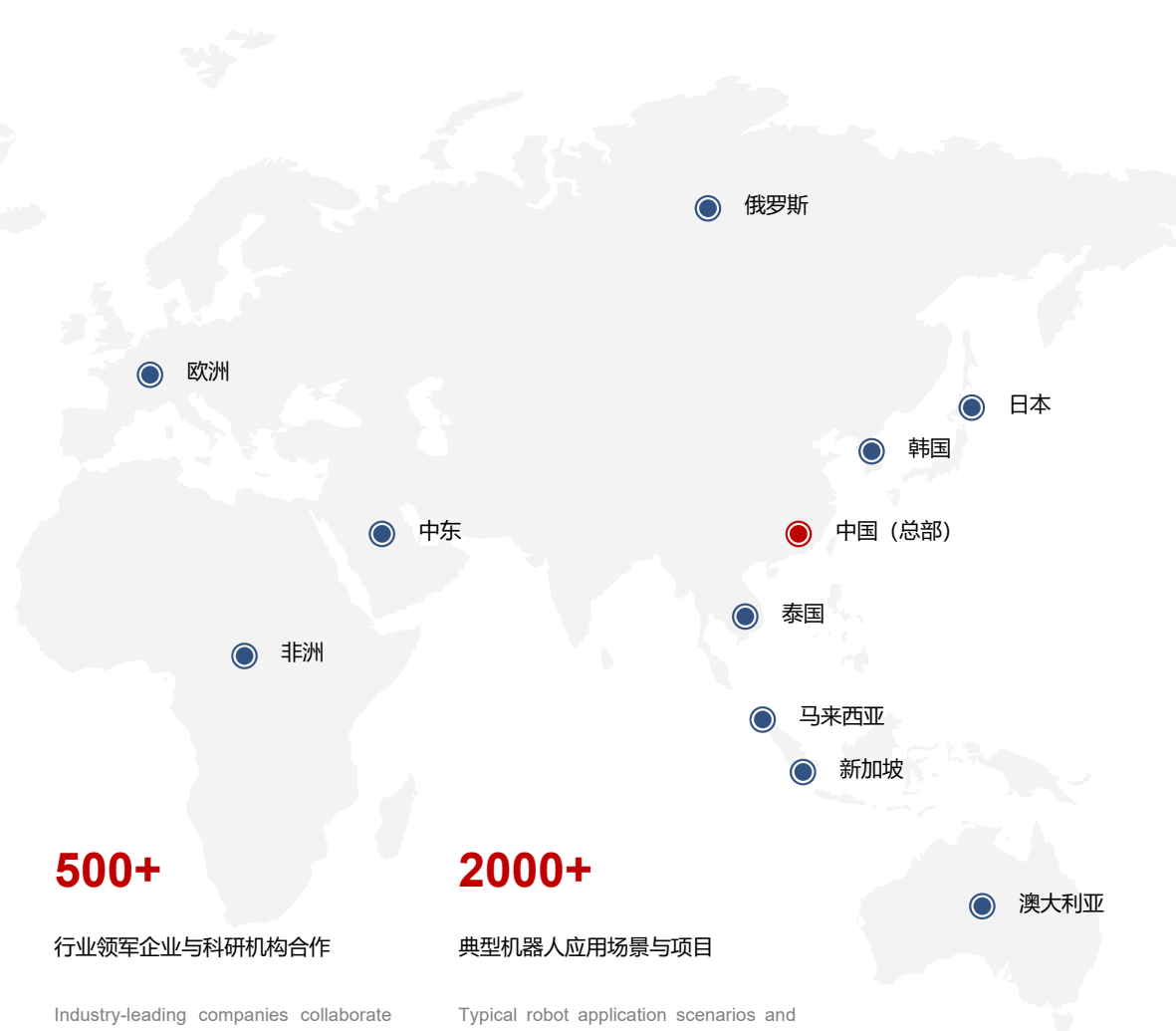


Global Localisation

全球化市场网络

松灵与全球30多个国家与地区建立了长期稳定的合作，服务合作伙伴包括全球行业领军企业以及国内外顶尖学府、科研机构，拥有成熟的全球方案落地经验及技术支持体系。

AgileX Robotics has established long-standing partnerships across more than 30 countries and regions worldwide. The company serves global industry leaders, top universities, and research institutions, supported by a mature global deployment framework and robust technical support system.



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With mobile robotics architecture and embodied intelligence technologies as our core engines, we are dedicated to serving the global research education and innovation markets, accelerating the commercialization and technological evolution of robotics.

Standard Robotics Chassis

标准移动机器人底盘



SCOUT 4WD机器人

SCOUT 4WD Robot Chassis



HUNTER AKMAN机器人

HUNTER AKMAN Robot Chassis



TRACER AGV机器人

TRACER AGV Robot Chassis



BUNKER TRACK机器人

BUNKER TRACK Robot Chassis



RANGER 4WD4WS机器人

RANGER 4WD4WS Robot Chassis



RANGER Air/Delta机器人

RANGER Air/Delta Robot Chassis



UMR 行业级机器人基座

UMR Enterprise Robot Chassis



TREX 轮足机器人

TREX WLR Robot Chassis



尺寸

Size

< 2000mm



速度

Speed

1.5~4.8m/s



载重

Payload

10~150Kg



续航

Battery Life

4~8H



爬坡

Climbing

8~30°



越障

Negotiate

20~150mm

Covering all industry scenarios

覆盖全地形通行场景，支持多种行业应用

移动底盘产品矩阵涵盖了各种地形通行需求，具备严格的产品检测流程，为用户提供CAN开发接口及ROS Page、URDF、技术文档等开发资源，为用户构建面向核心业务快速应用开发的全面支持。

The mobile chassis product lineup delivers comprehensive all-terrain capabilities, supported by rigorous product testing protocols. It provides developers with CAN bus interfaces alongside ROS packages, URDF models, and technical documentation, enabling rapid application development for core business needs.



ROS

ROS2



GAZEBO



python



IP防护能力检测

IP protection capability testing



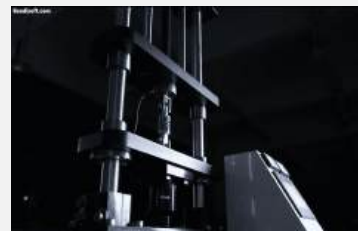
适用温度范围检测

Temperature range detection



高尘土环境防护检测

High dust environment testing



零部件震动检测

Component vibration detection



轮胎结构磨损检测

Tire structure wear inspection



整机震动检测

Whole machine vibration detection

Standard R&D Sensors Kit

标准移动机器人开源套件



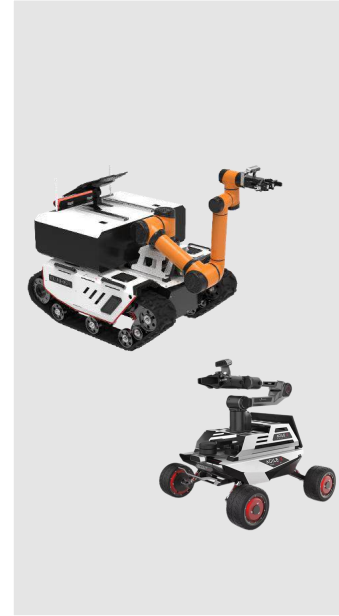
Mini Lite/Pro开源套件

Mini Lite/Pro R&D Kit



ROS2 EDU开源套件

ROS2 EDU R&D Kit



Cobot Kit开源套件

Cobot KitR&D Kit



LIMO多模态开源套件

LIMO Multimodal R&D Kit



Autokit开源套件

Autokit R&D Kit (Based on Autoware)



四足机器人开源套件

Quadruped R&D Kit

Comprehensive ROS Ecosystem

全面的ROS生态体系

基于松灵机器人ROS生态体系，集高性能工控、高精度LIDAR、多传感器搭配于一身，可实现移动机器人运动控制、通讯、导航、建图、移动抓取等应用，提供完善的开发者文档及DEMO资源，极具科技感的工业设计，专属传感器定制支架，为用户提供教育科研、产品预研、课题等二次开发最佳实验平台。

Based on AgileX Robotics's ROS ecosystem, this integrated platform combines high-performance computing, precision LIDAR, and multi-sensor suite. It supports key mobile robot functions like motion control, navigation, mapping, and mobile manipulation, and comes with full documentation, demos, and custom hardware design—making it an ideal development platform for education and research applications.

注：开源套件默认配置齐全的开发环境及开发工具。
The R&D kit comes pre-configured with a complete development environment and comprehensive tools.

“硬件+资源+课程” 三位一体 Integrated Ecosystem of Hardware, Resources, and Curriculum

■ 完善的硬件配置

Well-Designed Hardware Configuration



Lidar



Camera



IMU



GPS



Computer



Wi-Fi

■ 充足的开发资源

Rich Development Toolkit



官方Github

Official Github



官方Demo

Official Demo



技术开发文档

R&D Document

■ 配套的教学课程

Supported Learning Courses



中文出版课程

Publishing Course



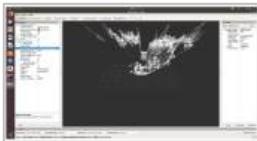
英文在线课程

Online Course (EN)



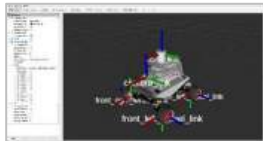
官方定制课程

Customized Courses



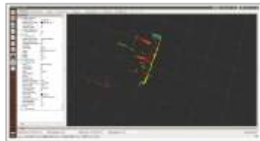
传感器数据获取

Sensor data



Gazebo仿真

Gazebo simulation



点云地图构建

Map construction



自主导航与避障

Navigation and obstacle



Movit机械臂运动控制

Movit control



ROS

ROS2



GAZEBO



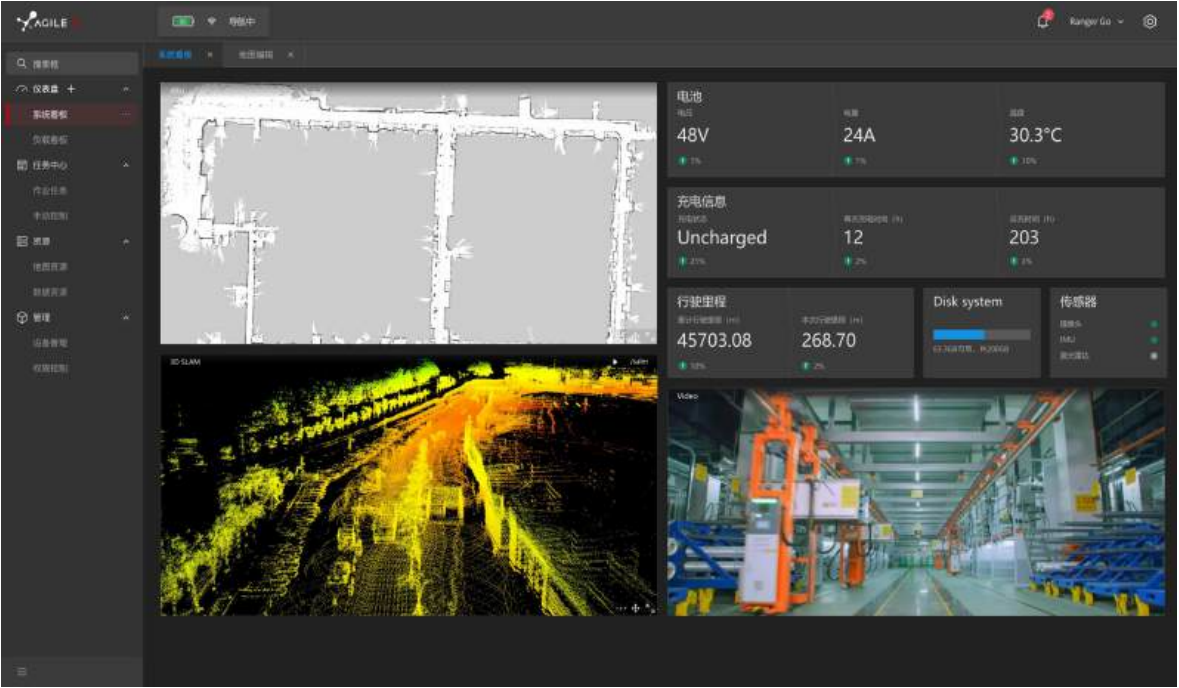
python



MoveIt

Navis Full 3D Navigation Kit

Navis全三维导航套件



松灵Navis商用导航具备超大地图构建能力，仅采用Lidar、IMU融合方案，便可轻松支持自主导航、路径跟踪，用极低的成本代价，为行业应用提供高精度、稳定可靠的移动机器人商用导航方案。

With robust Lidar-IMU fusion, AgileX Robotics's commercial navigation supports large-scale mapping, autonomous navigation, and path tracking—providing a cost-effective, high-precision solution for mobile robots.

2,000,000 m²

单次最大建图面积

Maximum single
mapping area

±3 cm

重复定位精度

Repeatability

2.5 m/s

最大导航速度

Maximum
Navigation Speed

6-flod

安全防护机制

Protection
mechanism

HTTP/WebSocket

二次开发接口

Secondary development
interface

Navis Plus

可定制扩展模组

Customizable expansion
modules

+RTK GPS

支持GPS接入

Supports GPS access

Embodied Intelligence Solution

具身智能解决方案



具身智能机械臂系列

EI Robotics Arm Series



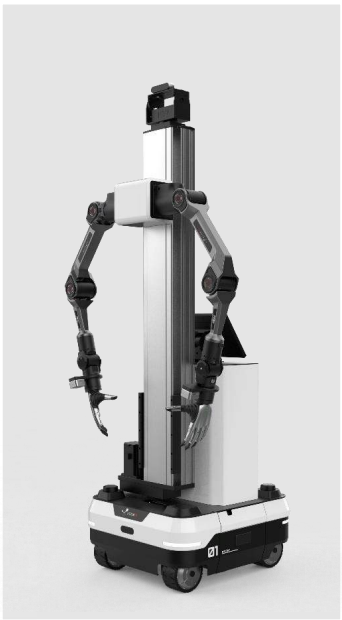
具身智能移动基座

EI Robotics Navigation Chassis



Cobot S Kit开源套件

Cobot S Kit



轮式人形双臂开源套件

Bimanual Kit



Pika数据采集套件

Pika Data Collection Kit



Cobot Magic数采套装

Cobot Magic Data Collection Kit

Comprehensive Embodied AI Hardware Ecosystem: From Mobility to Task Execution

从移动到执行，全具身智能硬件体系



“移动+动作+定制支架” = 具身本体方案

"Mobility + Manipulation + Custom Frameworks = Embodied Intelligence Solution"



PIPER NERO
具身智能机械臂

Embodied Intelligence Robot Arm



Ranger Air/Delta Navigation
具身智能移动基座

Embodied Intelligence Robot Chassis



Support Structures
定制支架

Robot Body Structures

ROS

ROS2



6/7轴	1.5/3Kg	552 x 500 x 250 mm	80Kg	导航方案
机械臂自由度	机械臂负载	移动基座尺寸	移动基座负载	支持二次开发
6/7 DOF	1.5/3 Payload	Chassis Dimensions	Chassis Payload	Navigation Support

松灵机器人硬件体系适配C++、Python开发环境，兼容ROS1、ROS2，提供URDF模型，同时支持基于Gazebo、issacsim仿真。

The AgileX Robotics hardware ecosystem supports development in C++ and Python environments, maintains compatibility with both ROS1 and ROS2, and provides URDF models. With integrated simulation capabilities through Gazebo and Isaac Sim.



Cobot Magic套件 Cobot Magic Kit

斯坦福Mobile Aloha同款，采集-推理-执行三位一体真机数据采集方案

Stanford Mobile ALOHA Replica: Trinity Data Acquisition Platform with Integrated Collection-Inference-Execution Capabilities



Pika数据采集套件 Pika Data Collection Kit

专为具身智能大模型数据采集设计的高精度通用型低成本便携式解决方案

Low-cost & Portable precision actuator system designed for intelligent control and adaptable data collection.



桌面双臂套件 Desktop Dual-Arm Kit

轻量级低成本桌面双臂采集推理方案，适用于挑战杯、WBCD等赛事

Lightweight Desktop Dual-Arm Kit for Collection & Inference | Optimized for Academic Competitions (e.g., Challenge Cup, WBCD).



VR双臂套件 VR Dual-Arm Kit

全开源VR适配方案，支持适配基于松灵定制的轮式双臂人形方案

Fully Open-Source VR Adaptation Framework | Compatible with AgileX Customized Wheeled Bimanual Humanoid Platforms.

Multiple Configurations to Adapt to Diverse Data Collection Scenarios

多种构型满足多样化数据采集场景需求



精细操作+高帧率+人体操作习惯，仅需采集50组数据，动作复现成功率90%

Precision Manipulation + High-Frame-Rate Capture + Human-Factor-Engineered Operations, 50 Sets of Data → 90% Success Rate

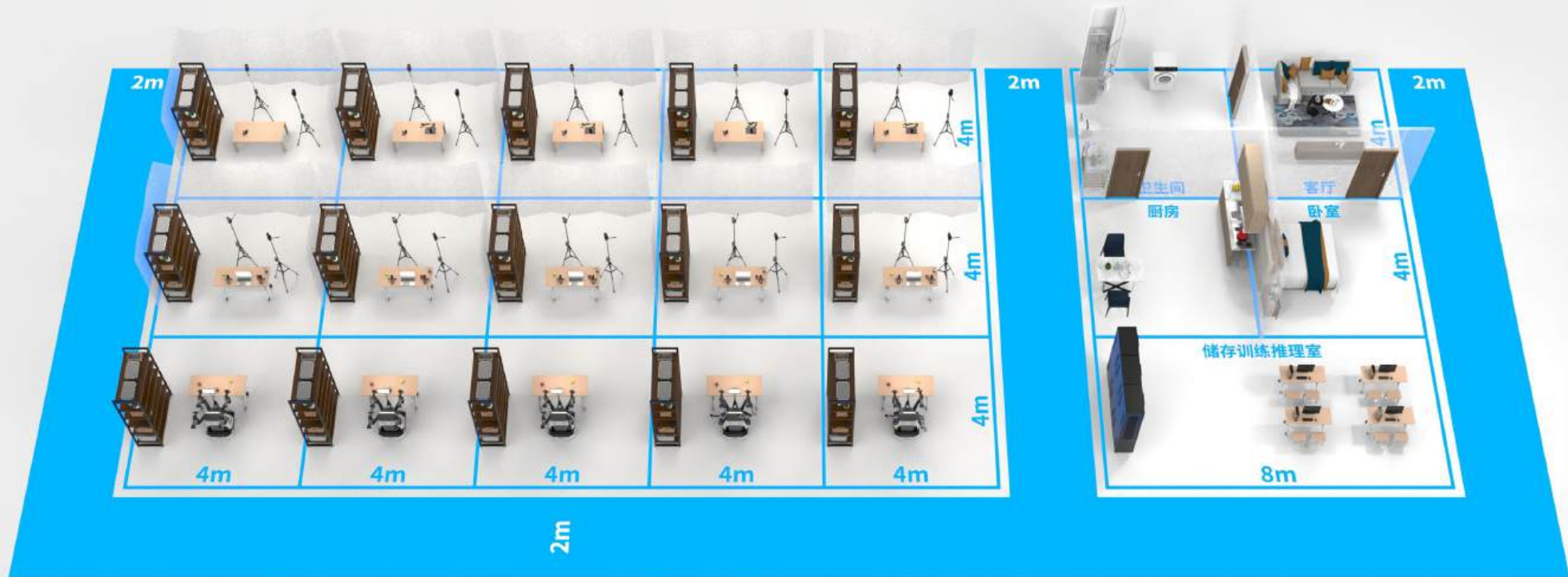
随时随地高效采集复现，构建全面的空间采集能力

Anytime, anywhere, efficiency first, ready to use



Building the Embodied Intelligence Data Flywheel through the "Collection-Data-Model-Hardware" Cycle

基于“采集-数据-模型-本体”循环，构建具身智能数据飞轮



End-to-End Scalable, Standardized & Visualized Data Acquisition Pipeline Solution

全流程规模化、标准化、可视化数据采集工厂方案



参考配置方案	详细描述	数量	备注
Cobot Magic	主从遥操数据采集平台	5	16m²/套
PiKA	基于基站定位的手持+遥操	10	16m²/套
存储阵列	数据存储服务器	1	
训练阵列	8卡训练服务器（4090）	1	
WEB OA	数据生成全链路管理OA	1	
推理主机	I7 13700 32G 2T 4090	1	
隔离屏风	PiKA部署隔开干扰	10	选配/自备
桌椅	数采设备常规配置	15	选配/自备
货架	数采设备常规配置	15	选配/自备
场景	厨房/卧室/客厅/卫生间布置	4	选配/自备

Leveraging a Data Management System to Implement Three-Tiered Quality Control: Collection, Verification & Augmentation

基于数据管理系统实现“采集-校验-增强”三级质量管控

免费开源数据包

Free & Open-Source Data

5000 条，涵盖25类任务场景，可节省约25天数采成本

25 Task Scenarios | 5,000 Open-source Data Entries | Estimated 25 Days Saved in Data Collection Costs

付费标准数据包

Paid Certified Data

100000 条，多场景任务数据，未来计划百万级，即买即用

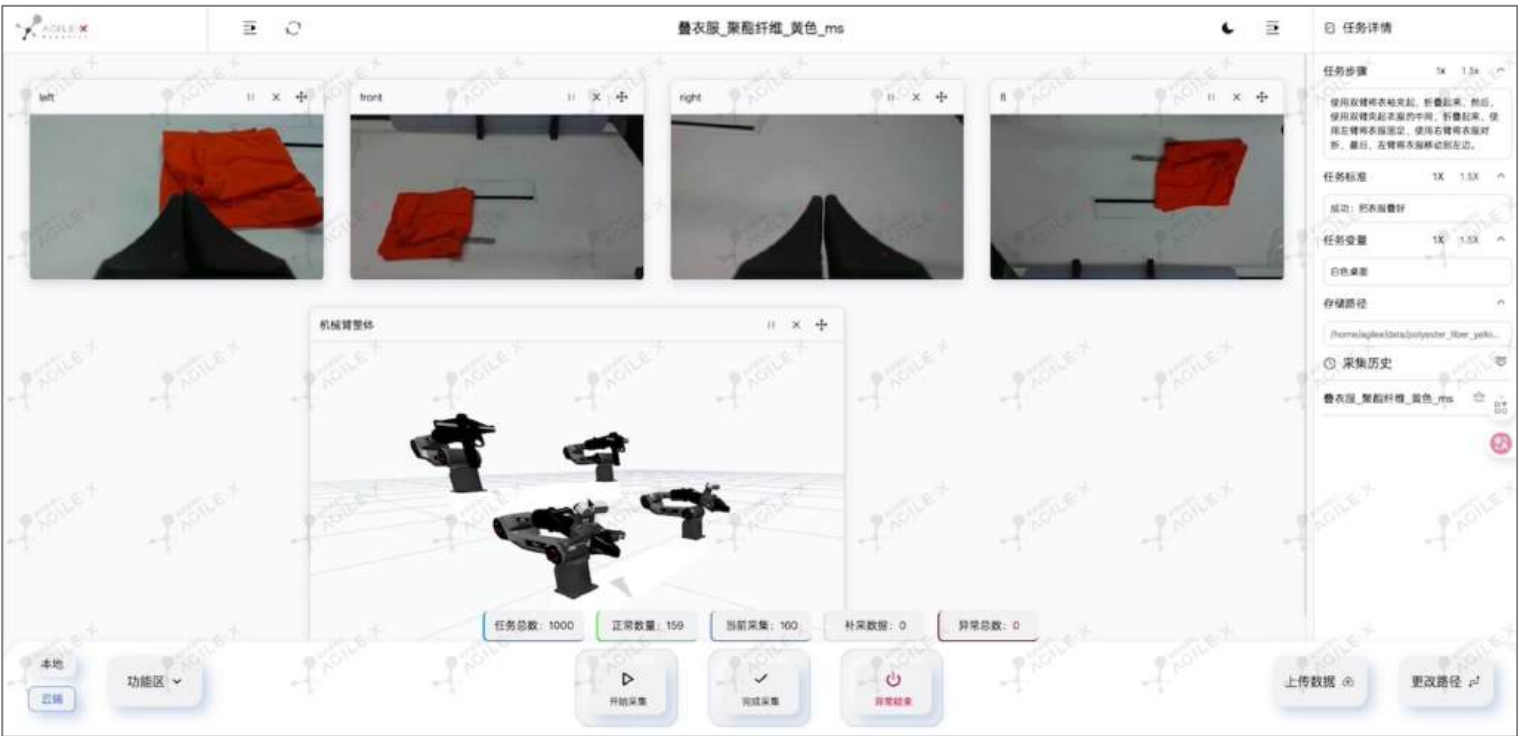
Multi-Task Scenarios | 100,000 Real-Robot Data Entries | Million-Scale Data Expansion Initiative

付费定制数据包

Paid Custom Data

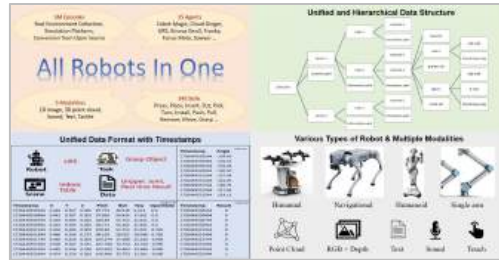
200H MOQ，硬件+场地+人员全包（支持设备/场地/人员租赁模式），自定场景/任务，指定时间交付，支持独享

200-Hour Minimum Order | All-Inclusive Hardware, Venue & Personnel (with rental options) | Custom Scenarios/Tasks | Guaranteed Timely Delivery | Exclusive Usage Rights



Spanning Data, Academic, and Competition Ecosystems to Comprehensively Empower Embodied AI Model Deployment

横跨数据-学术-赛事生态，全面助力具身智能模型应用



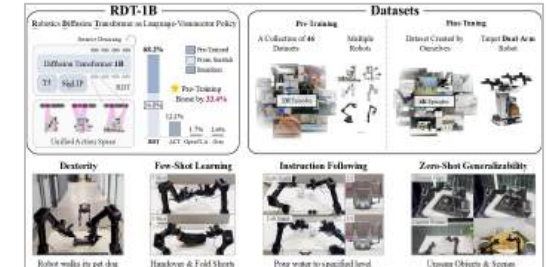
All Robots In One (ARIO)



RoboCOIN



RoboTwin



RDT

数据生态 Data Ecosystem

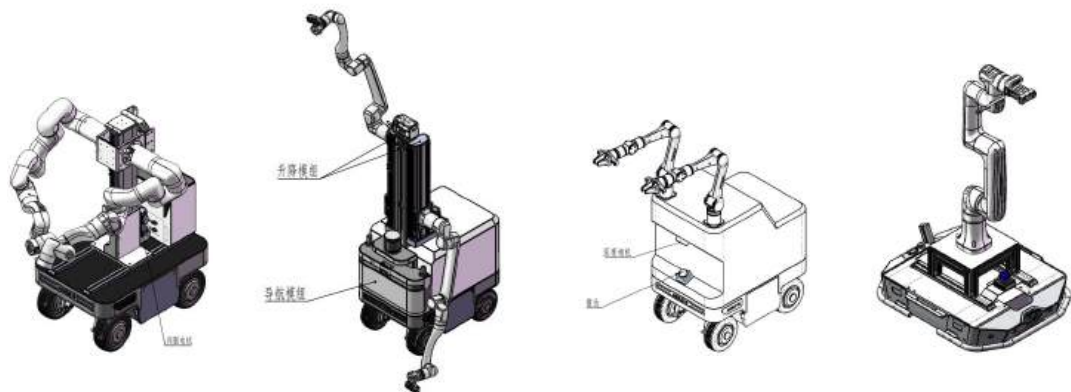
学术生态 Academic Ecosystem



赛事生态 Competition Ecosystem

AgileX Robotics X+N Customized ODM Design Solutions

松灵机器人 X+N ODM定制化服务



松灵机器人支持客户硬件选配定制设计，基于强大的机械结构设计能力，松灵机器人已帮助实现超过1500+专业机器人硬件定制设计方案，满足用户不同机器人课题、研究方向需求。

AgileX Robotics offers configurable and customizable hardware solutions tailored to specific research needs. Leveraging robust mechanical design capabilities, we have delivered over 1,500 professional robotic hardware customization designs to support diverse research projects and directions.



X: 全地形移动机器人平台

X: All-Terrain Mobile Robot Platform



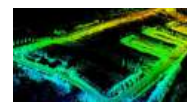
定制结构设计
电控驱动设计

Structural & Electronic
Systems Design



整机集成装配
技术服务支持

SI & Technical
Support



多传感融合
SLAM方案

Multi-Sensor
SLAM Solutions



全行业机器人应用场景

Industry-Wide Robotic Application Scenarios

Custom Solutions Portfolio

客户定制案例

将“以客户体验为中心”融入企业文化底蕴，帮助客户达成业务成功。通过不断创新的技术能力，踏实极致的工程师文化，引领行业的工业设计，我们将高性价比的移动机器人产品带给用户，让创新的想象力照进现实。

We integrate "customer-centricity" into our corporate DNA, empowering clients to achieve business success. Through continuously innovative technologies, a dedicated engineer-first culture, and industry-leading industrial design, we deliver high-value mobile robotics solutions that turn imaginative concepts into tangible realities.

UAS 中国无人系统展

户外巡检机器人

Outdoor Inspection Robot

- 基于SCOUT 2.0+商用导航套装
- 全园区自动导航及自主避障能力
- 适配自动充电模块，低电量自动返航

- Powered by SCOUT 2.0+ Commercial Navigation Suite
- Campus-Wide Autonomous Navigation with Dynamic Obstacle Avoidance
- Compatible with Automatic Charging Modules | Auto-Return on Low Battery



鸡场巡检机器人

Chicken Farm Inspection Robot

- TRACER（定制）+客户自研导航系统
- 智能AI识别算法+智能巡检管理平台

- TRACER (Customized) + Client-Proprietary Navigation System
- Smart AI Recognition Algorithms and Intelligent Inspection Management Platform



轨道巡检机器人

Underground Railway Inspection Robot

- RANGER MINI 3.0+Navis导航套装
- 双机械臂系统+线性模组+充电模组
- 提供机器人任务规划与管理

- RANGER MINI 3.0 + Navis Navigation Suite
- Dual Robotic Arms System with Linear Actuator & Charging Modules
- Integrated Task Planning and Management Capabilities



养老运送机器人

Elderly Care Material Robot

- RANGER MINI 3.0+客户自研导航系统
- 定制人机交互服务+自动上下电梯

- RANGER MINI 3.0 + Client-Proprietary Navigation System
- Custom HMI Services with Seamless Elevator Operation Capabilities



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松灵机器人品牌合作

Agile-X Robotics Scholarly Alliances

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AGILE·X

Beyond Borders

以移动机器人架构与具身智能技术为核心引擎，专注服务全球机器人科研教育以及创新市场，加速机器人市场化进程与技术变革。

With mobile robotics architecture and embodied intelligence technologies as our core engines, we are dedicated to serving the global research education and innovation markets, accelerating the commercialization and technological evolution of robotics.

Official Partner of Global Robotics Conferences

全球机器人顶级会议、赛事官方合作伙伴

机器人训练营及赛事赞助支持

ROS训练营及技术培训活动，为国内外机器人赛事提供硬件技术方案支持

Robotics training workshop & competition sponsorship



500+

全球知名行业领军企业及科研机构客户

World-class famous industry leaders and scientific research institutions

300+

典型机器人场景解决方案及技术支持

Typical robot scenarios with AgileX Robotics Solutions and technical support

机器人展会及顶级会议赞助支持

国内外顶级机器人会议、相关展会参展与赞助及本地渠道支持

Support for robotics industry exhibitions and top-tier conferences



机器人行业方案技术落地支持

国内外机器人行业应用方案提供商，全面支持终端行业应用场景落地

Robotics Industry Solution & Technology Implementation



We champion key robotics events and competitions, advancing corporate value through ecosystem enrichment.

我们参与并赞助机器人重要活动/赛事，为机器人生态繁荣贡献企业价值



✱ Adventure X



ROS Summer School



ROS Winter School



iROS HANGZHOU 2025 IROS Hongkong



Education & Competition Sponsorships



The Greater Bay Area Embodied AI WorkShop



The 2025 World Humanoid Robot Games



ICRA ATLANTA 2025 ICRA (WBCD) 2025 US

WWW.AGILEX.AI



官方公众号



官方客服号

东莞松灵科技有限公司
AgileX Robotics Co., Ltd

+0755 8616 5015

商务合作: Sales@agilex.ai

市场合作: Marketing@agilex.ai

深圳·南山智园·A3栋2层

东莞·松山湖中小科技企业创业园·11栋1101室

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