



BLINX

# AI + ROBOTICS

*Product Portfolio*

{Education} {Intelligence} {Innovation}

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# What We Build

We build **modular** and **scalable** AI and robotics laboratory systems for **higher education**.

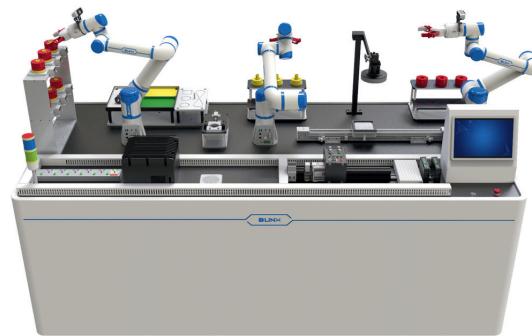
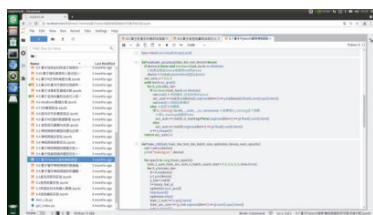
Our platforms **integrate AI, machine vision, mobile robotics, and industrial robotics** within a unified architecture.

Designed for **hands-on learning and real-world practice**, our systems enable institutions to deliver **accessible, future-ready AI and robotics education**.



## From Industry to Education

Leverage 10+ years of industrial experience to bring real-world applications into hands-on educational projects.



## Open-Source & Customizable

Fully open-source software and algorithms allow teachers and students to customize, experiment, and master practical skills.

## Curriculum-Ready

Each product includes step-by-step lab guides, ideal for beginner-friendly, hands-on learning.



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# Laboratory Solutions

From Fundamentals to Advanced AI & Robotics Applications

Our modular and scalable laboratory solutions are designed for teachers and educators.

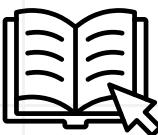
They cover Robotics & AI, Machine Vision, Mobile Robotics, Industrial Robotics, and Embodied Intelligence, providing hands-on learning, ready-to-use curricula, and flexible experiments.

These platforms help teachers guide students from basic concepts to advanced, real-world applications, enhancing practical skills and interdisciplinary understanding.

## \* Current Challenges in Robotics Education

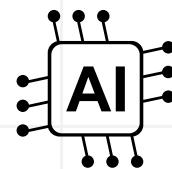
1

Limited access to real-world industrial applications



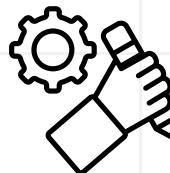
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Insufficient hands-on training opportunities



2

Fragmented learning resources and software



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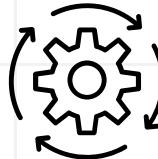
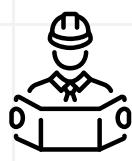
Lack of integration between AI and robotics curricula



## Future Employment Trends in Robotics

1

Rising demand for AI & robotics engineers in manufacturing

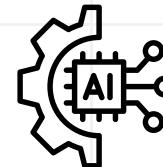


2

Growth of autonomous systems and service robotics

3

Increased opportunities in AI-powered industrial automation



**STEAM**

4

Interdisciplinary roles combining AI, robotics, and data science

2



# 1 Robotics & AI Lab

AI Foundations

This laboratory focuses on the integration of robotic systems with core artificial intelligence technologies. It supports teaching and practice in AI algorithms, robotic control, intelligent perception, and AI-driven decision-making, enabling students to develop and deploy intelligent robotic applications in real-world scenarios.



# AI Experiment Box

This experiment kit is designed for AI-related majors. It integrates computer vision, speech processing, a robotic arm, gesture sensor, temperature/humidity sensor, barometric pressure sensor, and other embedded modules. By building an edge computing terminal, it provides a unified communication protocol and interface for AI application development. Based on Linux OS and developed using Python for course materials, it supports teaching and hands-on practice for more than 8 AI-related courses.



Programm  
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Learnin  
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Deep  
Learnin  
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Digital  
Image  
Processin  
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Machine  
Vision



Speech  
Recognitio  
n



Embedded  
Systems

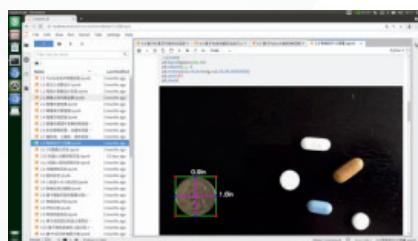


Intelligent  
Robotics

## Product Features

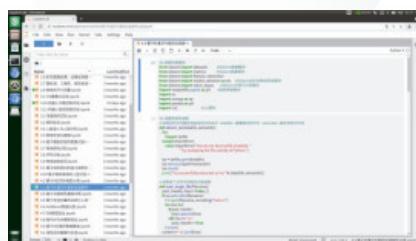
- Designed for AI education, integrating vision, speech, robotics, and embedded sensing in one platform.
- Edge-computing architecture with unified communication protocols and development interfaces.
- Linux-based system with Python as the core development language for teaching and experiments.
- Supports 8+ AI-related courses, enabling hands-on learning and practical skill development.

## Product Functions



### Open AI Experiment & Development Environment

An interactive Jupyter Notebook-based environment supporting browser-based programming, multimodel experiments, mainstream deep learning frameworks, and flexible teaching configurations.



### Full-Stack Open Source & Secondary Development

Provides complete access to software frameworks and algorithm-level source code, with comprehensive lab manuals and system architecture documentation for advanced development.



### AI-Driven Multimodal Intelligent Training

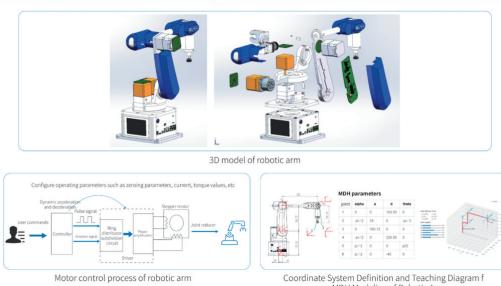
Integrates robotics control, machine vision, speech processing, and embedded sensors to support comprehensive AI and intelligent system training projects.

# Desktop Six-Axis Robot

This robot is specifically developed for educational purposes. It features a fully open design, including the robot's mechanical structure, motor control, and kinematics algorithms, while integrating open-source AI large model technologies. It also offers multiple expansion interfaces, enabling seamless integration of peripherals such as vision modules, speech systems, sensors, and more — perfectly suited to diverse hardware development scenarios across multiple applications.



## Product Features



## Fully Open-Source Architecture

Provides complete openness across mechanical design, motor control, and kinematic algorithms, with access to 3D models, control source code, and SDKs, enabling in-depth research and development at both hardware and software levels.

## Expansion Capabilities

### Expandable Peripherals



## Easy Integration with Third-Party Kits

Designed for educators and system integrators, the platform supports seamless integration with external kits and devices through standardized interfaces and open SDKs, enabling flexible system expansion, simplified teaching deployment, and efficient solution integration.

## Product Specifications

Axes	6	Maximum Payload	1.0 kg
Working Radius	410mm (16.14in)	Weight	5.4 kg
Repetitive Positioning Accuracy	±0.5mm	Supply Voltage	12V/5A DC
Rated Power	60W Max	Material	Aluminum Alloy, High Toughness Resin
Working Environment	-10°C~60°C (14°F~140°F)	Controller	STM32
Communication Method	USB/WiFi/Bluetooth/RJ 45	Base Dimensions	170mm×135mm (6.69in×5.31in)
Axis Motion Parameters (with a 500g payload)	J1: ±130°, Maximum speed: 45°/s J2: -80°~+90°, Maximum speed: 45°/s J3: -85°~+40°, Maximum speed: 45°/s J4: ±160°, Maximum speed: 45°/s J5: -179°~+15°, Maximum speed: 27°/s J6: ±179°, Maximum speed: 45°/s		

# Six-Axis Collaborative Robot

The 6-axis collaborative robot is a research and education-oriented platform that combines industrial-grade performance with full openness in structure, motor control, and kinematic algorithms. Integrated with open-source AI foundation models, it supports multiple expansion interfaces for vision, speech, sensors, and peripheral devices, making it suitable for teaching, research, production line integration, and assembly applications.

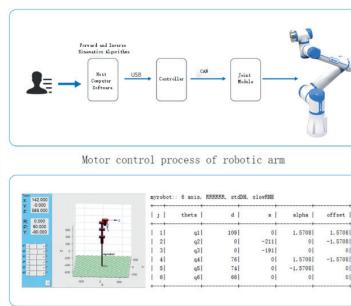


## Product Features



### Built-In Controller

Compact base integration reduces footprint and simplifies deployment for teaching, research, and industrial setups.



### Fully Open-Source

Provides full access to structure, motor control, kinematics, and AI model SDKs, enabling secondary development and flexible system integration.

## Product Specifications

Axes	6	Maximum Payload	3.0 kg
Working Radius	680 mm (26.77in)	Weight	15 kg
Repetitive Positioning Accuracy	±0.02 mm	Supply Voltage	24 V/18 A DC
Rated Power	450W Max	Material	Aluminum Alloy
Working Environment	-10°C~70°C (14°F~158°F)	Controller	X86
Communication Method	WiFi/RJ45	Base Dimensions	120 mm×120 mm (4.72in×4.72in)
Maximum range of joint motion	J1: ±175° J2: ±120° J3: ±150° J4: ±175° J5: ±175° J6: ±175°		



# 2 Robotics & Machine Vision Laboratory

Vision & Perception

The Robotics & Machine Vision Laboratory emphasizes vision-based perception and intelligent robotic inspection. By integrating robotic arms, industrial vision systems, and AI computing platforms, the lab supports teaching in computer vision, vision-guided robotics, and AI-powered inspection and manufacturing applications.



Six-Axis Robot Vision Experiment Platform



Six-Axis Robot Vision Inspection Production Line



Six-Axis Robot Vision Experiment Platform



Robot Large Model and Vision Inspection Production Line

This vision-based robotics system integrates a machine vision system, a six-axis robot, and an AI-powered edge computing terminal to support teaching and training in artificial intelligence, robotics, and smart manufacturing. With an optional conveyor module, it forms a vision-based inspection production line for real-world industrial applications.



Programming



Machine Learning



Deep Learning



Digital Image Processing



Machine Vision



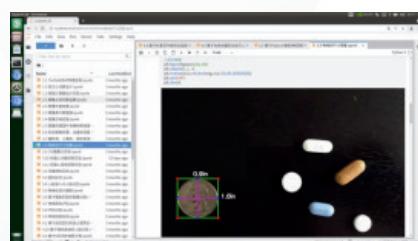
Intelligent Robotics



## Product Features

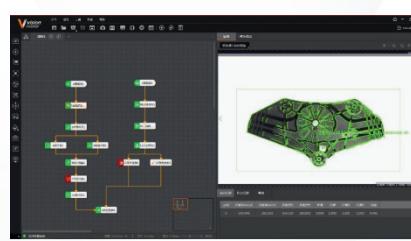
- The system supports teaching in Python programming, machine learning, deep learning, digital image processing, computer vision, and robot control.
- It integrates a robot and vision system in a compact, desktop-ready design, powered by an edge computing terminal that supports mainstream AI frameworks such as PyTorch and TensorFlow.
- The platform combines deep learning, machine vision, and vision-robot collaboration, with built-in AI algorithms for object classification, detection, defect inspection, and OCR to support both basic and advanced teaching.

## Product Functions



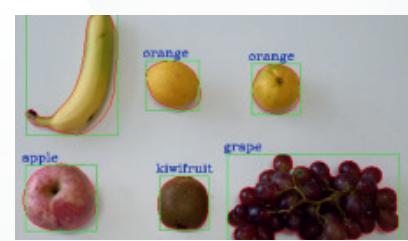
### Open and Interactive Development Environment

The platform provides an interactive Jupyter Notebook environment supporting Python, deep learning frameworks, multi-user experiments, and hands-on coding practice.



### Full Source Code and Graphical Vision Software

All software and algorithms are fully open, with drag-and-drop 2D vision software, 130+ modules, camera support, and industrial protocol compatibility for rapid deployment and secondary development.



### Vision-Guided Robotic Applications

Integrated vision and robotics enable localization, inspection, recognition, hand-eye calibration, and applications such as object sorting, defect detection, and intelligent stacking for teaching and industry projects.



This platform combines a vision system and collaborative robot with an AI-powered computing unit, enabling teaching and industrial applications in AI, robotics, and smart manufacturing, with support for large models like DeepSeek and Qwen for vision, speech, and robot integration.



Programming



Machine Learning



Deep Learning



Digital Image Processing



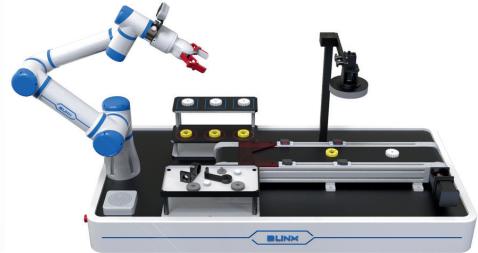
Machine Vision



Intelligent Robotics



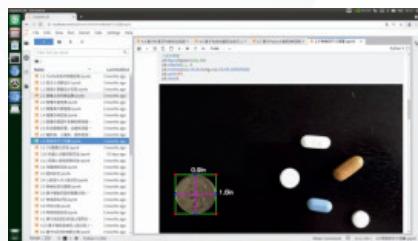
Large Model Applications



## Product Features

- The platform supports teaching in Python, machine learning, deep learning, computer vision, robot control, and large model applications.
- It integrates a robot and vision system in a compact 800×600 mm design with a GPU-powered computing unit supporting PyTorch, TensorFlow, and other AI frameworks.
- Built-in AI and vision algorithms, along with locally deployed large models like DeepSeek and Qwen, enable applications in object recognition, defect detection, OCR, and advanced industry scenarios combining vision, speech, and robotics.

## Product Functions



### Open and Interactive Development Environment

The platform provides an interactive Jupyter Notebook environment for Python, deep learning, and robotics experiments.



### Full Source Code and Local Large Models

All software and algorithms are open, with locally deployed large models like DeepSeek and Qwen supporting AI applications in vision, speech, and robotics.



### Vision-Guided Robotic Applications

Integrated vision and robots enable localization, inspection, recognition, hand-eye calibration, and tasks such as sorting, stacking, and classification for teaching and industrial training.



# 3 Mobile Robotics Laboratory

Mobile Autonomy

This laboratory is dedicated to autonomous mobile robots and intelligent navigation systems. It provides hands-on learning environments for perception, localization, path planning, and human–robot interaction, preparing students for applications in service robotics, logistics, and intelligent mobile systems.



Mobile Robot Application Development Platform



Indoor Composite Mobile Collaborative Robot



AI Intelligent Interactive Robot



High-Precision Composite Mobile Collaborative Robot

This mobile robot integrates automatic control, microelectronics, information technology, and mechanical design, equipped with sensors such as vision, LiDAR, speech, motion, and ultrasonic. It provides environment perception, path planning, and intelligent control, enabling students to learn and practice robot motion and posture control, sensor-based perception, and autonomous decision-making in a multidisciplinary, hands-on context.



ROS Operating System



Mobile Robot Control



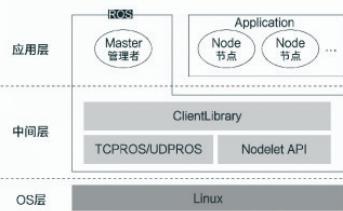
Sensor Technology



## Product Features

- The platform supports ROS, mobile robot control, LiDAR SLAM navigation, and sensor technology for hands-on learning.
- An edge computing unit running ROS enables motion control, AI deployment, real-time SLAM mapping, and path planning.
- Integrated vision, voice, and multiple sensors allow traffic sign recognition, custom voice commands, and environmental perception.

## Product Functions



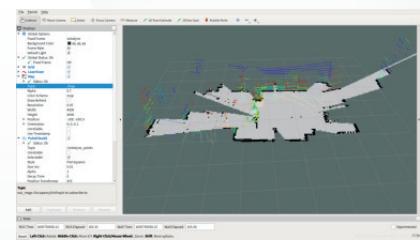
### ROS Robot Operating System

An open-source system providing hardware abstraction, device control, messaging, and common functions for flexible robot development.



### Robot Motion and Pose Control

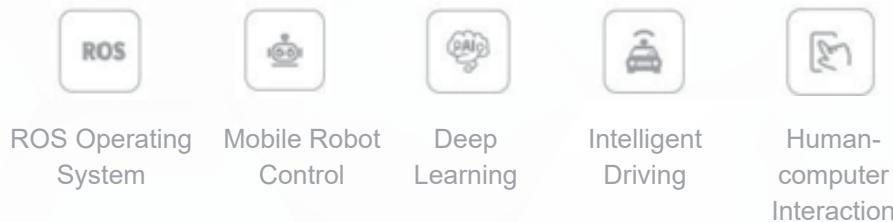
Built-in gyroscope and accelerometer enable real-time monitoring and adjustment of speed, position, and orientation.



### SLAM Mapping and Multi-Sensor Perception

High-precision LiDAR supports real-time mapping and navigation, while integrated vision, voice, ultrasonic, and motion sensors provide comprehensive environmental awareness.

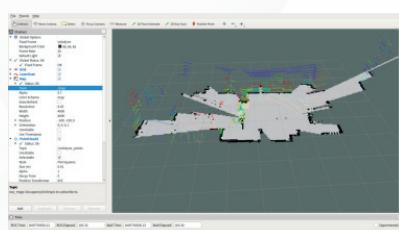
The AI interactive robot combines mobile robotics, vision, and speech recognition to navigate autonomously and perform tasks indoors and outdoors. It accurately detects faces, objects, and obstacles, while enabling intelligent dialogue and command execution. Users can interact naturally through touch, gestures, and voice for intuitive and safe human–robot operation.



## Product Features

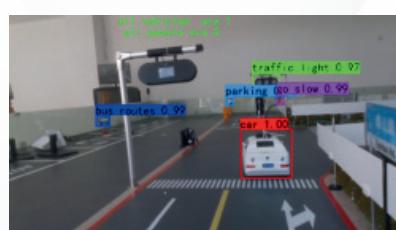
- The platform supports teaching in deep learning, computer vision, ROS, mobile robot control, intelligent driving, NLP, and human–machine interaction.
- Its computing unit runs ROS and AI frameworks for motion control, vision, and speech processing.
- Equipped with four-wheel independent suspension, differential drive, 30 m LiDAR, and a depth vision system, it enables real-time mapping, object recognition, pose analysis, and autonomous navigation.
- The robot features advanced voice interaction, cross-modal retrieval, and customizable knowledge bases for natural dialogue and information access.

## Product Functions



### ROS and SLAM Navigation

Equipped with the open-source ROS system and optional single-line or 16-line LiDAR, supporting 2D and 3D mapping, autonomous navigation, and development across different scenarios.



### Vision-Based and Intelligent Driving Projects

Provides image-based practice cases for lane detection, traffic sign recognition, vehicle and pedestrian detection, as well as model-based vision applications for assisted driving and customizable traffic sign recognition.



### Voice Interaction and Dialogue System

Supports voice wake-up, customizable greetings, real-time speech recognition, and AI-driven dialogue with user-defined knowledge bases for business consultation and semantic understanding.

The hybrid mobile collaborative robot combines a mobile base and a collaborative arm with LiDAR SLAM, multi-sensor fusion, and a depth vision system for autonomous navigation, 3D environment perception, precise object manipulation, and human–robot interaction, supporting applications in smart manufacturing, modern agriculture, unmanned retail, and smart homes.



Deep Learning



Machine Vision



Collaborative Robot Control



Mobile Robot Control



Human-computer Interaction



Intelligent Information Processing



## Product Features

- The computing unit runs ROS and supports motion control for the mobile robot as well as deployment of AI frameworks.
- The system integrates a mobile robot, collaborative arm, and depth vision for human–robot collaboration, fruit picking, delivery, and light material handling.
- High-precision LiDAR enables SLAM mapping, real-time navigation, obstacle avoidance, optimal path planning, and autonomous movement.
- Depth vision and voice control allow object pose recognition, precise grasping, and command-based navigation and handling tasks.

## Product Functions



Multi-Scenario Operation

The hybrid robot combines mobile and collaborative capabilities, extending workspace for applications in factories, agriculture, retail, and smart homes.



Depth Vision and Adaptive Grasping

Depth cameras detect object shape, posture, and appearance, enabling the robotic arm to adjust its gripper for precise grasping of various objects.



Intelligent Recognition and Voice Control

Onboard deep learning allows autonomous object recognition and adaptive handling, while voice-guided commands enable the robot to move toward sound sources with real-time obstacle avoidance.

This system is built on a high-precision mobile robot, integrating a collaborative arm, vision system, and sensors with a high-performance computing unit for unified control and processing. Compared to other versions, it offers superior accuracy and stability, making it ideal for smart manufacturing, workshop collaboration, and indoor inspection in complex environments.



## Product Features

- The mobile robot features industrial-grade control with  $\pm 5$  mm precision and a chassis payload over 150 kg, while the collaborative arm supports up to 5 kg or configurable loads.
- It provides advanced mapping, navigation, and expandable interfaces for versatile applications.
- A depth camera guides object localization and manipulation, enabling complex tasks such as workshop collaboration, indoor inspection, and unmanned delivery.

## Product Specifications

Module	Key Specifications
Omnidirectional Mobile Base	Height $\leq$ 550mm; Weight $\leq$ 60kg; Load $\geq$ 150kg; Max Speed 0.8 m/s; Battery 24V/35Ah, runtime $\geq$ 4h; Laser SLAM navigation; Auto-charging; 14-inch interactive screen
Collaborative Robot	6 DOF; Reach 954mm; End-effector load 5kg; Positioning accuracy $\pm 0.05$ mm; End speed $\leq$ 3m/s; Protection IP54; Supports other robot brands
Depth Vision System	2MP camera; Depth error $\leq$ 1%; Max sensing distance 10m; Depth resolution 1280 $\times$ 720 @90fps; RGB 1920 $\times$ 1080 @30fps; USB3.0 interface
Computing Unit	Intel i5 CPU; 16GB RAM; 512GB SSD; Supports Windows 10, C++, OpenCV; Controls vision, robot, and sensors



# 4 Industrial Robotics Laboratory

Industrial Automation



Visual Perception and Industrial Robot Training Platform



3D Industrial Vision Inspection Training Platform



Multi-functional intelligent construction robot system



Desktop intelligent manufacturing production line



Multi-robot collaboration and visual perception training production line

The Industrial Robotics Laboratory focuses on intelligent manufacturing and automated production systems. It supports training in industrial robot programming, multi-robot coordination, vision-guided operation, and smart production line integration, reflecting real-world industrial workflows and automation requirements.

The platform combines industrial robots, vision and sensor systems, and modular controls for teaching and research, enabling tasks like trajectory teaching, handling, palletizing, object recognition, and assembly, with real-time monitoring via a PLC-based control system.



- The platform uses a PLC for unified control of robots, conveyors, cylinders, sensors, and vision systems, allowing students to program and operate robot motions.
- It provides 2D/3D industrial vision systems with open-source code for calibration, positioning, detection, recognition, and measurement, as well as deep learning-based image processing for complex industrial scenarios.
- A human-machine interface enables robot teaching, voice and gesture interaction, and real-time monitoring of robot movements.

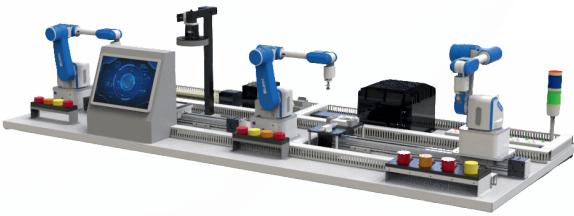
## 3D Industrial Vision Inspection Training Platform

The 3D Industrial Vision Training Platform combines 3D/2D cameras with a collaborative robot, real workpieces, and virtual simulations. It supports vision calibration, image processing, offline robot programming, and deep learning applications. Complete teaching materials enable training from basic robot operation to advanced vision-based tasks.



- Supports teaching of digital image processing, machine vision, 3D vision, and vision-based robot applications.
- Equipped with a self-developed six-axis collaborative robot, while also supporting other brands.
- 3D and 2D vision systems enable handling and recognition of complex objects, including stacked, reflective, or dark items, with defect detection, classification, and segmentation capabilities.
- Provides graphical robot programming, digital twin support, trajectory planning, collision detection, and real industrial case studies for project-based learning.

The smart manufacturing line integrates robots, conveyors, a vision system, and PLC control to train students in assembly, inspection, transport, and digitalized production management for electronic devices.



Machine Vision



Robot Principles & Applications



Vision-Based Robotics



PLC & Electrical Control



Smart Factory Integration Technology

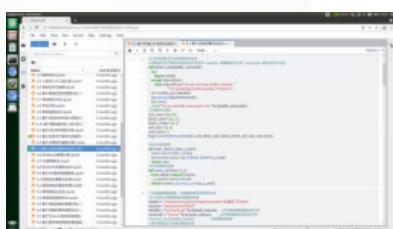


Digital Twin

## Product Features

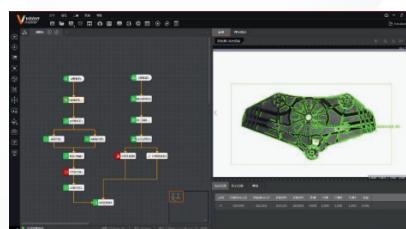
- The platform supports courses in robotics, machine vision, PLC control, mechatronics, and smart factory integration.
- It integrates robots, vision systems, PLCs, conveyors, and sensors into a compact, tabletop-ready design.
- With only about 10% of the cost of a full-scale production line, it allows multi-group hands-on teaching while combining vision, robot control, and production line coordination technologies.
- Graphical AI and vision software with built-in algorithms for object classification, detection, defect inspection, OCR, and measurement enables rapid development and modular experiments.

## Product Functions



### Open Vision Development Environment

Integrated Python and OpenCV environment with full access to image processing functions and source code, supporting algorithm development, object classification, detection, OCR, defect inspection, and industrial-scale practical exercises.



### Graphical Vision Software & Communication

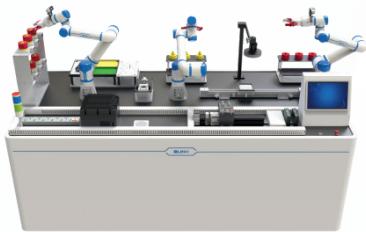
2D vision software with intuitive drag-and-drop interface, 130+ modules, GigE/USB3 camera support, TCP/IP, ModBus, UDP, Ethernet/IP compatibility, and simple secondary development for custom algorithms and industrial integration.



### Support for Digital Twin

Provides a fully integrated digital twin environment, enabling simulation, visualization, and real-time monitoring of robots, production lines, and industrial processes, enhancing training, development, and operational decision-making.

This is an upgraded version of the Desktop Intelligent Manufacturing Production Line, featuring collaborative robots for a more industrial-relevant setup. It supports hands-on applications with large model technologies, including AI-driven vision, voice, and robotics across multiple industry scenarios.



Machine Vision



Robot Principles & Applications



Vision-Based Robotics



PLC & Electrical Control



Smart Factory Integration Technology

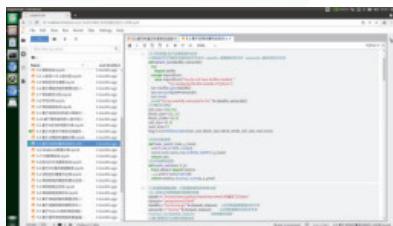


Digital Twin

## Product Features

- This production line supports teaching in robot principles, machine vision, PLC control, mechatronics, smart factory integration, and large model technology applications.
- It integrates robots, vision systems, PLC, conveyors, and multiple sensors in a compact, low-cost design, providing similar functionality to full-scale smart manufacturing lines.
- The platform combines machine vision, robot control, vision-robot collaboration, production line motion control, and AI/large model technologies for hands-on learning.
- It includes graphical vision software, built-in AI/vision algorithms, and locally deployed large models (DeepSeek, Qwen) to enable practical applications across vision, voice, and robotics scenarios.

## Product Functions



### Open Vision Development Environment

Integrated Python and OpenCV environment with full access to image processing functions and source code, supporting algorithm development, object classification, detection, OCR, defect inspection, and industrial-scale practical exercises.



本地化部署  
 deepseek  
 Qwen

### Local Deployment of Large Models

Enables on-device deployment of open-source large models such as DeepSeek and Qwen, allowing AI learning and practical applications with integrated vision, voice, robotics, and sensor systems across industrial, smart home, and smart agriculture scenarios.



### Robotics & Smart Manufacturing Integration

Combines 3 six-axis robots, 2 conveyors, vision systems, and sensors to support hand-eye calibration, visual-guided grasping, sorting, stacking, and full-process smart manufacturing applications.



# 5 Embodied Intelligence Robotics Laboratory

Embodied Intelligence



Mobile humanoid robot



Humanoid Seven-Axis Arm



Dual-Arm Collaborative Flexible Manufacturing Platform

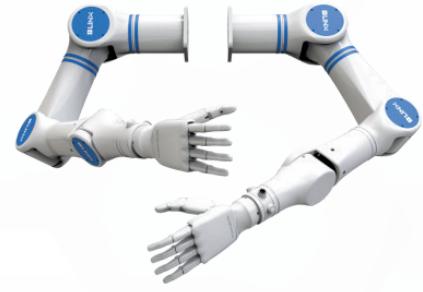


Intelligent Service Robot

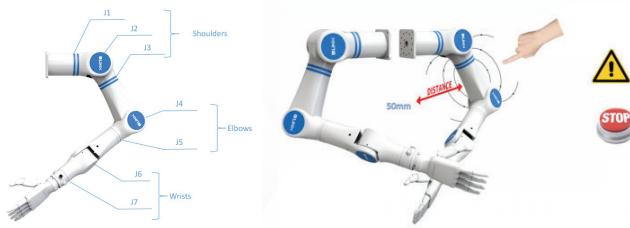
This laboratory explores embodied intelligence through the integration of physical robotic bodies, perception, cognition, and control. It supports advanced teaching and research in humanoid robotics, embodied AI, and human–robot collaboration, addressing complex interaction and decision-making in dynamic environments.

# Humanoid Seven-Axis Arm

This seven-axis collaborative robot mimics human arm movements, features dual-arm coordination with pre-collision sensing for safety, and provides open control algorithms for integration with mobile platforms, vision, voice, and sensors, suitable for education, research, and industrial applications.

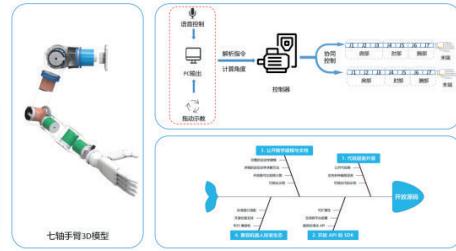


## Product Features



### Human-like Seven-Axis Dual-Arm Design with Safety

The robot features fully human-like arm kinematics with shoulder, elbow, and wrist joints (seven degrees of freedom), supporting smooth, singularity-free motion. Equipped with high-sensitivity capacitive electronic skin, it detects objects 5–15 cm away, enabling pre-contact warning and emergency stop for safe dual-arm collaboration.



### Open Control and Dual-Arm Coordination

A single “one-controller-two-arms” system drives both seven-axis arms in parallel, supporting high-precision coordination while saving hardware space and cost. Open motor control and kinematics algorithm code allow developers to perform advanced research and integrate the arms with mobile platforms, sensors, and other modules.

## Product Specifications

Axes	7	Maximum Payload	3.0 kg
Working Radius	450mm (17.72in)	Weight	12 kg
Repetitive Positioning Accuracy	±0.1mm	Supply Voltage	24V/25A DC
Rated Power	600W Max	Material	Aluminum Alloy
Working Environment	-10°C~60°C (14°F~140°F)	Controller	X86
Communication Method	WIFI/RJ45	Base Dimensions	100mm×100mm (3.94in×3.94in)
Axis Motion Parameters	J1: ±179° J2: ±96° J3: ±179° J4: ±94° J5: ±179° J6: ±91° J7: ±179°		

# Mobile humanoid robot

This humanoid robot combines a biomimetic dual-arm system, multimodal perception, and an omnidirectional mobile base, enabling autonomous navigation and human-like manipulation. Powered by large models such as DeepSeek and Qwen, it supports advanced perception, reasoning, and autonomous task execution, serving as a compact research platform for embodied intelligence and human–robot collaboration.

Adjustable Height Version



Linear Rail Version



## Product Features

- The robot integrates multimodal perception and large models to form a closed-loop system for embodied intelligence and autonomous decision-making.
- An open, seven-DOF dual-arm system with cooperative control enables precise, human-like manipulation and safe coordination.
- Electronic skin provides pre-collision awareness and enhanced safety in human–robot collaboration.
- Reinforcement learning and sensor fusion allow continuous adaptation, optimization, and evolution toward a general-purpose intelligent agent.

## Product Specifications

Height	1645 mm	Weight	85 kg
Degrees of Freedom (Single Arm)		7	
Max Payload (Single Arm)	5 kg	Onboard AI Computing Power	100 TOPS
Mobile Base Dimensions	605 × 465 mm	Vision System	Binocular structured-light depth vision
Depth Resolution RGB Resolution	1280 × 720 1920 × 1080	Processor	16 GB RAM, 512 GB storage, 24 GB dedicated GPU
Arm Control System	Dual-arm unified control (one controller for two arms)	Safety Protection	Electronic skin with pre-collision sensing

# Intelligent Service Robot

This model is a cost-effective variant of the humanoid robot, featuring a single arm mounted on a column structure while retaining the same core computing, perception, and interaction capabilities. It delivers comparable intelligence and functionality at a lower cost, making it an efficient and practical solution for research, education, and service applications.



## Product Features

- Combines collaborative robotics, depth vision, voice interaction, and large models to enable versatile human–robot collaboration in education, logistics, and manufacturing.
- Depth vision and dual-arm coordination allow precise object recognition and manipulation in complex 3D spaces.
- Integrated voice control and local large models (DeepSeek, Qwen) support custom commands, autonomous task execution, and application development across multiple industry scenarios.

## Product Specifications

Degrees of Freedom (Single Arm)	7	End-Effector Expansion	Supports Grippers and Suction Cups
Max Payload (Single Arm)	5 kg	Onboard AI Computing Power	100 TOPS
Platform Size	1100× 750mm	Vision System	Binocular structured-light depth vision
Depth Resolution RGB Resolution	1280 × 720 1920 × 1080	Processor	16 GB RAM, 512 GB storage, 24 GB dedicated GPU
Arm Control System	Single controller with support for dual-arm expansion	Safety Protection	Electronic skin with pre-collision sensing

This platform is designed for smart manufacturing, featuring a dual-arm cooperative system with customizable end-effectors for precise task execution. Integrated large models like DeepSeek and Qwen enable understanding of complex instructions and autonomous planning. Combining biomimetic design, high-DOF control, and embodied intelligence, it serves as an advanced research platform for human–robot collaboration and dynamic industrial applications.



## Product Features

- The robot integrates multimodal perception and large models to form a closed-loop system for embodied intelligence and autonomous decision-making.
- An open, seven-DOF dual-arm system with cooperative control enables precise, human-like manipulation and safe coordination.
- Electronic skin provides pre-collision awareness and enhanced safety in human–robot collaboration.
- Reinforcement learning and sensor fusion allow continuous adaptation, optimization, and evolution toward a general-purpose intelligent agent.

## Product Specifications

Height	1245mm	Weight	70 kg
Degrees of Freedom (Single Arm)		7	
Max Payload (Single Arm)	5 kg	Onboard AI Computing Power	100 TOPS
Mobile Base Dimensions	605 × 465 mm	Vision System	Binocular structured-light depth vision
Depth Resolution RGB Resolution	1280 × 720 1920 × 1080	Processor	16 GB RAM, 512 GB storage, 24 GB dedicated GPU
Arm Control System	Single controller with support for dual-arm expansion	Safety Protection	Electronic skin with pre-collision sensing

# CASE STUDIES

Empowering AI & Robotics Education in 200+ Chinese Universities



湖南大学  
HUNAN UNIVERSITY



中南大學  
CENTRAL SOUTH UNIVERSITY



国防科技大学  
National University of Defense Technology



深圳职业技术大学  
SHENZHEN POLYTECHNIC UNIVERSITY



湖南铁道职业技术学院  
Hunan Railway Professional Technology College



山东大学  
SHANDONG UNIVERSITY



华南理工大学  
South China University of Technology



长沙理工大学  
CHANGSHA UNIVERSITY OF SCIENCE & TECHNOLOGY



湖南信息学院  
Hunan University of Information Technology



桂林电子科技大学  
GUILIN UNIVERSITY OF ELECTRONIC TECHNOLOGY



新疆大学  
XINJIANG UNIVERSITY



湖南工商大学  
Hunan University of Technology and Business



深圳技术大学  
SHENZHEN TECHNOLOGY UNIVERSITY



井冈山大学  
JINGGANGSHAN UNIVERSITY



石家庄邮电职业技术学院  
SHIZIAZHUA NG POSTS AND TELECOMMUNICATIONS TECHNICAL COLLEGE



第一师范  
HUNAN FIRST NORMAL UNIVERSITY



湖南科技大学  
Hunan University of Science and Technology



湖南工程学院  
Hunan Institute of Engineering



陕西理工大学  
SHAANXI UNIVERSITY OF TECHNOLOGY



淮南师范学院  
HUAINAN NORMAL UNIVERSITY



湖南工业大学  
HUNAN UNIVERSITY OF TECHNOLOGY



长沙理工大学  
CHANGSHA UNIVERSITY OF SCIENCE & TECHNOLOGY



湖南理工学院  
Hunan Institute of Science and Technology



湘潭大学  
XIANGTAN UNIVERSITY



西安电子科技大学  
XIDIAN UNIVERSITY



湖南文理学院  
Hunan University of Arts and Science



湖南文理学院  
Hunan University of Arts and Science



湖南工业大学  
HUNAN UNIVERSITY OF TECHNOLOGY



闽南师范大学  
MINNAN NORMAL UNIVERSITY



湘潭技师学院  
XIANGTAN TECHNICIAN COLLEGE



大连海事大学  
DALIAN MARITIME UNIVERSITY



河南理工大学  
Henan Polytechnic University



西北民族大学  
NORTHWEST NORMAL UNIVERSITY

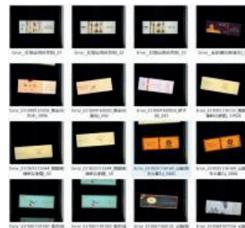


郑州大学  
ZHENGZHOU UNIVERSITY



广州城市理工学院  
Guangzhou City University of Technology

Applying Real-World Industrial Data in Educational Settings



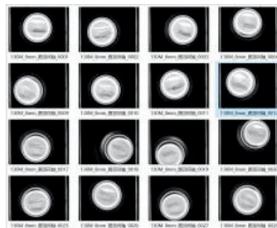
Cigarette



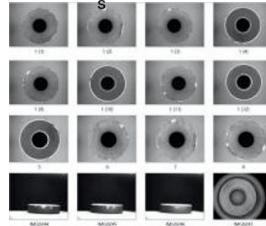
Tobacco Leaves



Lumber / Wood



Canned Beverages



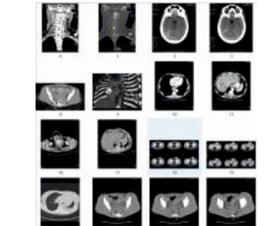
Magnetic Rings



Food Plates

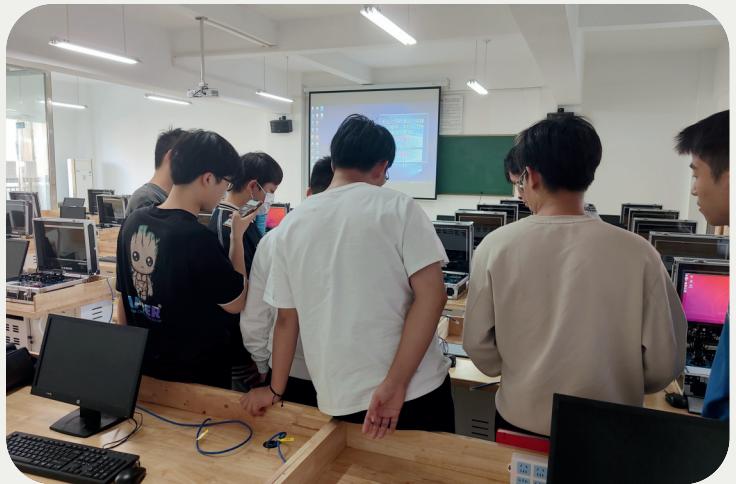


Oral Liquid



Medical Images

Hunan University of Technology



Hunan International Economics University



Hubei Minzu University



Shandong Business Vocational and Technical College



Xiangtan University



Linyi Institute of Technology



## Guangzhou Public Utilities Technician College



## Guangzhou City University of Technology



## Shandong University of Technology



Dalian University of Technology



Shenzhen Technical University



Hunan Institute of Engineering



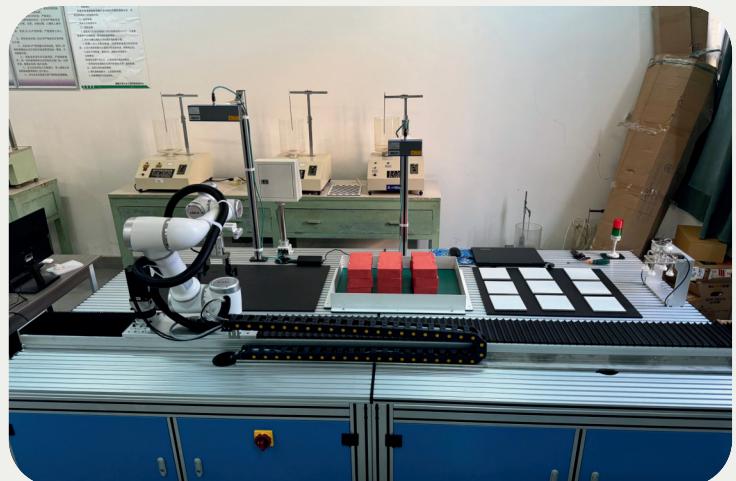
Northwest Minzu University



Hunan University of Science and Technology



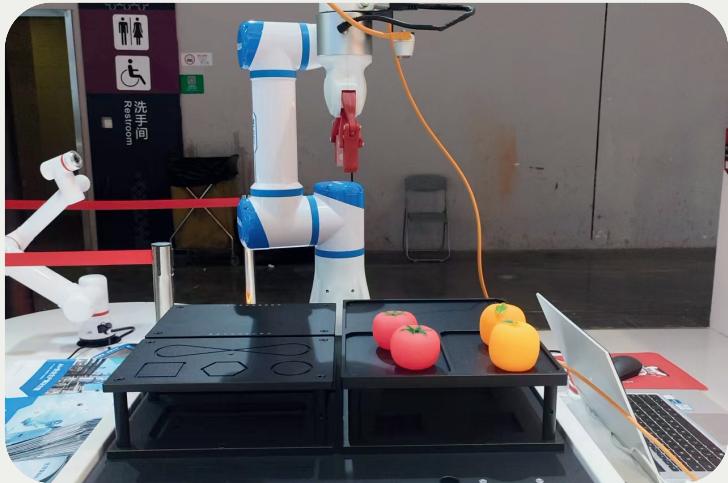
Hunan University



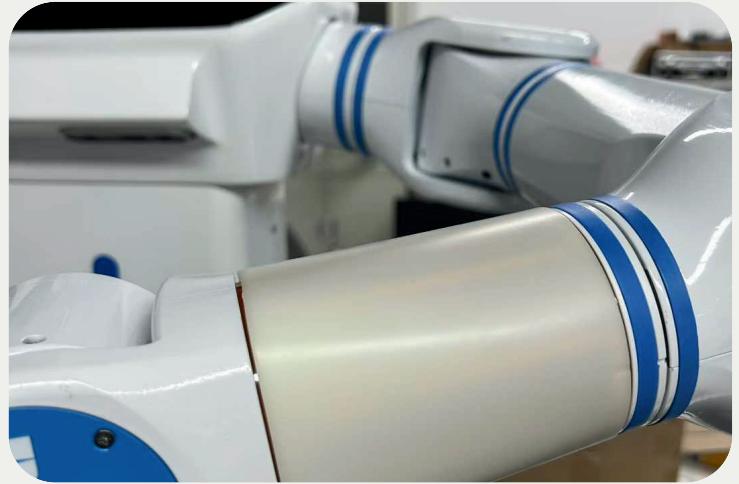
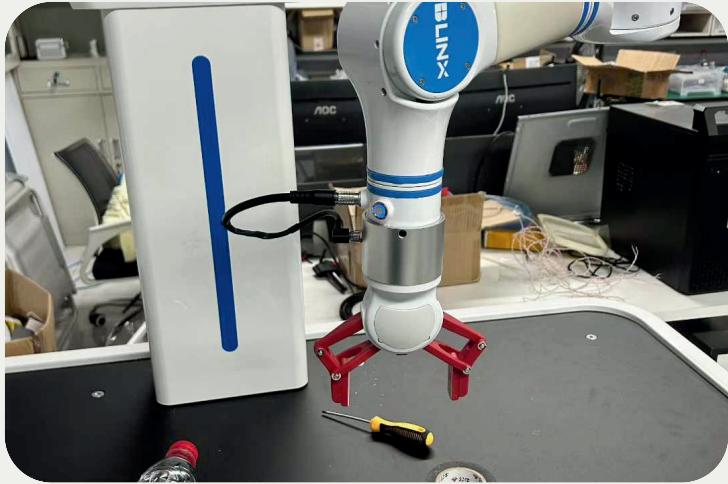
## Tianjin University



## Shaoyang University



## Guangdong Weapons Group





# Partnership & Contact

Open Platforms · Proven Products · Long-Term Collaboration



## Who We Are

- AI & Robotics Education Solution Provider
- Open-Source & Teaching-Oriented Platforms
- From Lab Education to Industrial Training



## Why Partner with Us

“

### Proven Products, Ready for Education



Field-tested AI and robotics products designed for direct deployment in classrooms and laboratories.

”

“

### Open, Expandable, Easy to Integrate



Open-source architectures and curricula enable deep customization, system integration, and secondary development for local markets.

”

“

### Built for Long-Term Education Growth



From foundational courses to applied labs and research platforms, AI and robotics education is a sustainable growth market.

”

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## Partner Models

### 1. Project Registration & Protection

Partners can register projects in advance to ensure territory and opportunity protection, avoiding internal competition and safeguarding long-term cooperation.

### 2. Co-Development & Co-Branding

We support joint product development and co-branded solutions, enabling partners to build differentiated offerings under their own brand identity.

### 3. Exclusive Custom Solutions

Partners may develop customized, exclusive products tailored to specific markets or clients, with non-competitive positioning guaranteed.



## Partner Models

- Product training & technical documentation
- English teaching materials & course guides
- Demo solutions & application cases
- Marketing materials (brochures, videos, PPTs)
- Pre-sales & after-sales technical support
- Continuous product & curriculum updates

## Let's Build AI & Robotics Education Together

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