云幕智造
Yunmu Intelligent Manufacturing

YMBot
PRODUCT MANUAL
General-Purpose Functional Humanoid Robot

LET HUMANOID ROBOTS EXPAND
THE BOUNDARIES OF MANKIND

CONTACT US

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CONTENTS

COMPANY PROFILE 04

HONOR QUALIFICATION 06

PROJECT EXPERIENCES 08

FOUNDING TEAM 10

PRODUCT CATGORY 11

PRODUCT DETAILS 12

FUTURE PLANNING 21

Suzhou Research and Development Center

Wuhan Mass Production Factory & Second R&D Center

Research Center for the Design of Humanoid Robots

About Us

2021.05
Established Time

12500m²
Site Area

24000m²
Factory Floor Area

60%
Advanced degree holder percentage

60%
Proportion of R&D Expenditure

Yunmu Intelligent Manufacturing is a national high-tech enterprise focusing on the R&D and industrialization of general-function intelligent humanoid robots. It has full-stack independent R&D capabilities and is a domestic humanoid robot research team with the most comprehensive advantages.

Main Business

Yunmu Intelligent Manufacturing focuses on the R&D and industrialization of general-function intelligent humanoid robots. Its main business covers the R&D and production of robot platforms, key components, core software, and integrated solutions. It has developed ten types of products, which have been applied in multiple scenarios such as industry, service, education, and scientific research. Currently, it ranks first in China in terms of the variety of product matrices.

R&D Strength

The core team of YMBot has nearly 20 years of technical accumulation and full-stack independent R&D capabilities. It masters key technologies such as the advanced motion control "cerebellum", embodied intelligent "brain" and core components of robots. It has significant advantages in fields such as high-simulation skin technology, full-body coordinated control, and multimodal human-robot interaction.

Business Strategy

Yunmu Intelligent Manufacturing adopts a three-step strategy: it has already become regionally renowned, completed the finalization of multiple prototypes and launched them to the market; it is now becoming a top enterprise in China, with the ultimate goal of entering the world-renowned ranks. It focuses on application scenarios in industry and service industries, while exploring special application fields, such as developing aerospace-grade humanoid robots, participating in lunar and deep-space exploration projects, and extending technical boundaries to cosmic-level applications.

Comprehensive Advantages

Yunmu Intelligent Manufacturing has demand-oriented full-stack independent R&D capabilities in complete machine design and development, core component design and development, and software function development, covering many vertical application fields. It has the comprehensive advantages of "body construction and empowerment": complex robot motion modeling and control technology, human-like bionics and intelligent algorithms; price-limited design and cost control capabilities, management and control systems, channels, and background resources.

Corporate Culture

Mission
Let humanoid robots expand the boundaries of humanity

Vision
Build a humanoid robot technology research enterprise with the most c-omprehensive advantag

Values
Cross-innovation
Integrated develo-pment
Work together
Pursue the ultimate

Development History

Yunmu Intelligent Manufacturing was established in 2021 and has completed four rounds of 100-million-yuan strategic financing so far. It is one of the leading innovation entities in the domestic humanoid robot field. Its product layout includes: bipedal electric humanoid robots, bipedal hydraulic humanoid robots, skinned bipedal humanoid robots, chassis-type electric humanoid robots, educational electric humanoid robots, industrial bipedal humanoid robots, chassis single-arm robots, chassis skinned humanoid robots, etc.

2021.05 YMBot Establish
Scientific Research Startup Funding of Northwestern Poly-technical University Taicang Yangtze River Delta Research Insti-tute： 8 million yuan
focus on the R&D and industrialization of core robot technolo-gies

2023.03 Seed Round Financing
Financing Amount： 3 million yuan
post-money valua-tion： 50 million yuan

2024.01 Angel Round Financing
Financing Amount： 8 million yuan
post-money valua-tion： 80 million yuan

2024 Two-tier Talent Subsidy Program
2 million yuan

2024.11 Angel Round + Financing
Financing Amount： 10 million yuan
post-money valua-tion： 200 million yuan

2025 pre-A Round Financing
Financing Amount： 50 million yuan
post-money valuation: 550 million yuan
Funding support from Suzhou Science and Technology Bureau for the "Made in Suzhou" project

2023 Product Development
Developed YMBot Type A Industrial Planetary Screw Humanoid Robot

2024 R&D Breakthrough
Launched YMBot Type C Cultural Tourism Skinned Bipedal Humanoid Robot
YMBot Type D Industrial Chassis Humanoid Robot
YMBot Type E Educational Humanoid Robot
YMBot Type F Industrial Bipedal Humanoid Robot

2025 Lead Industry Innovation
Launched YMBot Type H Cultural Tour-ism Chassis Skinned Humanoid Robot
YMBot Type B Industrial Bipedal Hydraulic Humanoid Robot
YMBot Type I Home-use Full-body Skinned Companion Humanoid Robot
YMBot Type G Retail Chassis Single-arm Weak Humanoid Robot
YMBot Type D2 Heavy Industrial Chassis Humanoid Robot

National High-Tech Enterprise

Patent Certification

Software Copyright

Hierarchical Honors and Awards

Honors and Qualifications

National High-Tech Enterprise

Member Unit of the Humanoid Robot Standard Working Group of the National Robot Standardization Committee

Vice-Chairman Unit of Jiangsu Embodied Intelligent Robot Industry Alliance

Contract R&D Unit for "Made in Suzhou" Humanoid Robots in Suzhou City

Suzhou Artificial Intelligence Innovation Application Laboratory (Cultural Tourism Embodied Intelligence

66 Items +
Patent For Invention

8 Items
Design Patent

2 Items
Utility ModelPatent

10 Items +
Hierarchical Honorary Awards

Project Experience

It has received attention from leaders of the Ministry of Industry and Information Technology, provincial and municipal levels, as well as the media. Early customers have responded positively.

Lead Inspection

Exhibition Activities

Media Interviews

Project Cooperation

Study Sharing

Technical Exchange

Team Founder

Professor He Liang

Chairman, Founder

Main Social Positions

Director of Suzhou Urban Perception and Intelligent Computing Laboratory

Vice-Chairman of Suzhou Aerospace Society

Member of the Professional Committee on Full-Drive System Theory and Application of the Chinese Association of Automation

Member of the Academic Committee of Shanghai Manned Lunar Exploration Integration and Innovation Center

Deputy Secretary-General of the Humanoid Robot Special Committee of Suzhou Robot Industry Association

Participate in Project

He has presided over more than 20 national and provincial-level projects, including those of the Equipment Development Department, the Military 863 Program, the Ministry of Science and Technology, and the State Administration of Science, Technology and Industry for National Defense. The scientific research achievements were respectively invited to participate in the National Exhibition of Scientific and Technological Innovation Achievements during the 11th Five-Year Plan and the National Exhibition of Scientific and Technological Innovation Achievements during the 12th Five-Year Plan.

More than 80 academic papers have been published, over 80 national invention patents have been approved, 8 monographs and translations have been published, and more than 10 academic reports have been invited at home and abroad.

Personal Honor

Talent of the Special Support Plan of the Organization Department of the CPC Central Committee, 2021 Shaanxi Province High-Level Introduced Talent, 2023 Taicang City Leading Talent, 2024 Gusu Entrepreneurship Leading Talent. One First Prize of Military Science and Technology Progress, one Second Prize of National Defense Technology Invention, and one First Prize of Shanghai Technology Invention. Advanced Individual in the "11th Five-Year Plan" Science and Technology Tackling of the National High-Tech Research and Development Program (863 Program), and 863 "12th Five-Year Plan" Science and Technology Innovation Star Award.

Core Members of The Team

Professor Yuan Jianping

Chief Consultant Co-founder

Chief Scientist of a certain field in the Innovation Special Zone of the Central Military Commission's Science and Technology Commission, Chief Scientist of the National 973 Project, and Group leader of the aerospace expert group of the National 863 Program
Professor and doctoral supervisor at Northwestern Polytechnical University,Humboldtian scholars in Germany
Director of the Key Laboratory of Aerospace Flight Dynamics Technology
Previously served as the Vice President of Northwestern Polytechnical University

Wang Danwei

Chief Scientist

Academician of the Singapore Academy of Engineering, IEEE Life Fellow(Lifetime Fellow), Professor at Nanyang Technological University, Singapore
Humanoid robot cutting-edge technology and technology consultant

Chen Jianlin

Co-founder

Doctor from the Polytechnic University of Catalonia, Spain
Associate Professor of the School of Civil Aviation, Northwestern Polytechnical University
Mainly engaged in the research of humanoid robot clusters and evolution theory in complex environments

Product Catgory

Yunmu Intelligent Manufacturing focuses its main business on the humanoid robot industry. Its product layout covers complete robot machines, key components, core software, etc., providing customers with integrated solutions based on humanoid robot technology.

Robot Platform Hardware Products

YMBot Type A Industrial Planetary Screw Humanoid Robot, YMBot Type B Industrial Bipedal Hydraulic Humanoid Robot, YMBot Type C Cultural Tourism Skin-Wrapped Bipedal Humanoid Robot, YMBot Type D Industrial Chassis Electric Humanoid Robot, YMBot Type D2 Heavy-Duty Industrial Chassis Humanoid Robot, YMBot Type E Educational Humanoid Robot, YMBot Type F Industrial Bipedal Humanoid Robot, YMBot Type G Retail-Oriented Chassis-Mounted Single-Arm Semi-Humanoid Robot, YMBot Type H Cultural Tourism Chassis-Mounted Skin-Wrapped Humanoid Robot, YMBot Type I Family-Oriented Full-Body Skin-Wrapped Companion Humanoid Robot.

Component Hardware Products

Joint Motors, Dexterous Hands, Hydraulic Power Systems, Industrial Fixtures, Data Motion Capture Suits, Coreless Motors, Linear Actuators, Electronic Skins, 3D Force Sensors.

Software Product

Humanoid Robot Main Control System, Cloud Control Platform, Robot Large Model, Application Software.

YMBot Type A Industrial Planetary Screw Humanoid Robot
YMBot Type D Industrial Chassis Electric Humanoid Robot
YMBot Type E Educational Humanoid Robot
YMBot Type C Cultural Tourism Skin-Wrapped Bipedal Humanoid Robot
YMBot Type H Cultural Tourism Chassis-Mounted Skin-Wrapped Humanoid Robot
YMBot Type F Industrial Bipedal Humanoid Robot
YMBot Type G Retail-Oriented Chassis-Mounted Single-Arm Semi-Humanoid Robot
YMBot Type D2 Heavy-Duty Industrial Chassis Humanoid Robot

YMBot Type A Industrial Planetary Screw Humanoid Robot

Product Description

It is the first in China to develop and successfully apply small-size high-thrust linear actuators for deployment, with a single actuator capable of achieving 8000N thrust.

Product Parameter

Height ≥1.75m	Weight ≤75kg
Walking Speed ≥0.5m/s	Adaptability to Slopes ≥10°
Endurance Time ≥3h	Hands Configure Dual Dexterous Hands
Single-Arm Load ≥5kg	DOF > 30(Body)
Drive Type Electric Drive	Power Supply Form Lithium Battery48V14AH

Perceptual Configuration
Depth Vision Cameras, Solid-State Lidars

Sensor Configuration
Inertial Navigation System,Six-Axis Force

Voice Interaction Configuration
Dual Noise-Canceling Microphone Array

External Interface
Power Charging Port,Debugging Interface

Basic Function
Bipedal Walking, Autonomous Planning, Intelligent Interaction

YMBot Type C Cultural Tourism Skin-Wrapped Bipedal Humanoid Robot

Product Description

It is currently the first full-state humanoid robot in China that simultaneously has bionic bipedal walking, dual 6-DOF arms, simulated skin, dexterous hands, and fine expression drive.

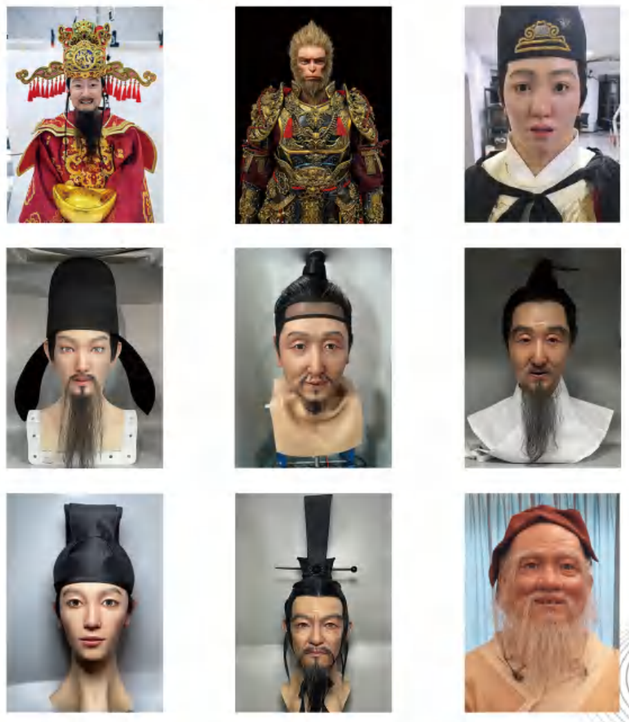
Product Parameter

Texture	DOF(Facial)	DOF(Overall)	Image Perception
Silica Gel	26	66	5 Million Pixel Visible Light Camera

Characteristic
Continuous, open-ended conversational ability

Customized Service
Arbitrarily customize the authorized IP image

Customized Image



YMBot Type D Industrial Chassis Electric Humanoid Robot

Product Description

It has chassis mapping and navigation movement capabilities, equipped with dual 7-DOF robotic arms and dual dexterous hands. It supports multiple teleoperation methods such as VR teleoperation and inertial motion capture teleoperation, and can be widely used in scenarios such as industrial operations, data collection, security patrols, and home services.

Product Parameter

Extended State Size	Folded State Size
⩽600x600x1650mm	⩽600x600x1100mm

Maximum Joint Torque	Movement Speed
≥220Nm	≥1.5m/s

Weight(Battery-Included)	Power Supply Mode
≤100kg	Lithium Battery 45AH

Single-Arm Load	Drive Control Interface
5kg	RJ45 Gigabit Ethernet Port

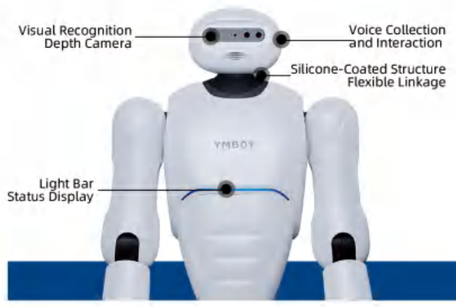
Folded State Extended State

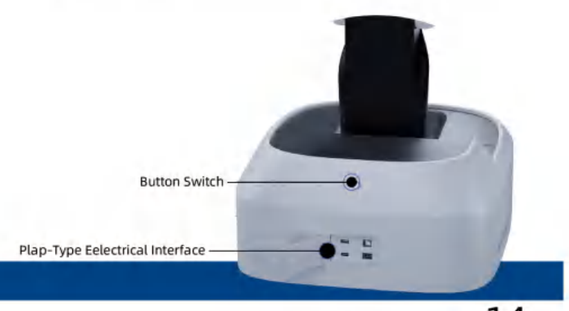
Mobile Comprehensive Endurance Capacity	overall operational endurance capability	Environmental Perception Sensors	DOF (Without Dexterous Hands)
≥100km	≥8h	Gemini2L	≥22

Product Details

The heat dissipation holes on the back and the sound pickup/speakers on the ears all adopt gradient openings, which increase the texture and layering of the robot and enhance the product's interestingness.

The rear of the chassis has a reserved docking interface to support automatic recharging at the pile, and a reserved network port to support secondary development.





YMBot Type D2 Heavy-Duty Industrial Chassis Humanoid Robot

Product Description

It has all the functions of the YMBot Type D Industrial Chassis Humanoid Robot, and its dual arms are upgraded to the force-controlled version, supporting hybrid force-position control, making it more suitable for industrial application scenarios.

Product Parameter

Extended State Size ≤560x560x1800mm	Folded State Size ≤560x560x1400mm
Weight(Including Chassis) ≤150kg	Maximum Movement Speed ≥1.5m/s
Arm span 1.5m	DOF(Without end Effector) 22
Single-Arm Load Rated 3kg,Max 6kg	Working Radius ≤1m(With Both Arms)
Capstan 2	Lifting Load 20kg

Embodied Intelligent Dual arms

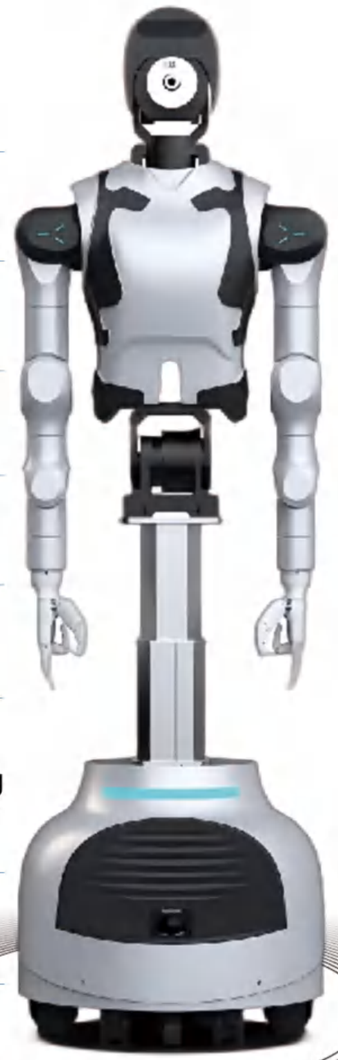
Humanoid Movements,Bimanual Coordination

Chassis

Two-Wheel Differential Motion Control,Self-Charging Obstacle Crossing and Climbing,Lidar-Based Mapping, Navigation, Obstacle Avoidance

Lifting Mechanism

Mute,Positive Inversion,Arbitrary-Position Stopping



YMBot Type E Educational Humanoid Robot

Product Description

The educational humanoid robot body adopts a high-degree-of-freedom design, with a larger rotation/swing angle, audio-visual display on the head, and a modular design to meet different educational and scientific research needs. It can be optionally equipped with voice interaction functions and a variety of sensors.

Product Parameter

Height 130cm	Weight(With Battery Included) 35kg
Bimanual Collaborative Load Handling ≥1.5kg	DOF (Without a Five-Fingered Dexterous Hand) 26-30
Maximum Joint Torque ≥150Nm	Maximum Movement Speed ≥2m/s
Power Supply Mode Lithium Battery 9AH	Communication Mode CAN Bus,EtherCAT Bus
Endurance Time Approximately 2 hours	Athletic Ability Support Omnidirectional Walking

Support Secondary Development

Compatible with ROS communication protocol, providing URDF model

Selective Assembly

Five-Finger Dexterous Hand (Motor Force Feedback Edition)

YMBot Type F Industrial Bipedal Humanoid Robot

Product Description

It adopts full force-controlled joints, with reasonable distribution of degrees of freedom in various parts. The end effector is a human-like 5-finger dexterous hand, featuring high-precision positioning and innovative design, enabling precise grasping.

Product Parameter

Height ≥1.70m	Weight 60kg
DOF(Without Dexterous Hands) 30	Maximum Torque Of The Knee Joint ≥360Nm
Endurance Time Approximately 4 hours	Single-Arm Load ≥3kg
Support Secondary Development Compatible with ROS communication protocol and provides URDF model	
Sensing Element Active binocular structured light depth camera,LiDAR(Optional)	
Communication Mode CAN Bus, EtherCAT Bus	

Product Feature

Bipedal Walking System
Adopts innovative drive technology to achieve flexible and stable bipedal walking, which can adapt to various terrain environments.

Intelligent Control System
Equipped with high-performance sensors to achieve precise environmental and state perception, as well as autonomous navigation and task planning.

Modular Design
Adopts a modular structure design, facilitating maintenance and upgrades, and supporting flexible configuration and function expansion.

Safety Guarantee
Multiple safety protection mechanisms to ensure stable and reliable operation, with emergency protection functions.

YMBot Type G Retail-Oriented Chassis-Mounted Single-Arm Semi-Humanoid Robot

Product Description

It has chassis mapping and navigation movement capabilities, equipped with a 7-DOF manipulator and an adaptive gripper. It is standardly equipped with sensors such as 3D LiDAR and depth camera, and can be widely used in commercial scenarios such as unmanned pharmacies and unmanned supermarkets.

Product Parameter

Overall Machine Size 520x350x1300mm
Elevation Change 300mm
Weight 50kg
Arm Span 600mm
Arm DOF 7
Waist DOF 3
Arm Payload 3kg
Perceptual System Depth Camera×1 Arm Positioning Camera×1 Ultrasonic Sensor×3 MID360 LiDAR

YMBot Type H Cultural Tourism Chassis-Mounted Skin-Wrapped Humanoid Robot

Product Description

It has chassis mapping and navigation obstacle avoidance capabilities, equipped with dual 6-DOF robotic arms and skin-type dexterous hands. It can provide promotional messages along pre-programmed routes. It supports character customization, including facial image and costume customization.

Product Parameter

Height 170cm±10cm	Overall Machine Size 170*50*41cm
DOF 54	Appearance Image(customizable) Highly Realistic Humanoid Face
Turn Radius Pivot Steering	Move Mode Equipped With An Intelligent AGV Chassis
Minimum Clear Width 1.2m	Communication Mode CAN Bus
End-of-Arm Load 0.5kg	Battery Capacity 24V/45AH
Endurance Time ≥6h	Gradeability ≥5°

Support Secondary Development

Provides underlying joint and sensor interfaces,compatible with ROS2 Communication Protocol

Interactive Function

Intelligent Interaction,Voice Interaction
(Support for switching between Chinese and English)

Customized Image

Customized Image(Whole Body)

YMBot Type H Cultural Tourism Chassis-Mounted Skin-Wrapped Humanoid Robot is currently widely used in guidance and reception scenarios such as museums, science and technology museums, shopping malls, and automobile 4S stores. It has achieved commercial implementation and has rich experience in the deployment of scenic spots and exhibition halls.

Future Main Customer Groups

Large Institutions, Institutes and Factories | Strategic Partners | Ecosystem Partners | Agent Channels

Main Track

Industrial Manufacturing
Automated Production Line Application
Flexible Assembly in Factory Environment
Operations in "Nuclear, Biological, Chemical and Hazardous" Environments
Emergency Rescue and Fire Fighting

Intelligent Services
Cultural Tourism Performances Explanation and Reception
Elderly Care
Emotional Companion
AI Diagnosis and Treatment

Education and Scientific Research
Motion Algorithm Development Teaching
Embodied Intelligence Application Development

Cooperative Partners

中国兵器工业集团有限公司 CHINA NORTH INDUSTRIES GROUP CORPORATION LIMITED
中国航天科技集团公司 CASC
蚂蚁金服 ANT FINANCIAL
京东
BOSCH
zollner
遨博智能 AUBO
中建智地 C-LAND 智造美好生活
LEAR CORPORATION
国讯芯微 NIIC
金智科技 Wiscom System
X SQUARE ROBOT
MLILY梦百合
太仓博物馆 TAICANG MUSEUM
北京航空航天大学 BEIHANG UNIVERSITY
HIT 1920
哈尔滨工程大学 HARBIN ENGINEERING UNIVERSITY 1953
浙江大学 ZHEJIANG UNIVERSITY 1897
SHENZHEN UNIVERSITY 1983
上海交通大学 SHANGHAI JIAO TONG UNIVERSITY 1896

Future Layout

Strategic Layout

Firstly: Regional Renown, Vigorous Expansion of the Civilian Market (2025)

Complete the finalization of all ten types of prototypes in 2025 and launch them to the market gradually at an appropriate time. Focus on obtaining a large number of orders in cultural tourism, industrial applications, education and scientific research, and actively explore overseas markets.

Secondly: Nationwide Focus, Civil-Military Dual Development (2026-2027)

Focus on industrial applications to become a leading domestic enterprise, expand other special applications, and develop To C-end products.

Finally:World-Famous, Chasing the Stars and the Sea(2028 -)

Achieve steady growth in industry and service industry, explore emerging application fields such as lunar and deep-space exploration, develop aerospace-grade humanoid robots, participate in lunar and deep-space exploration projects, and extend the technical boundary to cosmic-level applications.