

DEEP Robotics

Pioneering Innovation &
Application of Embodied AI

Hangzhou Yunshenchu Technology Co.,Ltd



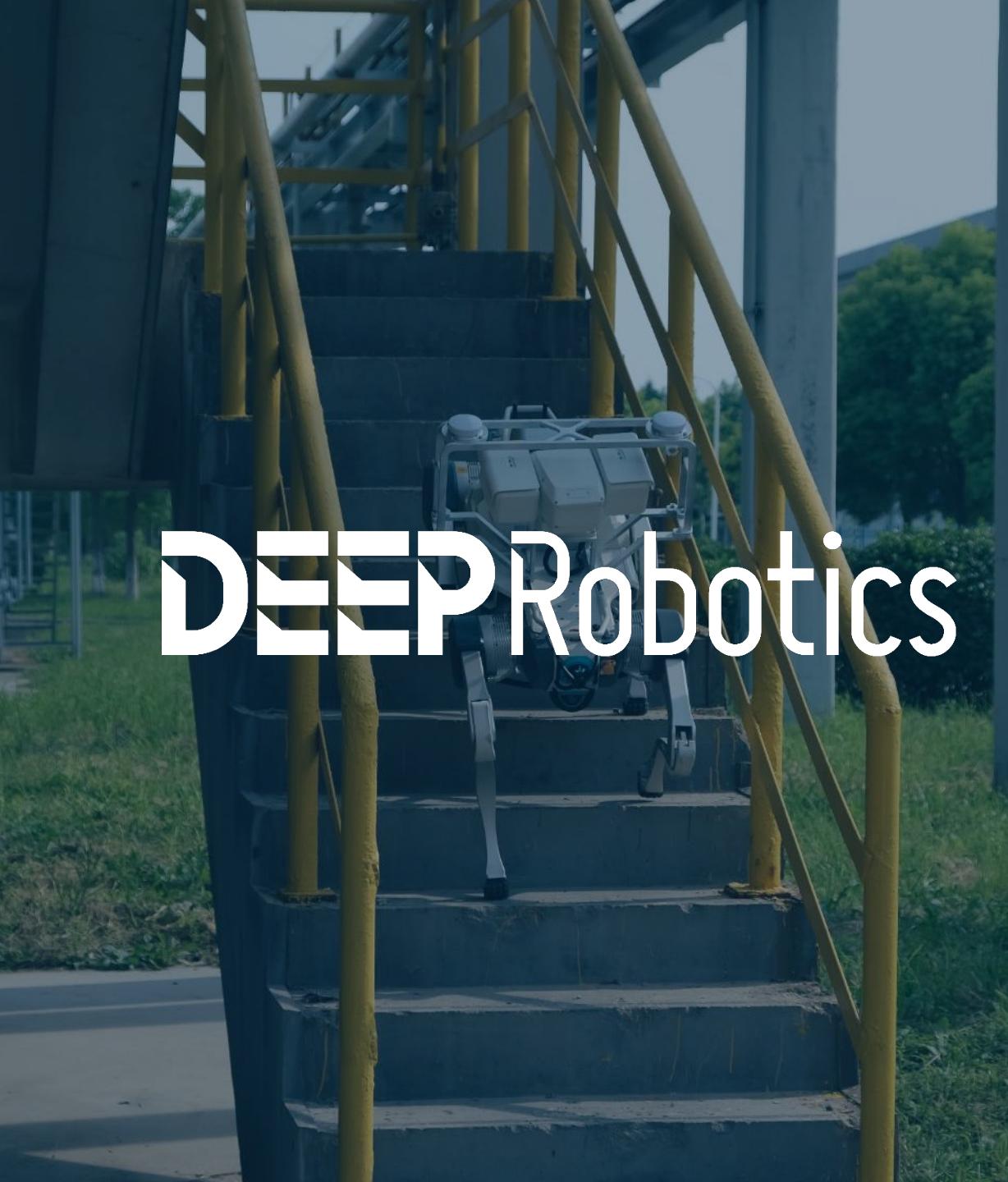
www.deeprobotics.cn

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01. About us



About us DEEP Robotics

DEEP Robotics, founded in 2017, is an international high-tech enterprise specializing in the R&D, production, sales, and service of humanoid robots, quadrupedal robots, and their core components .

The company is committed to independent innovation, with cutting -edge technologies in advanced control algorithms, intelligent environment perception, and artificial intelligence algorithms that are at the forefront of international standards .

DEEP Robotics has deeply rooted itself in industry applications, including power station, factory, and tunnel inspections, as well as emergency rescue, fire detection, and scientific research.

The related applications and products have been interviewed and reported by Reuters, NBC, BBC, AFP, Nikkei, People's Daily, Xinhua News, and South China Morning Post, and have been featured on the cover of the authoritative journal "Science Robotics" .

Pioneering Innovation & Application of Embodied AI



About us

Founder

Zhu Qiuguo

Founder CEO

Ph.D., Zhejiang University

Executive Chairman of the 28th IDC Robocon
10+ national and provincial scientific research projects;
40+ academic papers published;
40+ invention patents,
3 international invention patents.



About us

Core Team



Li Chao

Co-Founder CTO

PhD,

Zhejiang University

Over 15 years of experience in robotics technology and product development

National project State High-Tech Development Plan and National Natural Science Foundation of China projects, etc.
Youth Award of the First 2050 Conference in 2018
Huawei's First Batch of Global Ascend Experts in 2020



Chu Jian

Strategic Advisor

Founder of

Supcon Technology Group

Researcher in the College of Control Science and Engineering at Zhejiang University

Expert in industrial automation

State Scientific and Technological Progress Award of China (Second Prize)

State Technological Innovation Award of China (Second Prize)

The core personnel are mainly PhDs and Masters from Zhejiang University, Harbin Institute of Technology, University of Chinese Academy of Sciences, Shanghai Jiao Tong University, Xi'an Jiaotong University, Georgia Institute of Technology, Technical University Dortmund, and other well-known universities.

About us

Milestone

Pioneering Innovation & Application of Embodied AI

2018



The **1st** quadruped robot with stair climbing, auto navigation, and intelligent interaction in China

2019



The **1st** quadruped robot with auto self-charging in China

2020



The **1st** quadruped robot achieved auto power inspection in China

2021



The **1st** quadruped robot completed auto inspection of substations in China

2022



The world's **1st** robot dog fleet for exploration of unknown environments

2023



Asian Game village underground tunnel inspection

2024



Serving **400+** industry-level customers in 29 provinces across China



The **1st** quadruped robot on the cover of Science Robotics



The **1st** quadruped robot with IP66 industrial protection in China



The world's **1st** quadruped robot joined earthquake relief drill



The **1st** quadruped robot to receive 'First Set' equipment certification in China



Completed the entire process of intelligent substation inspection



The **1st** quadruped robot to achieve intelligent inspection of underground utility tunnels in China



The only quadruped robot company involved in establishing standards for new generation of State Grid substation robots



The **1st** "wheel-legged robotic dog" for intelligent substation inspection across the entire network.

About us Key Advantage

Flagship Product Born for the Industry

The core components and systems, motion control algorithms, intelligent environmental perception are all self-developed and at the industry-leading level.

400+

IMPLEMENTED INDUSTRY PROJECTS

Jueying Series robots have been used in power stations, factories, tunnel inspections, emergency rescue, fire investigation, and scientific research.



95%

PROPRIETARY
TECHNOLOGIES

1000+

DELIVERED PRODUCTS
ANNUALLY WITH REVENUE
IN THE HUNDREDS OF
MILLIONS

Six Little Dragons of Hangzhou

China's "Secret Weapon" of New-Quality Productivity

Rising "tech upstart" companies in Hangzhou that are at the forefront of new technologies and have industry influence.



- National High-tech Enterprise
- Zhejiang High-tech Enterprise R&D Center
- National specialized and sophisticated enterprises
- Quasi-unicorn Enterprise
- Zhejiang Specialized and Sophisticated SME
- The most investment-worthy innovative companies in Zhejiang
- CN 1st 'First Set' certification Quadruped Robot company
- Zhejiang Manufacturing Excellence

130+ Patent Application 60+ Issued Patent
50+ Invention Patent 7 Software Copyright



About us

Partners & Clients

Our partners & clients covering top-ranking institutes, companies, and universities



国家电网
STATE GRID

中国南方电网
CHINA SOUTHERN POWER GRID

中国移动
China Mobile

BAosteel
上海宝钢

中控·SUPCON

五矿
MINMETALS

Lenovo 联想 研究院
Research

FLUKE®

SPgroup
新加坡能源集团

CHERY

Budweiser
BUDWEISER BREWING COMPANY APAC
百威亚太控股有限公司

TBNET
天宝耐特

EGP
Eastern Green Power

浙江大学
ZHEJIANG UNIVERSITY

之江实验室
ZHEJIANG LAB

THE UNIVERSITY
of EDINBURGH

UCL

想いをかたちに 未来へつなぐ
TAKENAKA

*No Ranking Order

About us

Top Media Press

Official Media



Social Media



The image displays two news articles side-by-side. The top article is from Xinhua News, titled "China's own Tesla Optimus? Beijing's ambitions in humanoid robots in full display at expo". It features a photograph of a white, quadrupedal robot (X20) interacting with a crowd of people at an exhibition booth. The bottom article is from AP Newsroom, titled "Robotic canine companion can't wait to show off a wide range of tricks". It includes a video thumbnail showing the robot moving around. Both articles mention the robot's resemblance to Tesla's Optimus Prime and its use in dangerous environments.

DEEP Robotics Newsroom

China's own Tesla Optimus? Beijing's ambitions in humanoid robots in full display at expo

Chinese robot manufacturers are hoping to repeat the country's global success in smartphones and electric vehicles

Reading time: 2 minutes

Robotic canine companion can't wait to show off a wide range of tricks

Robotic canine companion can't wait to show off a wide range of tricks

日本経済新聞

中国、産業用四足歩行ロボット台頭 災害現場などで活躍

これまで数十年にわたり研究されてきた四足歩行ロボットは、走行用ベルトロボットと比べて駆動が機械でスピードも速く、障害物検知能力が突出している。またヒト型ロボットと比べても操作性が優れ、設計や製造、メンテナンスがより簡単だ。いくつもの優位性があるため、世界中で多くのテック企業が四足歩行ロボットの開発に注目している。

最近、産業用四足歩行ロボットを手がける「雲深處科技 (Deep Robotics, ...)

Marketing manager, Qian Xiaoyu of DEEP Robotics says X20 has been used for detection in toxic gas scenarios, but its use in fire rescue is still being worked on.

"Our wish is that by developing these applications of robots, we can release people from doing dreary and dangerous work. In addition to the patrol inspection, we are also discovering the possibility of using the robot in emergency rescue and fire detection, for example the exposure to toxic and harmful gases. We need to confirm that we didn't cause to use the robots in f...

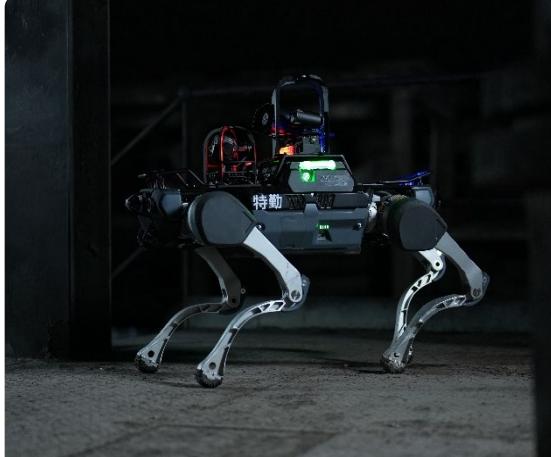
02. Solutions





Power Patrol

- The intelligent inspection solutions for substations and power tunnel were completed first.
- Applied in **26** provinces and cities, with a market share of more than **85%**.
- In 2023, the new transformer substation robots of the State Grid was piloted in **6 provinces**, all of which adopted the **Jueying series**.
- The Chinese 1st Quadruped Robot to get the first (set) recognition .
- Deployments in Singapore and Korea are underway.



Public Security

- In 2022, The world's first quadruped robot to attend earthquake relief drills.
- In 2022, hazard rescue robot dogs were launched with a market share of **over 90%** .
- In 2023, police patrol robot dogs were launched, equipped with a four-in-one (sound pickup, strobe light, lighting, and shouting) + stabilized gimbal.
- In 2023, attended drill for flood prevention & emergency rescue in Hubei
- In 2024, the “Emergency Mission 2024” explosive detection dog was on duty



Industry

- In 2022, **Metallurgical Industry** - The inspection of the electrolytic cell in a electrolytic aluminum industry
- In 2022, **Energy Industry** - An intelligent inspection project in a thermal power plant.
- In 2022, **Coal Industry** - The inspection of the raw coal bin in a coal mine.
- In 2023 **Steel Industry** - The inspection of the conveyor corridor in Baosteel.
- In 2023 **Food Industry** - An autonomous inspection project in a famous brewery.



Traffic

- In 2023 **Highway** - Tunnel Traffic Accident Drill in Shanxi.
- In 2024, **Aviation** - the airport runway patrol project at Xiaoshan International Airport in Hangzhou, Zhejiang.

Solutions

Policy

Guiding Opinions on Accelerating the Development of Emergency Robots:

By 2025 , Advanced Emergency Robots will be Developed to Significantly Improve the Level of Scientific, Professional, Refined, and Intelligent .

- the Ministry of Emergency Management (MEM) & the Ministry of Industry and Information Technology (MIIT)

"AI+" was Written in the Government Work Report for the First Time .

- the China's "Two Sessions " 2024

"Robotics +" Application Action Implementation Plan was released .

- the MIIT & the MEM and other 17 departments



03. Product

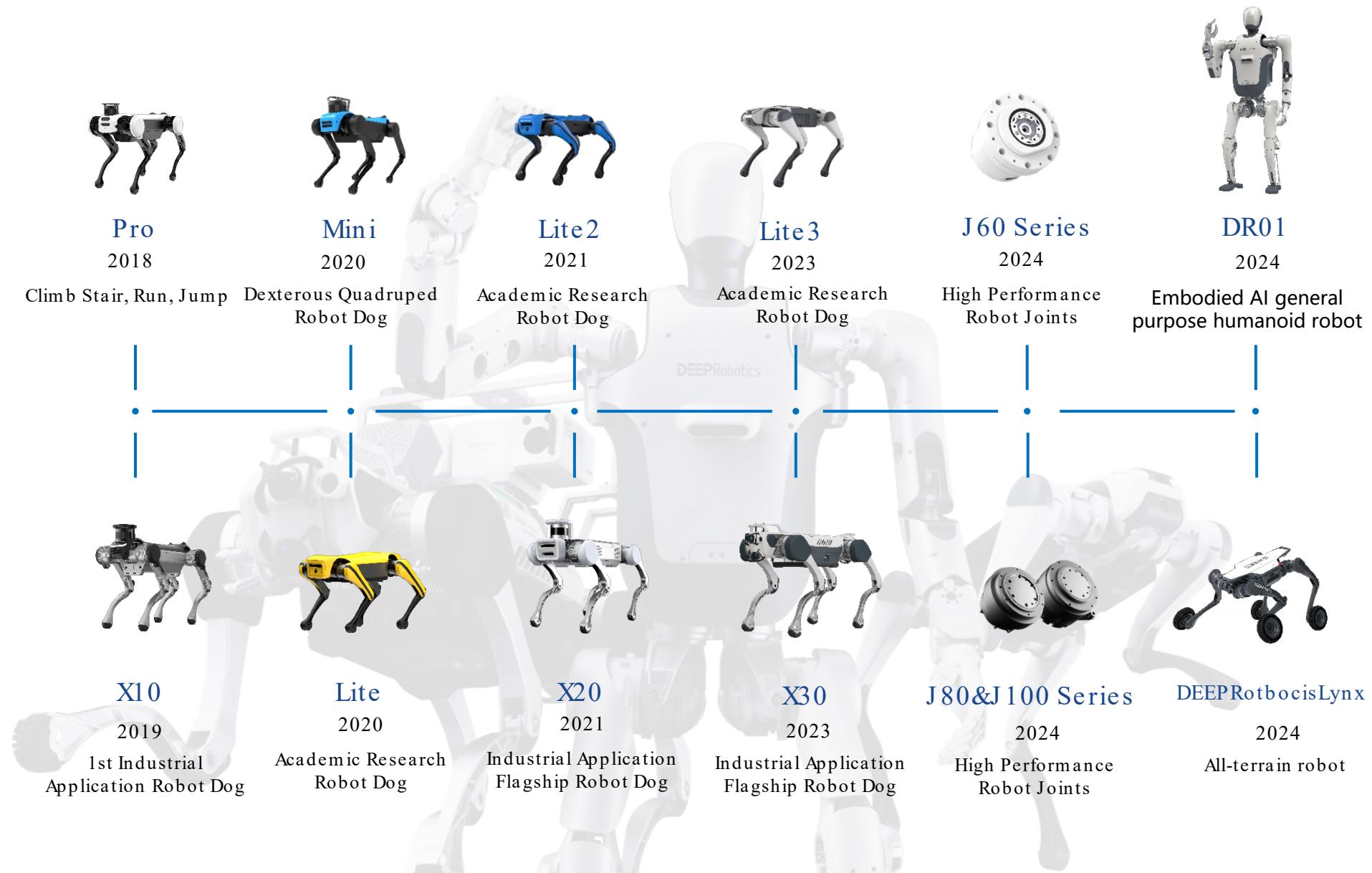


DEEPRobotics

Product

Product history

Pioneering Innovation & Application of Embodied AI



Product

Product Matrix



Quadruped Robot Ecology

Solution



Power Inspection



Emergency Rescue



Public Security



Academic Research



More...



DR01



DEEPRoboticsLynx



X30



Lite3



More...

Components

Proprietary
Motor & Joint



Algorithm

Locomotion,
Perception



Interaction

Robot-human
Interaction



Product

DR01

Flexible Mobility

DR01 has a walking speed of over 1.6 m/s and can navigate 18 cm steps, 25° slopes, and uneven terrain.

It can swiftly recover balance and maintain stable walking even under unknown disturbances such as slippery surfaces and external forces.

Fusion Perception Capability

DR01 integrates the robot's own perception and environmental perception, achieving stable traversal across complex and discrete terrains through a learning algorithm that combines sensing and control.

Autonomous Learning Ability

Through AI and big data training, DR01 can autonomously generate new behavioral skills in response to changing environments and task requirements.



DR01
Embodied AI General-
Purpose Humanoid Robot

Product

DEEP Robotics lynx



DEEPRoboticsLynx

All-terrain robot

Wild Performance

Climb platforms up to 80cm; Reach speeds of 5 m/s;
Navigate continuous 22cm steps; Tackle a variety of
challenging terrains.

All-Weather Exploration

IP54 protection rating; High-performance image/video
transmission; Exceptional interactive experience. Robust
long-endurance; Hot-swappable battery system.

Embodied Intelligence

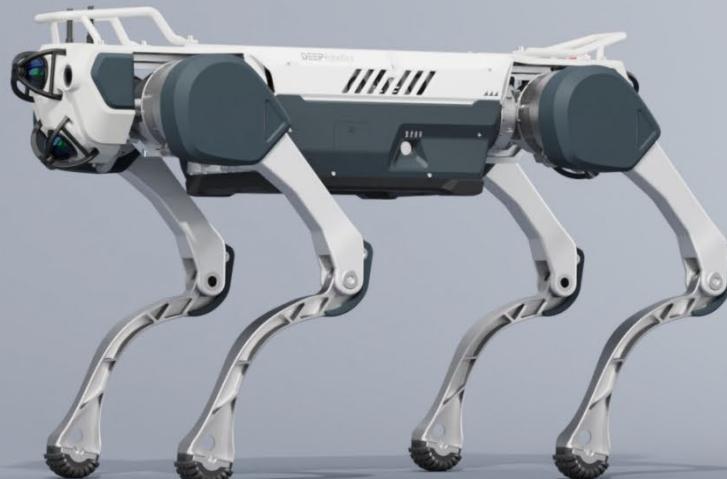
Built on the "DEEP Robotics AI+" initiative; Inherit DEEP
Robotics' expertise in Embodied AI; Feature customized
adaptations tailored to DEEPRoboticsLynx's unique design.

Product

X30

X30 Quadruped Robot

A Flagship product Born for the Industry



Undaunted by Extreme Weather

IP67 protection ;
Able to operate from
20°C to 55°C.

Fusion Perception Lights up the Darkness

Able to navigate and operate autonomously under different light source conditions.

Speedy Obstacle Crossing & Rapid Response

Able to climb 45° stairs and hollow industrial staircase.

Extra-long Endurance & Quick Battery Swaps

X30 features a 25% increase in endurance; Battery supports quick change on site.

Stable & Reliable Auto-charging

New fusion positioning-based autonomous charging solutions; Address issues including light, stains, and dust.

Product

Lite3

Lite3 Quadruped Robot

The Latest Generation of Agile Intelligent Robot Dog



Stronger Driving Force

The joint torque has increased by 50%, with high torque density, response bandwidth and reversed transmission efficiency.

Algorithm Upgrades

Make the movement more deft, and have stronger surmounting and maneuverability.

Interaction System

Enhance FPV image transmission, fewer lag errors.

Expansion Evolution

Additional applicable module design for unlimited modifications.

Product

J60



High Performance

Have superior torque performance under the same weight level. The maximum torque -to-weight ratio can reach 56.48N·m/kg (J60 -10).

Reliable & Durable Feature

Have been applied to Lite3 and verified through practical test. Suitable for various usage demands.

Integrated Design

It integrates a reducer, frameless torque motor, servo driver, and absolute value encoder into one, with a compact structure and convenient installation.

Status Detection & Protection

It is equipped with a built-in driver and motor temperature detection & protection system, which monitors input current and voltage in real-time.

Debugging & Development Kit

It is equipped with serial port and CAN communication interfaces; Provide visual joint debugging software, supporting Windows and Linux systems; Provide CAN communication protocol, and SDK and usage examples written in C language, and support Linux.

Product

J80&J100



Excellent Performance

The J100-116P boasts a peak output torque of 315 N·m, with a peak torque density of 107.5 N·m/kg .

Same Joints as the X30

The J80 and J100 have been verified in practical applications on X30, withstanding various complex environments.

Industrial-grade Product Spec

The J80 and J100 follow industrial-grade specifications in design and production.

High-precision Control

Utilizing the world's first reliable battery-free multi-turn absolute encoder, it has high accuracy, reliability, and durability.

High-speed Comm Solution

Adopting a high-speed EtherCAT communication solution, it is compatible with the control of 30 joints simultaneously.

Product

Robot Play House

CYBERSTRIKE



AI-ENHANCED LOCOMOTION ROBOTS PLAYHOUSE

The ultimate robot chase contest WCT robot dog version

Enjoy controlling robots, use their unique skills, best 2 out of 3 and win!

Product

Pioneering Innovation & Application of Embodied AI

AI+ Plan

Integrate AI with the Robot Software System to Reinforce Embodied Intelligence

AI + software system allows quadruped robots to use a large amount of data for self-learning and training, achieving more intelligent movement capabilities. In the future, robots will also expand to perception, planning, decision-making, and human-robot interaction capabilities.

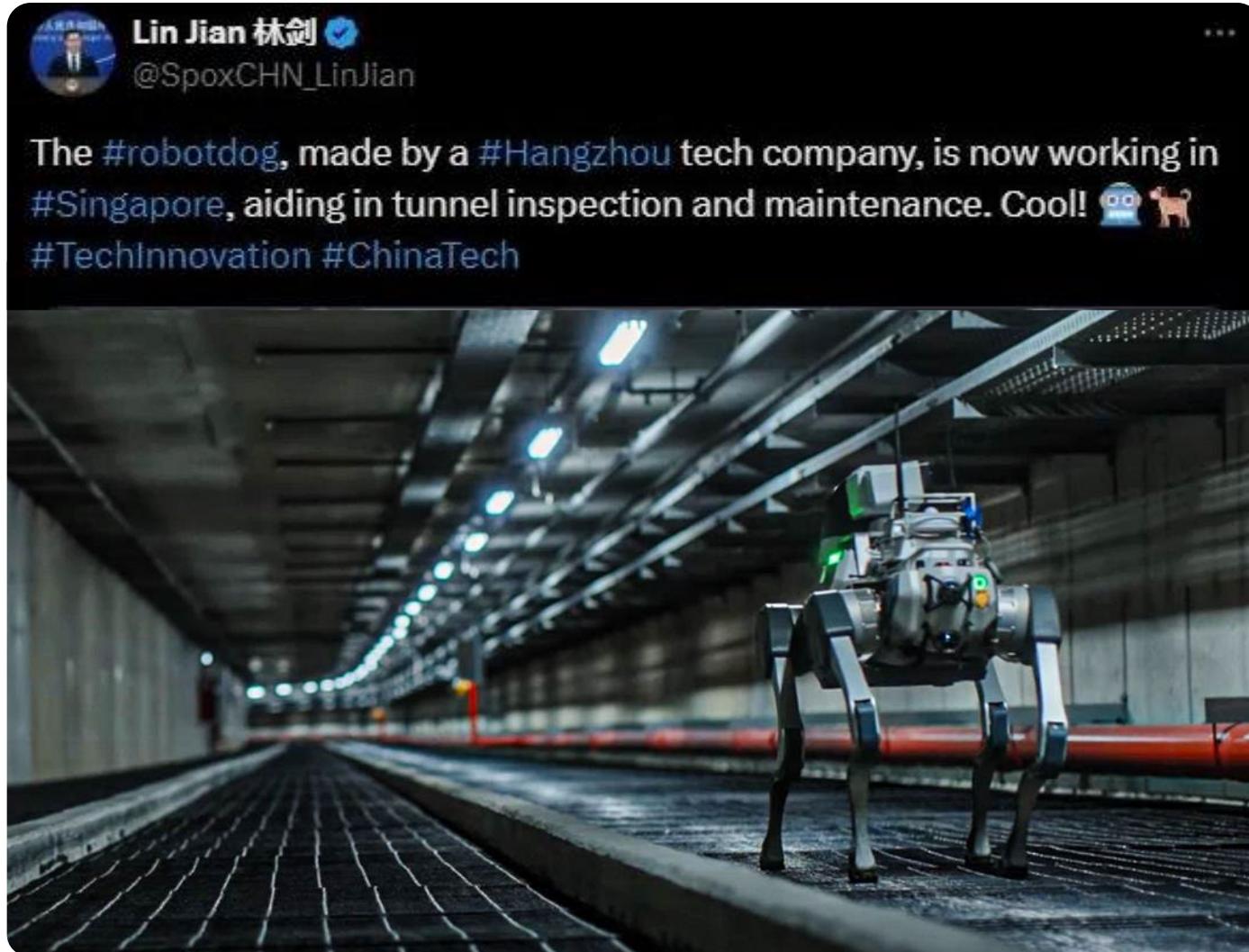


04. Applications



Applications

Power Patrol



Lin Jian 林劍 ✅
@SpoxCHN_LinJian

The #robotdog, made by a #Hangzhou tech company, is now working in #Singapore, aiding in tunnel inspection and maintenance. Cool! 🤖🐶

#TechInnovation #ChinaTech

DEEP Robotics' X30 robot dog Industry Application Implemented in Singapore Power Grid

The first industry-grade quadruped robot from China to be deployed in an overseas power system.

Foreign Ministry Spokesperson Lin Jian shared and praised

DEEPRobotics has partnered closely with the official partner, Eastern Green Power (EGP) to successfully deliver an electricity tunnel inspection solution for Singapore Power Group (SPGroup). SPGroup has named the inspection robot "SPock." Thanks to SPock's high reliability and efficiency in underground corridor inspections, SPGroup plans to further expand the adoption of this technology to minimize safety risks for employees and optimize tasks and processes through digital technology. It is estimated that with SPock's wider deployment, 480 hours of manual tunnel inspection time will be saved annually.

Applications

Power Patrol



Hangzhou Asian Games Village Power Utility Tunnel

A State Grid utility tunnel has adopted X20 for its power tunnel inspection solution, establishing a smart inspection platform to achieve fully intelligent inspection and operation of key tunnel equipment.



Converter Station Inspection in Anhui

The robot dog was used to execute inspection to ensure the safe operation of power device.



Ground-air Integration Inspection

The robot dog + UAV ground-air integration is used to detect the substation equipment.



Jinan Substation Intelligent Inspection

The robot dog has replaced manual inspections, reducing the manual inspections and improving the efficiency of inspections.



Substation Inspection in Jiangsu

The robot dog independently performs image and meter collection, equipment appearance and temperature detection in a 110kV substation.

Applications

Hazard Rescue



Emergency Mission 2024

The X30 robot dog and the drone collaborated to complete the detection of the sudden flammable and explosive chemical hazard. Through the dual-light gimbal and gas detector carried, it detects the temperature of the fire field, the intensity of radiant heat, toxic and harmful gases, and the situation of obstacles, providing valuable information for the rescue personnel.

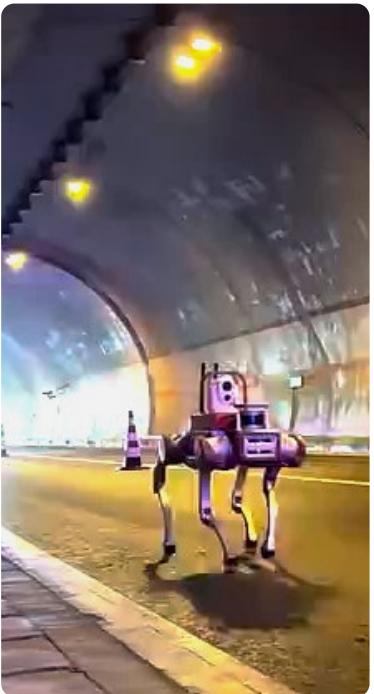
Applications

Hazard Rescue



Flood Rescue Drill
in Hubei

The robot dog can identify dangers of dam, realize intelligent inspection and provide support for emergency rescue work.



Tunnel Traffic
Accident Drill in Shanxi

The robot dog conducted preliminary investigation of uncertain factors in a toxic and harmful environment at the accident site.



Emergency Mission
2022

The robot dog was involved in the earthquake rescue drill for the first time in the world, detecting the radiant heat intensity and obstacle situation, and helping search for buried people.



Highway Emergency
Inspection Robot

The robot dog is composed of four function modules: intelligent inspection, robotic arm, automatic firefighting, and emergency rescue.



Inner Mongolia Drill

The drill simulated the leakage and explosion of natural gas pipelines and used robot dogs in the detection, throwing supplies, and firefighting.

Applications

Other Industry



TBNET Surveying & Mapping Robot Dog

Equipped with surveying and mapping devices from TBNET, the robot dog completed data collection in complex terrains.



Chengdu Police Street Patrol

By using multimodal large models, they provide timely feedback and warnings, and autonomously complete assigned tasks.



The Electrolytic Aluminum Tank Inspection

The robot dog realizes intelligent inspection in this environment, avoiding the harm of electromagnetic radiation to personnel.



Survey & Map an Overseas Construction Site

The robot dog used surveying and mapping devices to collect data for building structure measurement, geological exploration, etc.



The Conveyor Belt Gallery Inspection

The robot dog used multi-dimensional perception system including vision, hearing, temperature sensing, and force sensing to replace manual inspection .



The Brewery Autonomous Inspection

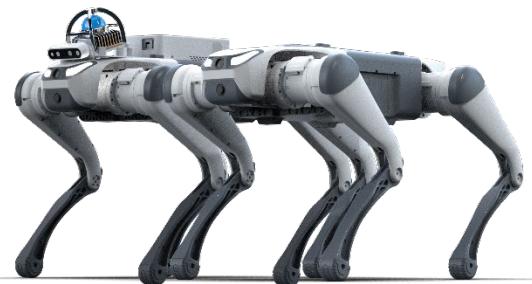
The robot dog completes temperature measurement, leakage detection, meter reading, harmful gas alarm, and noise data detection on devices.

Applications



The 19th Hangzhou Asian Games Group-Control Dance Show

DEEPRobotics & Zhejiang Lab used collaborative group control technology to combine bipedal robots and quadruped robots to complete the performance of the theme song “The love we share” of the Asian Games Village.



Applications

Performance



The First Intangible Cultural Heritage Gala The 2025 Spring Festival Gala

The robotic dog from DEEP Robotics performed the song "Shan He Tu" alongside renowned artists Duan Aojian and Fu Longfei at the Snake Year Spring Festival Intangible Cultural Heritage Gala. The event showcased the fusion and collision of intangible cultural heritage with cutting-edge domestic technology.



Applications

Performance



Beijing TV Spring Festival Gala

The Beijing TV Spring Festival Gala featured robotic dogs from DEEP Robotics dressed in traditional lion dance costumes, adding an innovative technological flair to the event.



Wu Xiaobo's Year-End Show

With Wu Xiaobo on his well-known large-scale financial program, the "Year-End Show." During the program, Wu Xiaobo discussed the rapid development of robotics and AI.



Web Series "Love, Smiles, and Robots"

The Spring Festival skit features artists Li Zongheng and Xu Yizhen collaborating with robots. The story revolves around robots integrating into the protagonists' lives, helping them solve.



Wei Daxun at the Mid-Autumn Festival Gala

The robot dog performed the song "I Want to Be the Wind" alongside artist Wei Daxun at Hunan TV Mid-Autumn Festival Gala, combining robots and moon, showcasing a vision of future technology.



The New Year at Hubei Enshi Grand Canyon

Robot dogs at Enshi Grand Canyon scenic area, kicking off a unique New Year intangible cultural heritage and technology show, garnering over 100 million cumulative online views.



Popular Variety Show "Zhongdiba"

DEEP Robotics robotic dog participated in the renowned large-scale interactive reality show Zhongdiba and engaged in fun interactions with the "Ten Diligent Farmers" team members.

Applications

Education & Research

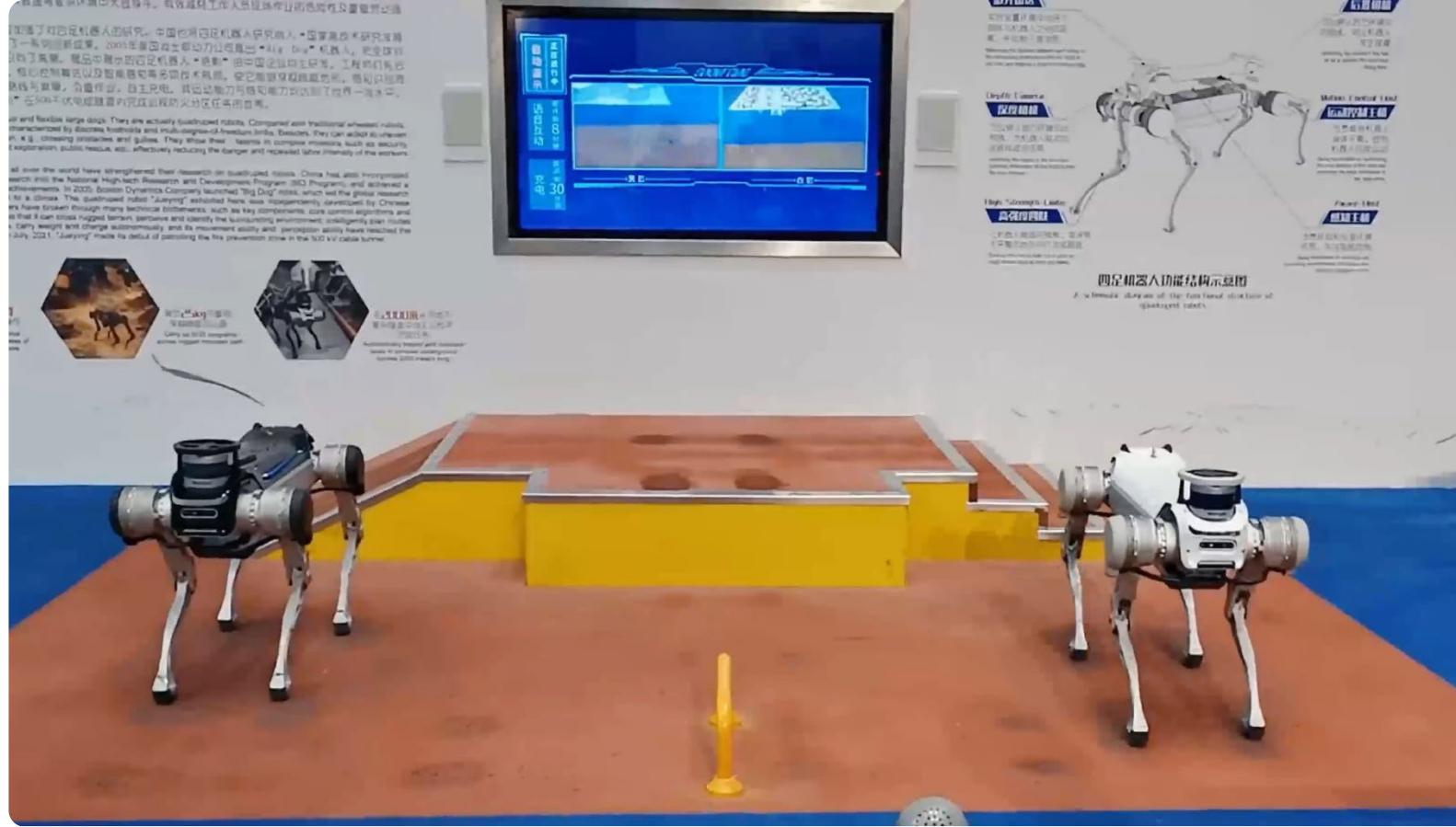


The ROS System Robot Dog Development Training Camp

DEEP Robotics and Ascend CANN held the “Quadruped Robot Dog Development Training Camp”, centering on control algorithms, reinforcement learning, and physical deployment, using the Lite3.

Applications

Education & Research



Robot & AI Exhibition Hall in China Science & Technology Museum

The China Science and Technology Museum uses

robot dog in the exhibition area of "Robots and AI".

In this exhibition, Jueying can walk independently on various terrain environments. Audiences can also control it through voice commands to reach the target area or complete the designated actions.

DEEP Robotics

PIONEERING INNOVATION & APPLICATION OF EMBODIED AI



@ DEEP Robotics

Due to product updates, contents may change, please consult for final confirmation