

*More Agile
More Open*

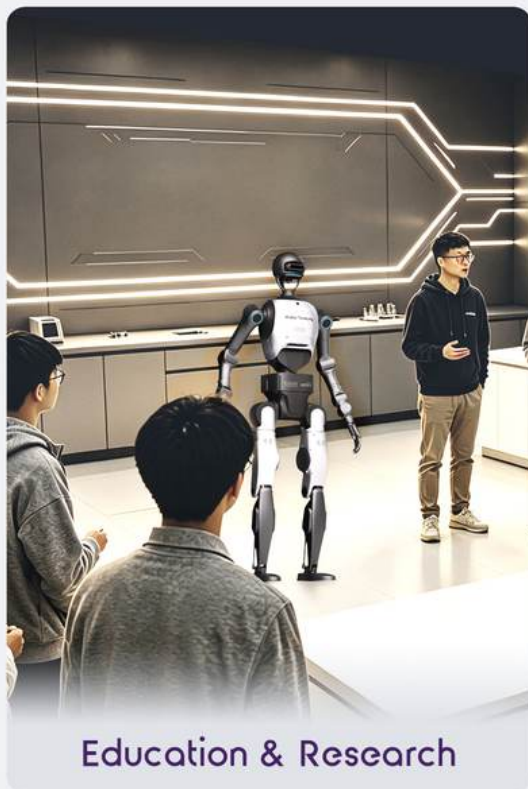


Walker Tienkung **DEX**

Full-Size Humanoid Robot for Embodied AI Research

One Robot, Multiple Scenarios, Full Coverage

Meet Diverse Application Scenario Requirements



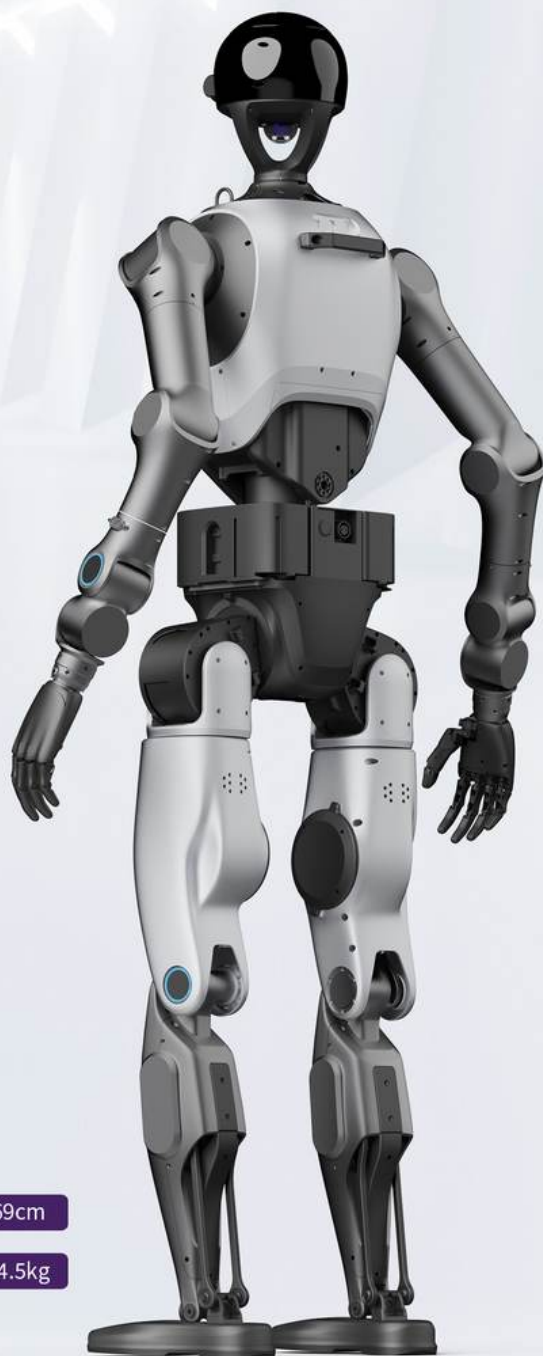
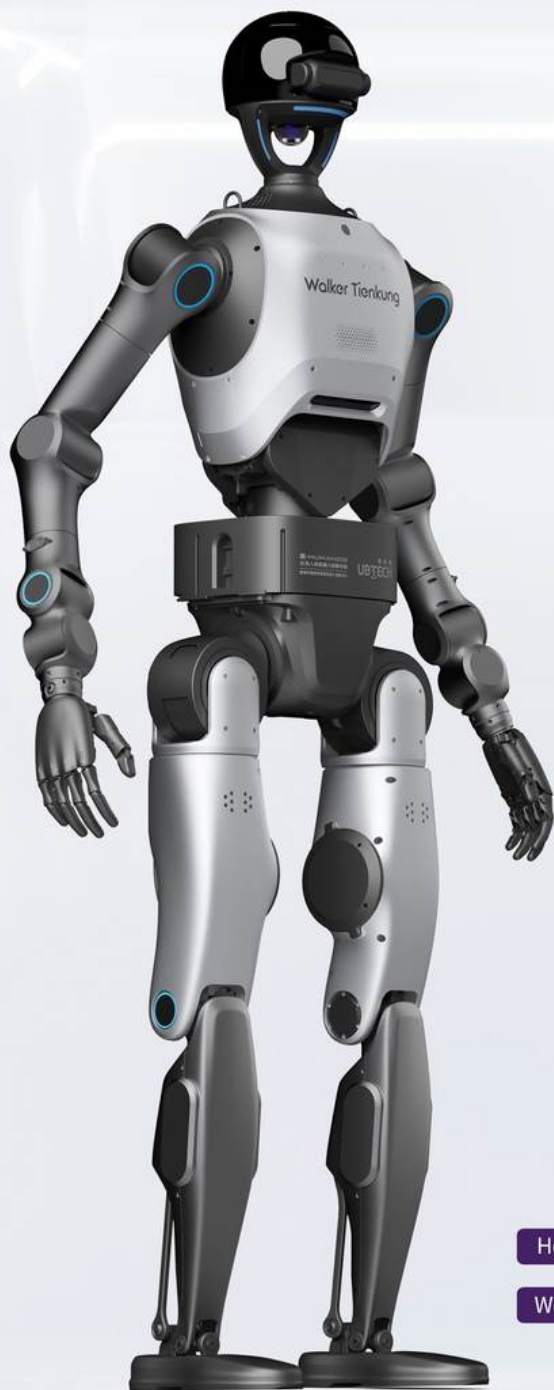
Walker Tienkung **DEX**

Full-size Humanoid Robot for Embodied AI Research

More Dynamic

More Advanced

More Open



Height: $\approx$ 169cm

Weight: $\approx$ 64.5kg

Product Highlights

More Dynamic

Redefining the performance benchmark for highly dynamic humanoid robots.

Ultimate Human-like Agility

Full-size 169cm height with an innovative 3-DOF waist, enabling whole-body coordinated movements akin to a human.

Powerful and Explosive Motion

400Nm peak torque joints provide high burst power, effortlessly executing highly dynamic actions like running and getting up.

Precision and Reliability

High-precision transmission system ensures every movement is accurate, quiet, and sustained.

The Brain on the Edge, Deciding in Real-Time

Powered by 2070 TOPS of top-tier performance, enabling large models to "think in real-time" directly on the robot.

Multi-modal Perception, Understanding the World

RGBD cameras, LiDAR, and AI voice kit work together to build a deep perception and understanding of the 3D environment.

Modular Expansion, Unlimited Capabilities

Supports multi-dimensional expansion including force sensing, vision, and dexterous hands, easily tackling more complex intelligent tasks in the future.

More Advanced

Providing a powerful edge-intelligence carrier for cutting-edge research in embodied AI.

More Open

Building the most open humanoid robot innovation platform to co-define the future with global developers.

Open Source, Deeply Accessible

From low-level motor control interfaces to top-tier open-source models (Thinker, Wow), everything is open to developers.

Ecosystem Empowerment, Accelerating Innovation

Provides 20+ real-robot scenario datasets, cloud simulation tools, and an AI Copilot assistant, significantly shortening the R&D cycle.

Modular Design, Flexible Adaptation

5+ plug-and-play optional accessories support rapid adaptation to various scenarios like security, logistics, and guidance.

Product Parameters

Walker Tienkung DEX

Height	≈169cm
Net Weight	≈64.5kg
Total DOF	31
Waist DOF	3
Head/Neck DOF	2
Per Arm DOF	Total 7 (Shoulder*3, Elbow*1, Wrist*3)
Per Leg DOF	Total 6 (Hip*3, Knee*1, Ankle*2)
Depth Camera	Head RGBD*1, Abdominal RGBD*1
LiDAR	1
High-precision IMU	2
AI Voice Kit	Linear MIC*4, Speaker*1, 720P Monocular Camera*1
Battery Capacity	15Ah+3Ah
Battery Design	Hot-swappable battery supported
Runtime	≥2 hours
Onboard Computer	Main Frequency up to 4.8GHz, Memory: 32GB, SSD: 512GB
AI Compute Board	NVIDIA Jetson AGX Thor* 1, 2070 TOPS
Openness	Whole-body Motor Control and Sensor Interface Open
Middleware	Self-developed high-speed communication middleware with ROS2 compatibility
Internal Comms	Full-body CAN/EtherCAT Bus Communication
External Comms	WiFi6E, Bluetooth, Ethernet, 5G(Only in Mainland China)
Optional	Dexterous Hand*2, 6-axis force sensor kit OCC Environmental Vision Perception Kit, Outdoor Satellite Navigation Kit
Heat Dissipation Capacity	Continuous Working Without Overheating
Support Capacity	Dancing, Push-ups, Navigation, Lip-reading, Standing-up,etc.

Note: Specifications subject to change. Final interpretation reserved by manufacturer.

Standard Configurations

Humanoid robot body ×1 | Wireless controller ×1 | User manual ×1 | Power adapter ×1
Development support: SDK, URDF

Basic Accessories Package

Flight Case | Safety Rope | Display Rack

* Basic accessory pack can be used for equipment storage, transportation, and daily use



🔍 UBTECH Education

Email: UBTECH.EDU@ubtrobot.com

Website: www.ubtrobot.com/en/ai-education