



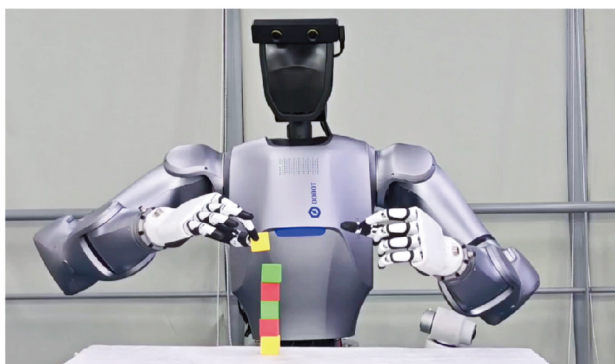
Dobot Atom Humanoid Robot

Dobot's First Humanoid Robot

Discover the Universal, Full-Size Embodied AI Humanoid Robots – Dobot Atom

Dexterous Manipulation

Features the **Neuro-Driven Dexterity System (NDS)**, enabling precise control of 28 upper-body degrees of freedom (DoF) through a Transformer-based architecture and binocular RGB vision. With servo-level vibration suppression and 200Hz high-frequency control, NDS ensures smooth, human-like fine motor skills for tasks such as tool use, assembly, and multi-specification handling, inspired by human brain-hand co-evolution.



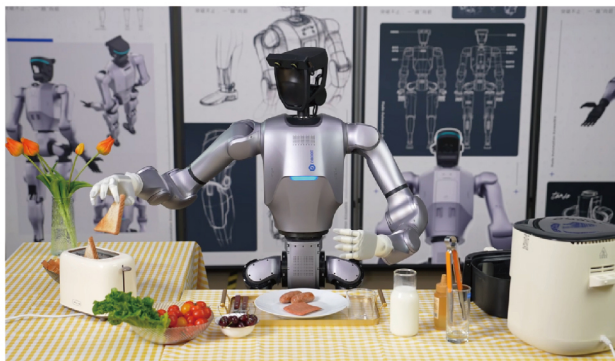
Straight-Knee Walking

The **Anthropomorphic Walking System (AWS)** mimics human biomechanics, leveraging imitation and reinforcement learning to generate highly human-like motion strategies. AWS reduces energy consumption by 42% compared to traditional bent-knee walking, enhancing stability and endurance for continuous operation in industrial environments, including navigating narrow spaces and adapting to varying workstation heights (700-1000mm).



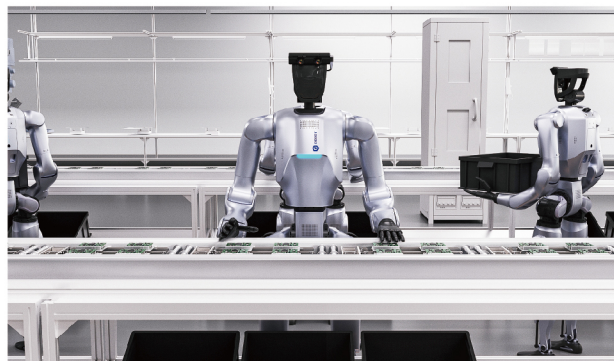
Cross-Scenario Master

Dobot Atom excels in cross-scenario adaptability, powered by the **Robot Operator Model-1 (ROM-1)**. ROM-1 combines base and vertical industry models, trained via imitation and reinforcement learning, to autonomously decompose complex tasks and make decisions. With 100M parameters and 24Hz end-to-end control, it ensures robust performance in unstructured environments, from automotive assembly to beverage preparation and pharmacy operations.



Multi-Robot Collaboration

Dobot Atom supports multi-robot collaboration, facilitated by its advanced edge computing system, which delivers **7.7x industry-standard computational power**. Integrated human-robot interaction and safety technologies enable seamless coordination with other robots or human workers, optimizing efficiency in tasks requiring high synchronization, such as production lines or multi-device service scenarios.



Food & Beverages



Education



New Retail



Warehousing

Dobot Atom D - Data Collection

The Dobot Atom D - Data Collection is optimized for large-scale data tasks, featuring 7-DoF dual arms and a 2-DoF head with customizable end-effectors (dexterous hands/grippers and wrist cameras). It integrates an Intel RealSense D455 depth camera (6m range) and a 60fps Full HD binocular camera that minimizes VR/MR motion sickness while ensuring high-quality imaging. The system supports Ethernet connectivity for efficient external data collection and processing.

Binocular Camera

Full HD mixed reality teleoperation

RGB-D Camera

Realsense D455

7 DoF Bionic Arm

Shake suppression, control silk slip

Fully Internal Cable Routing

Unrestricted movement

Vision + 5-Finger Dexterous Operation Closed Loop

Redirection Technology,accurately reproducing human operations

Included in the Box		Optional Accessories	
Dobot Atom D - Data Collection (without battery)	1	Battery Pack	1
Charger	1	Battery Charger	1
User Manual	1	6 - DoF Dexterous Hands	2
-	-	2 - Finger Adaptive Grippers	2
-	-	Wrist - Mounted RGB-D Cameras	2
-	-	Mobile Base	1

Dobot Atom - Trainer

The Dobot Atom Trainer is a 29-DoF robotics platform for embodied AI training, featuring optional 12-DoF dexterous hands or grippers. Its human-eye baseline Full HD binocular cameras ensure accurate vision with minimal motion sickness, while the Intel RealSense D455 (6m range) and 360° LiDAR provide comprehensive environmental awareness. The system's 1500 TOPS edge computing enables real-time AI processing, supported by dual wrist cameras for precision tasks and waist cameras for obstacle detection. With dual-mode teleoperation control (full-body/segmented), it's ideal for desktop-level AI training and task expansion in research and industrial applications. At the same time, it also has a powerful end-to-end operation model built-in, allowing users to quickly feed new datasets and deploy their own AI operation models.

Binocular Camera

Full HD mixed reality teleoperation

RGB-D Camera

Realsense D455

3D LiDAR

LVIOX-MID360

360° Microphone

50 m² high fidelity sound pickup

Stereo Speakers

5W

Quick Replaceable Battery

15AH

7 DoF Bionic Arm

Shake suppression, control silk slip

1500 TOPS AI Super Computing Module

Intel i9 + Graphics card with 16GB
256bit GDDR6

Fully Internal Cable Routing

Unrestricted movement

Vision + 5-Finger Dexterous Operation Closed Loop

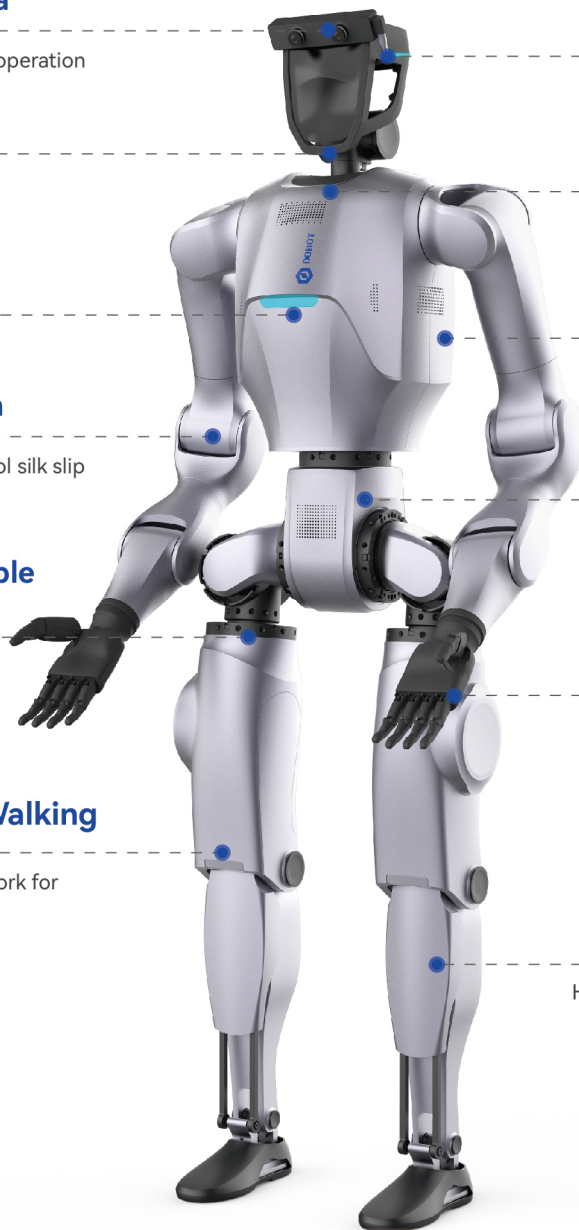
Redirection Technology, accurately reproducing human operations

Straight-Knee Walking

End-to-End Neural Network for Human-like Gait

Single-Leg DoF

Hip joint x 3 + knee joint x 1 + ankle joint x 2



Included in the Box		Optional Accessories	
Dobot Atom - Trainer (with battery)	1	Battery Pack	1
Battery Charger	1	Battery Charger	1
User Manual	1	Lifter	1
Embodied AI Operation Model (Lite Version)	1	Teleoperation Kit	1
Embodied AI Data Toolchain (Lite Version)	1	6 - DoF Dexterous Hands	2
Remote Controller	1	2 - Finger Adaptive Grippers	2
Development Document Set	1	-	-

Dobot Atom - Max

The Dobot Atom Max is a cutting-edge 41-DoF humanoid robot designed for advanced robotics research and industrial applications, featuring dexterous 12-DoF hands, a 60FPS Full HD vision system, and Intel RealSense D455 depth sensing. Its optional Embodied AI Set provides high-precision URDF models, an open-source training framework, and multi-modal data tools to accelerate development. The Atom Max adds VR/MR teleoperation with markerless tracking and dual control modes (full-body/segmented), all powered by a 1500 TOPS AI module for real-time edge computing. With sub-millimeter precision and 360° environmental awareness, it significantly lowers the barrier for AI robotics innovation while supporting complex tasks from precision assembly to dynamic locomotion research.

Binocular Camera

Full HD mixed reality teleoperation

RGB-D Camera

Realsense D455

3D LiDAR

LVIOX-MID360

360° Microphone

50 m² high fidelity sound pickup

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Quick Replaceable Battery

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1500 TOPS AI Super Computing Module

Intel i9 + Graphics card with 16GB
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Fully Internal Cable Routing

Unrestricted movement

Vision + 5-Finger Dexterous Operation Closed Loop

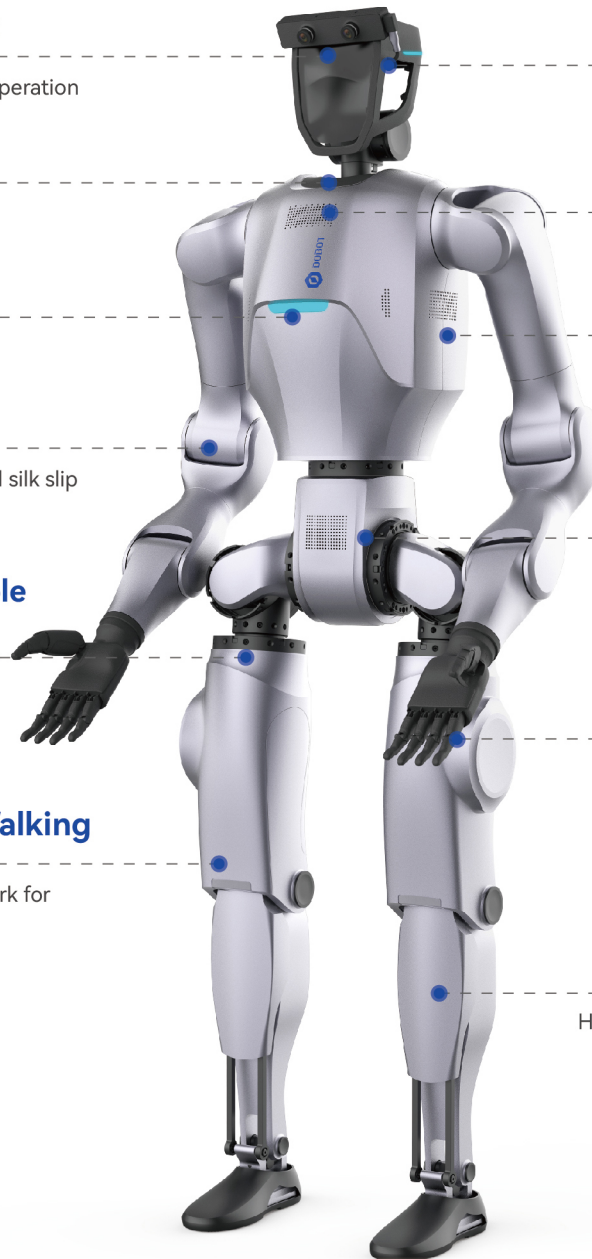
Redirection Technology, accurately reproducing human operations

Straight-Knee Walking

End-to-End Neural Network for Human-like Gait

Single-Leg DoF

Hip joint x 3 + knee joint x 1 + ankle joint x 2



Included in the Box		Optional Accessories	
Dobot Atom - Max (with battery)	1	Battery Pack	1
Battery Charger	1	Battery Charger	1
User Manual	1	Lifter	1
Development Documentation Set	1	Base Operation Model + Training Props Kit + Tutorial	1
Remote Controller	1	Teleoperation Kit	1
-	-	Embodied AI Data Toolchain	1

Product Specifications

Configuration	Atom D	Trainer	Max
Height	≈650mm	≈1650mm	≈1650mm
Weight (without dexterous hands/jaws)	≈20kg	≈62kg	≈62kg
Full-body Degrees of Freedom (without dexterous hands/jaws)	16	29	29
Head Degree of Freedom	2	2	2
Single Arm Degrees of Freedom (without dexterous hand/gripper)	7	7	7
Waist Degree of Freedom	0	1	1
Single Leg Degree of Freedom	0	6	6
Single Arm Span (without dexterous hand/gripper)	600mm	600mm	600mm
Single Arm Weight (without dexterous hand/gripper)	≈6.5kg	≈6.5kg	≈6.5kg
Single Arm Load (without dexterous hand/gripper)	3.5kg	3.5kg	3.5kg
Single Arm Repetitive Positioning Accuracy	± 0.05mm	± 0.05mm	± 0.05mm
Maximum End Speed of Arm	1.5m/s	1.5m/s	1.5m/s
Audio Devices	-	360°microphone x1 + neodymium strong magnetic speaker x 2	360°microphone x1 + neodymium strong magnetic speaker x 2
Maximum Walking Speed	-	1.5m/s	1.5m/s
Joint Assembly Actuators Hollow Alignment	Yes	Yes	Yes
Basic Computing Module	intel i5	intel i5	intel i5
1500 TOPS AI Computing Module	0	Intel i9 (24 cores 32 threads)+ Graphics card with 16GB256bit GDDR6 (FP32 GPUcomputing power: 41.15 TFLOPS)	Intel i9 (24 cores 32 threads)+ Graphics card with 16GB256bit GDDR6 (FP32 GPUcomputing power: 41.15 TFLOPS)
Battery Life	0	≈2h	≈2h
Battery Charge	Power Supply	≈1h	≈1h
End Actuator	0	0	6 DoF dexterous hand x 2
Head Sensor	RGB-D Camera x 1 + Full HD Binocular Camera x 1	RGB-D Camera x 1 + Full HD Binocular Camera x 1	RGB-D Camera x 1 + Full HD Binocular Camera x 1
Wrist Sensor	0	RGB-D Camera x 2	RGB-D Camera x 2
Waist Sensor	0	RGB-D Camera x 2	RGB-D Camera x 2
Head LiDAR	0	3D LiDAR x 1	3D LiDAR x 1
SDK Support	Supported	Supported	Supported
Warranty	1 Year	1 Year	1 Year
Technical Support	Premium: Full documentation + ecosystem support	Standard: Complete documentation	Premium+: Full documentation + exclusive training
Onsite Training	Not available	Not available	Available
Remote Service	3 sessions/year	3 sessions/year	3 sessions/year

