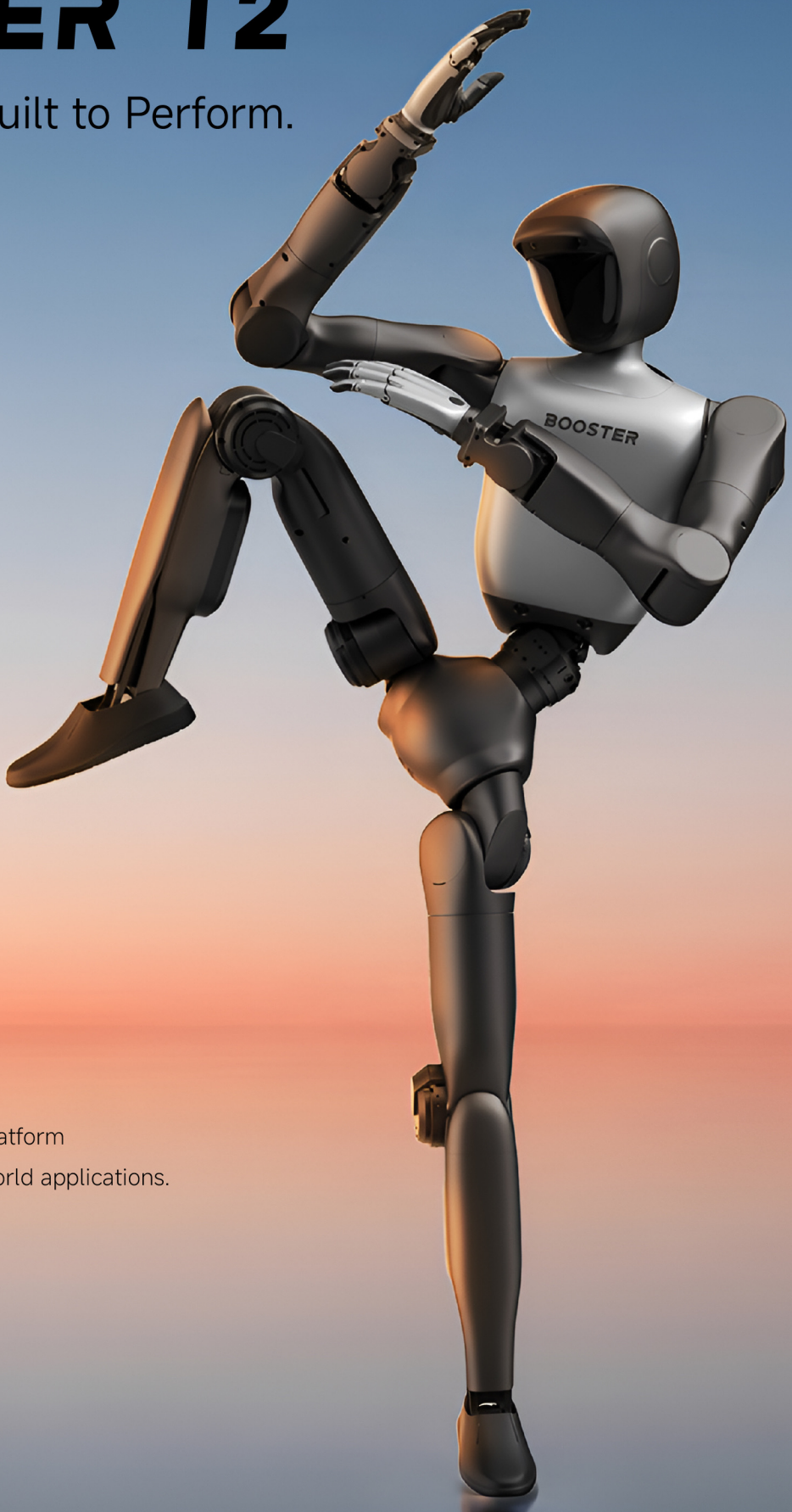
BOOSTER T2

Smart. Powerful. Built to Perform.



Flagship embodied development platform
for research, education, and real-world applications.

BOOSTER

BOOSTER T2

Chip

NVIDIA Jetson Thor T5000: 2,070 FP4 TFLOPS, 14-core Arm CPU, 128 GB LPDDR5X shared memory. Handles multimodal perception, decision-making, and task execution entirely on-device.

Body

Golden-ratio humanoid frame with high-strength structural design, balancing aesthetics, motion stability, and adaptability across scenarios.

Locomotion

Highly capable locomotion system that helps the robot handle complex real-world environments such as steps and slopes.

Joints

Self-developed high-performance joint system with highly dynamic actuation for fast response, strong power output, and agile movement.

Payload

High-capacity dual-arm payload supporting heavier object carrying, lifting, and handling across real-world applications.

Expansion

Optional super-hemispherical 3D LiDAR and RTK positioning module for omnidirectional perception, long-range detection, and open-scenario navigation.

Speaker

5W voice module for clearer guidance, announcements, and interaction.

Battery

10,000 mAh capacity, providing stable power for extended walking, development, and on-site work.

Magnetic Charging

Magnetic dock design supports hot-charging during use for long-duration demos, teaching, and development.

Interchangeable End Effectors

Supports grippers, bionic dexterous hands, and tactile dexterous hands for flexible grasping, manipulation, and scenario adaptation.

BOOST

Depth Camera

Ultra-wide-angle 3D depth camera for near-field, wide-range perception and spatial recognition.

Head DoF

Flexible head rotation enabling active observation, panoramic sensing, and natural interaction.

Waist Camera

Low-mounted ultra-wide-angle depth module for enhanced perception of ground, obstacles, and immediate surroundings.

Full Body DoF

High-degree-of-freedom structure enabling rich motion expression and broad development possibilities.

End Effector Perception Module

Close-range wrist-mounted vision module providing visual feedback for fine manipulation and precise interaction.

Agile in Motion.
Boundless in Capability.

Control Capability

Body

Human-like range of motion
Covers the main range of motion of human joints, reducing sim-to-real motion deviation

1.4m
Golden ratio height,
close to real human interaction scale

High strength
Industrial-grade body structure,
ensuring stable and repeatable motion

Joints

Self-developed high performance
Fast response,
good heat dissipation

10kg
Maximum dual-arm payload*

140N·m
Maximum peak joint torque

Degrees of freedom

Up to
75 DoF

Dexterous hand

Pro version

21 degrees of freedom
Fully-actuated bionic design
Precisely mimics human hand movement

0.01N
Full-hand tactile feedback
Precisely senses contact state

0.1°
Repeat-motion precision
Enables high-precision manipulation control

20kg
Full-Hand Payload Capacity
Precision handling with high-load grasping

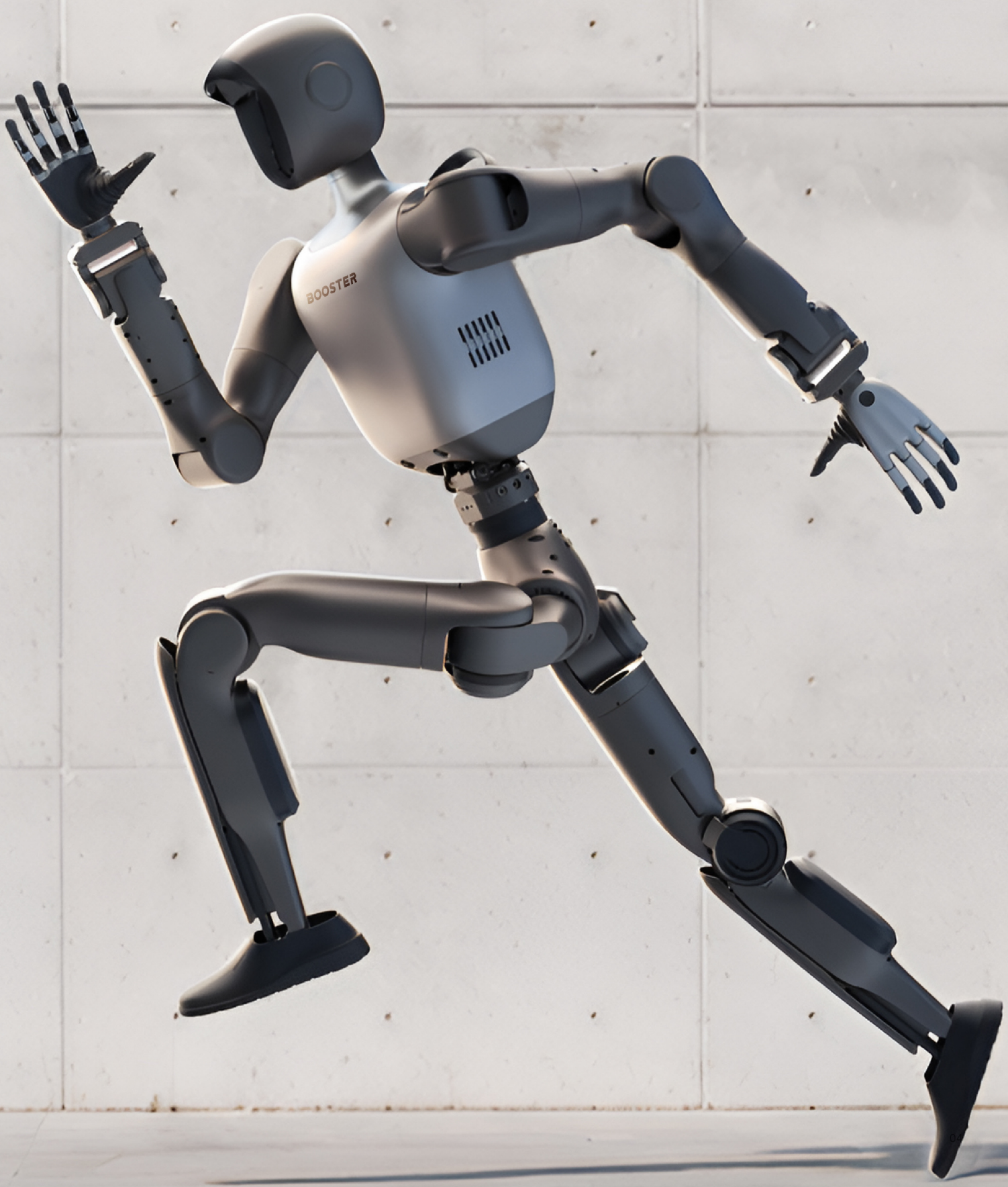
Standard version

11 degrees of freedom
Compact and agile bionic design

6 active joints
Perfectly mimics human hand movement

1° control precision
Enables precise and flexible manipulation control

*Maximum daul-arm payload varies significantly depending on arm posture; actual payload depends on the specific posture used.


BOOSTER

Senses All Around.
Understands Every Scene.

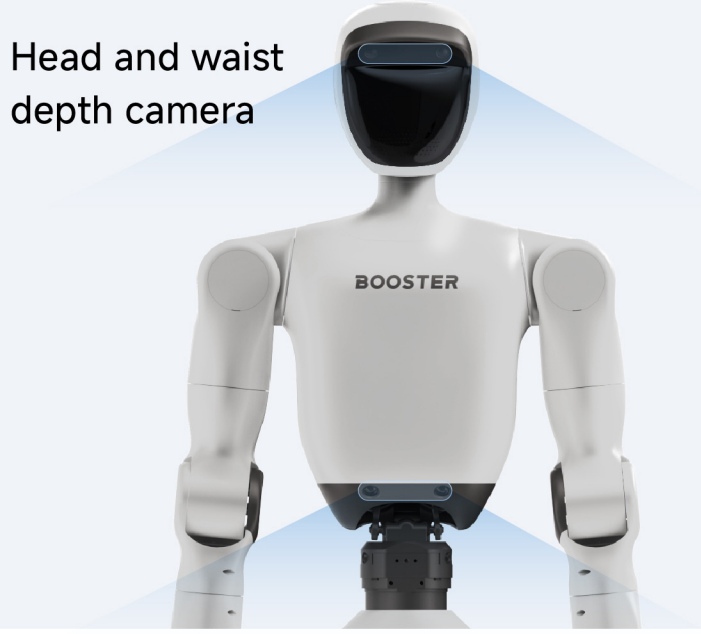
Perception Capability

LiDAR

Super-hemispherical 3D LiDAR;
360° x 189° super-hemispherical field of view, providing blind-spot-free sensing;
Detection range of 40m at 10% reflectivity (up to 60m maximum);
360° x 189° super-hemispherical field of view

360° × 189° super-hemispherical field of view

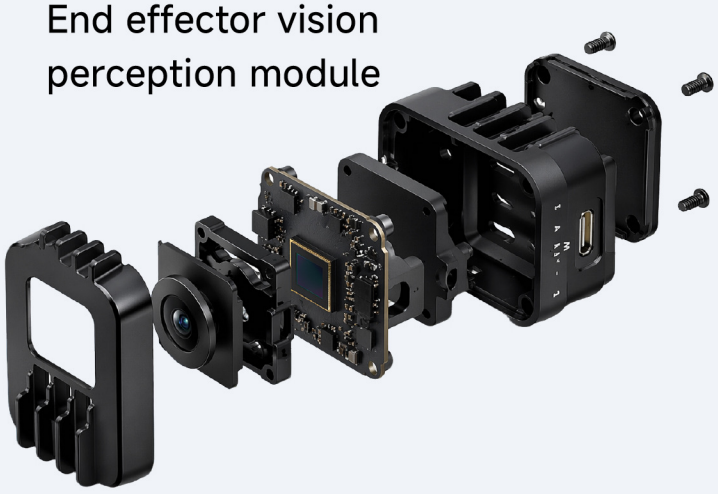
Head and waist depth camera



Ultra-wide-angle 3D depth camera;
150° x 94° wide field of view, providing near-field, wide-range sensing capability;
Effective working distance of 0.5m to 6m, with depth error of only 3cm at 1m;
Global-shutter imaging, ensuring no rolling distortion during motion;
150° x 94° wide field of view

150° × 94° wide field of view

End effector vision perception module



12-megapixel RGB camera;
120° wide-angle field of view, covering a larger end-effector operating range;
Supports high-definition image capture and target-detail recognition, helping the robot complete grasping, alignment, and close-range operations;
12-megapixel RGB camera; 120° wide-angle field of view

12-megapixel RGB camera
120° wide-angle field of view

Microphone array

Supports far-field pickup and noise reduction

360° far-field audio pickup, 360° sound-source localization, 15° precision;
Supports voice interruption and echo cancellation;
Supports microphone expansion;
360° far-field audio pickup; 360° sound-source localization, 15° precision

360° far-field audio pickup

360° sound-source localization, 15° precision

Open Ecosystem.
Seamless Sim-to-Real.

Developer Openness

Open-source ecosystem

From APIs to open-source projects,
connecting the entire robot-development pipeline

Fully-open SDK/API

Supports robot control, state reading, and application development, lowering the barrier to secondary development.

Native ROS 2 integration

Covers state publishing, motion control, RPC calls, and Agent services, connecting to mainstream

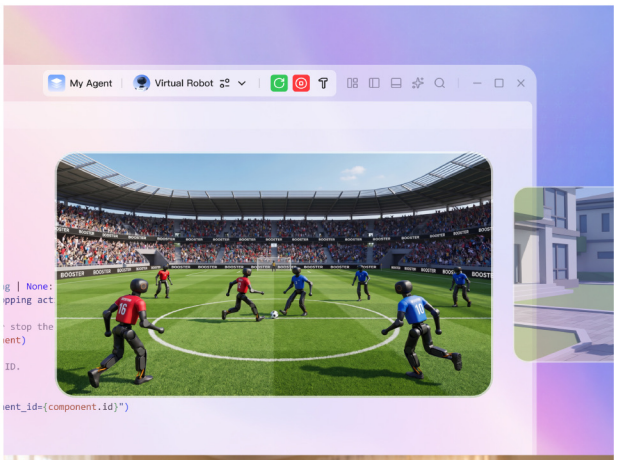
Open-source project support for real-world use

Provides RoboCup demos, reinforcement-learning frameworks, and robot models, supporting the complete pipeline from simulation training to real-robot deployment.

Scan the code
to learn more

Booster Studio

Built for embodied-intelligence development



An integrated development workbench for Agents

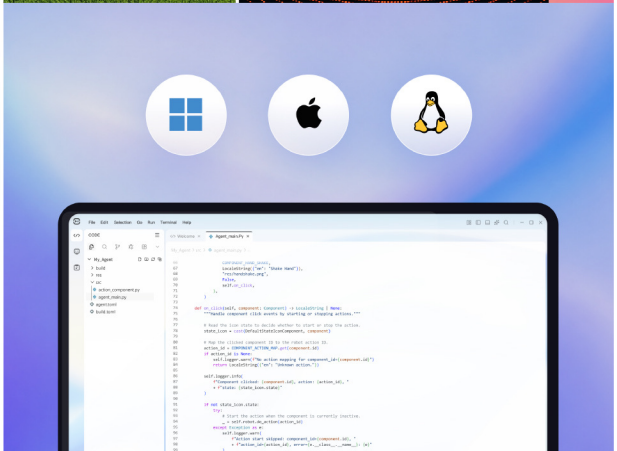
Integrates project creation, code development, build and deployment, and runtime debugging, improving robot-application development efficiency.

Physically accurate. Visually realistic.

Provides a simulation environment close to the real robot, allowing validation in a virtual environment before deploying to a real machine.

Real-time data. Crystal clear.

Natively supports ROS/ROS 2 message viewing, state monitoring, data-curve display, and overlaid algorithm results, making debugging and analysis easier.

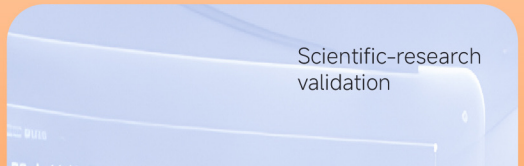


Cross-platform. Zero friction.

Supports local operation on mainstream operating systems, ready to use out of the box, lowering the cost of teaching deployment and getting students up to speed.

BOOSTER

Made for Every Scene. Ready for More.



BOOSTER T2

Key Specifications

Basic information

Version	Professional Edition P1 Professional Edition P2 (gripper version) Professional Edition P3 (dexterous-hand version)
Height	Approximately 1.4m
Weight	Approximately 42 to 43kg, varying slightly by configuration
Total body degrees of freedom	31 degrees of freedom
Single-leg degrees of freedom	6 degrees of freedom
Single-arm degrees of freedom	7 degrees of freedom
Waist degrees of freedom	3 degrees of freedom
Head degrees of freedom	2 degrees of freedom

Compute

Chip platform	NVIDIA Thor
Compute power	2070 TFLOPS
CPU	14-core CPU, up to 2.6GHz
Shared memory	128GB 256-bit LPDDR5X

Development

Peripheral interfaces	Power / USB / Locking Type-C / Ethernet
Wireless connectivity	WiFi 6
Bluetooth	Bluetooth 5.2
Expansion capability	Supports expansion modules such as LiDAR, grippers, and dexterous hands
Development platform	Booster Studio, a humanoid-robot Agent development platform
Simulation capability	High-precision virtual simulation, sim-to-real
API	Fully open high-level and low-level APIs
Expansion capability	Reserved expansion-dock interface on the body, allowing easy connection of accessories from multiple brands
Development resources	Datasets and sample code

Control

Walking speed	2m/s
Maximum peak joint torque	140N·m
Maximum dual-arm payload	10kg*
Joint motor	High-speed inner-rotor permanent-magnet synchronous motor
End effector	Optional gripper, dexterous hand, or prosthetic-style hand
Dexterous hand	11 degrees of freedom, five-finger grip strength greater than 50N Maximum opening width of 100mm Optional high-degree-of-freedom / tactile versions
Gripper	Clamping force of 0 to 20N, weight under 400g Opening/closing time of 0.6s

Perception

Head Camera	Binocular depth camera
Torso Camera	Binocular depth camera
Arm end camera	High-definition RGB camera
LiDAR (optional)	Super-hemispherical 3D LiDAR
Microphone	Supports far-field pickup and noise reduction
Speaker	Supported

Battery life

Battery	48V 10Ah
Charging method	Magnetic direct charging
Charge while in use	Supported
Battery life	Continuous walking for over 2 hours

*Maximum daul-arm payload varies significantly depending on arm posture; actual payload depends on the specific posture used.

BOOSTER

Make Humanoid Robots as Affordable, Reliable and Practical as PCs

www.booster.tech

sales@booster.tech