UNITREE G1

HUMANOID AGENT AI AVATAR

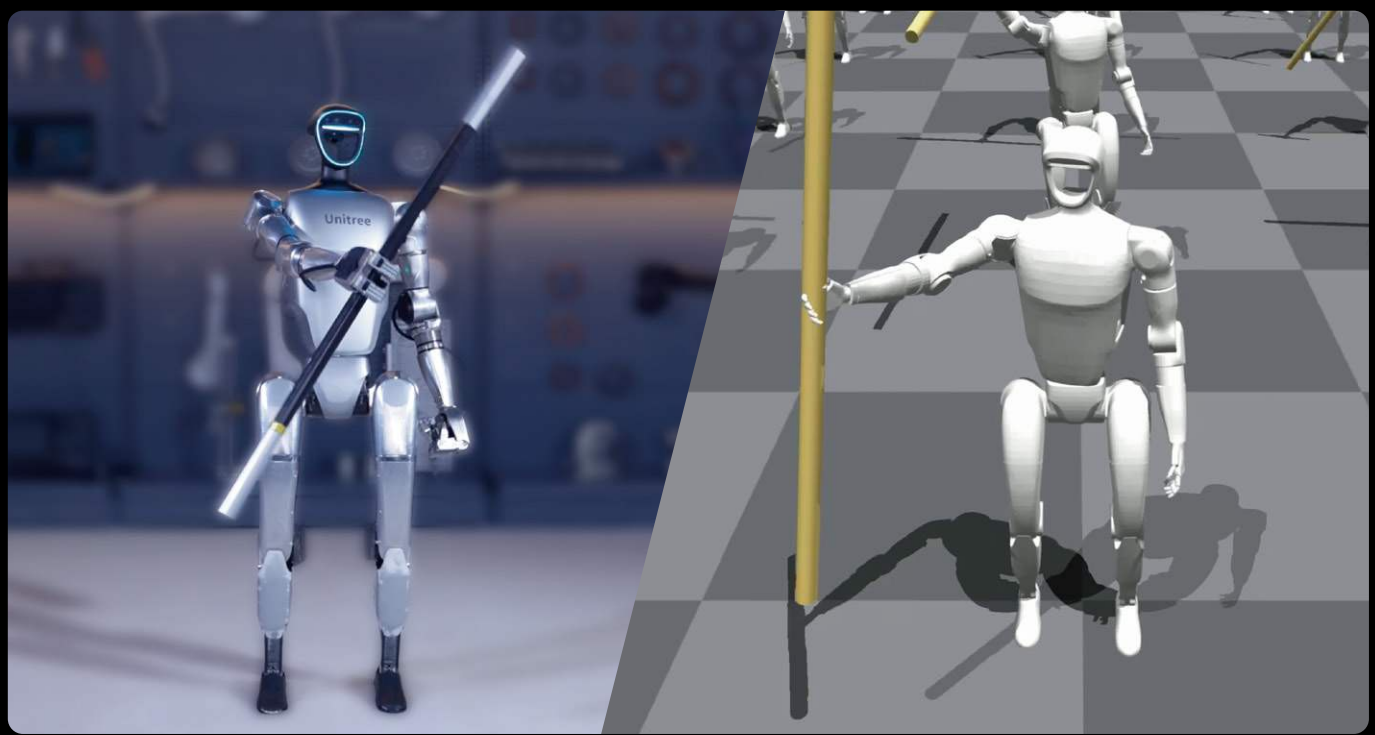
www.unitree.com

FLEXIBILITY BEYOND ORDINARY PEOPLE

Extra large joint movement angle space, 23~43 joint motors.

IMITATION & REINFORCEMENT LEARNING DRIVEN

Robotics technology accelerated by AI is upgrading and evolving every day.



FORCE CONTROL DEXTEROUS HAND, MANIPULATION OF ALL THINGS

Combined with force-position hybrid control, it is sensitive and reliable, and can simulate human hands to achieve precise operation of objects.

*Three-fingered dexterous hand Dex3-1 Parameter: The thumb has 3 active degrees of freedom; the index finger has 2 active degrees of freedom; the middle finger has 2 active degrees of freedom.

ROBOT WORLD MODEL, LET'S CREATE IT TOGETHER

UnifoLM (Unitree Robot Unified Large Model), create a new era of intelligence together.

*Open for everyone to co create and use in the future.

START THE AGENT NEW ERA

BODY SIZE VALUE

Weight About
35 kg

Height About
127 cm

TOTAL DEGREES OF FREEDOM

≤ **43** pieces

MAX JOINT TORQUE

120 N.m

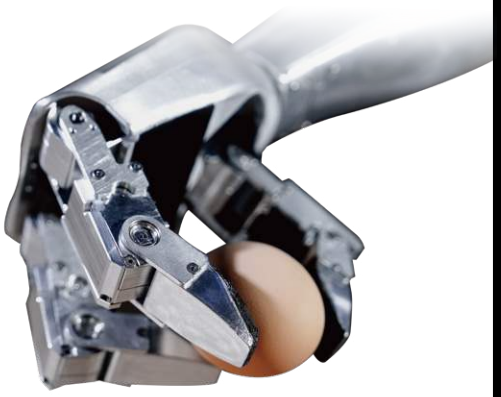
360° DETECTION PERCEPTION

3D LIDAR +Depth Camera

DEX3-1 FORCE CONTROL DEXTEROUS HAND

3-Finger Force Control Dexterous Hand

(Optional installation of tactile sensor arrays)



BATTERY LIFE

About **2** h

Unitree G1 Parameter

Depth Camera
Intel RealSence D435

3D LIDAR
LIVOX-MID360

Hollow Joint Wiring of The Whole Machine
No external cables

Mobility
Moving speed of 2m/s

Core Motion Module
Max torque at joints 120 N.m

Single Arm Degrees of Freedom
Shoulder 3+Elbow 2 +Wrist 2(optional)

Extra Large Quick Release Battery
Provide lasting power

Single Leg Degrees of Freedom
Hip 3 + Knee 1 + Ankle 2

Model	G1	G1 EDU
Size (Stand)	1270mmx450mmx200mm	1270mmx450mmx200mm
Size (Fold)	690mmx450mmx300mm	690mmx450mmx300mm
Weight (With Battery)	About 35kg	About 35kg+
Total Degrees of Freedom (Joint Freedom)	23	23~43
Single Leg Degrees of Freedom	6	6
Waist Degrees of Freedom	1	1+(Optional 2 additional waist degrees of freedom)
Single Arm Degrees of Freedom	5	5
Single Hand Degrees of Freedom	/	7 (Optional Force control of three-fingered hand) +2(Optional 2 additional wrist degrees of freedom) *Three-fingered dexterous hand Dex3-1 Parameter: The thumb has 3 active degrees of freedom; the index finger has 2 active degrees of freedom; the middle finger has 2 active degrees of freedom. **Dex3-1 can optionally be installed with tactile sensor arrays
Max Torque of Knee Joint【1】	90N.m	120N.m
Arm Max Load【2】	About 2Kg	About 3Kg
Calf + Thigh Length	0.6M	0.6M
Arm Span	About 0.45M	About 0.45M
Extra Large Joint Movement Space	Waist z-axis joint：±155° Knee joint：0~165° Hip joint：P±154°、R-30~+170°、Y±158°	Waist z-axis joint：±155° Knee joint：0~165° Hip joint：P±154°、R-30~+170°、Y±158°
Full Joint Hollow Electrical Routing	YES	YES
Joint Encoder	Dual Encoder	Dual Encoder
Cooling System	Local Air Cooling	Local Air Cooling
Power Supply	13 String Lithium Battery	13 String Lithium Battery
Basic Computing Power	8-Core High-Performance CPU	8-Core High-Performance CPU
Sensing Sensor	Depth Camera+3D LiDAR	Depth Camera+3D LiDAR
WiFi 6 、Bluetooth 5.2	YES	YES
High Computing Power Module	/	NVIDIA Jetson Orin(optional)
Smart Battery (Quick Release)	9000mAh	9000mAh
Charger	54V 5A	54V 5A
Manual Controller	YES	YES
Battery Life	About 2h	About 2h
Upgraded Intelligent OTA	YES	YES
Secondary Development【3】	/	YES
Warranty Period【4】	8 months	1 year

[1] The maximum torque of the joint motors of the whole machine is different. This is the maximum torque of the largest joint motor among them.
[2] The maximum load of the arm varies greatly under different arm extension postures.
[3] For more information, please read the secondary development manual.
[4] For more detailed warranty terms, please read the product warranty brochure.
[5] The above parameters may vary in different scenarios and configurations, please subject to actual situation.
[6] The humanoid robot has a complex structure and extremely powerful power. Users are asked to keep a sufficient safe distance between the humanoid robot and the humanoid robot.Please use with caution
[7] If any change in the appearance of the product, please refer to the actual product.
[8] Some sample functions on this page are still being developed and tested, and will be opened to users in the future.

UNITREE

TO PROMOTE THE WORLD WITH SCIENCE AND TECHNOLOGY

Unitree Robotics

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