

High Power, Smart Control, Multi-Scenario Ready



Agile & Swift Lightweight Extended Endurance

Weighs around 37kg, fully loaded(25kg) can continuously walk 3h/12.5km
Unloaded can continuously walk 5h/20km.
Lighter, Faster, Tougher



Industrial-Grade Legged Robot
Heavy Payload Standard

Premium mobile hardware platform,
open for rapid development



Conquer Rugged Terrain with Ease



Wheel-Leg Option Available
Unleash Greater Performance

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Please visit Unitree Robotics Website for more related terms and policies,
and comply with local laws and regulations.

UNITREE A2
Stellar Explorer



Dual-Sided Perception Zero Blind Spots
Greater Accuracy [3]

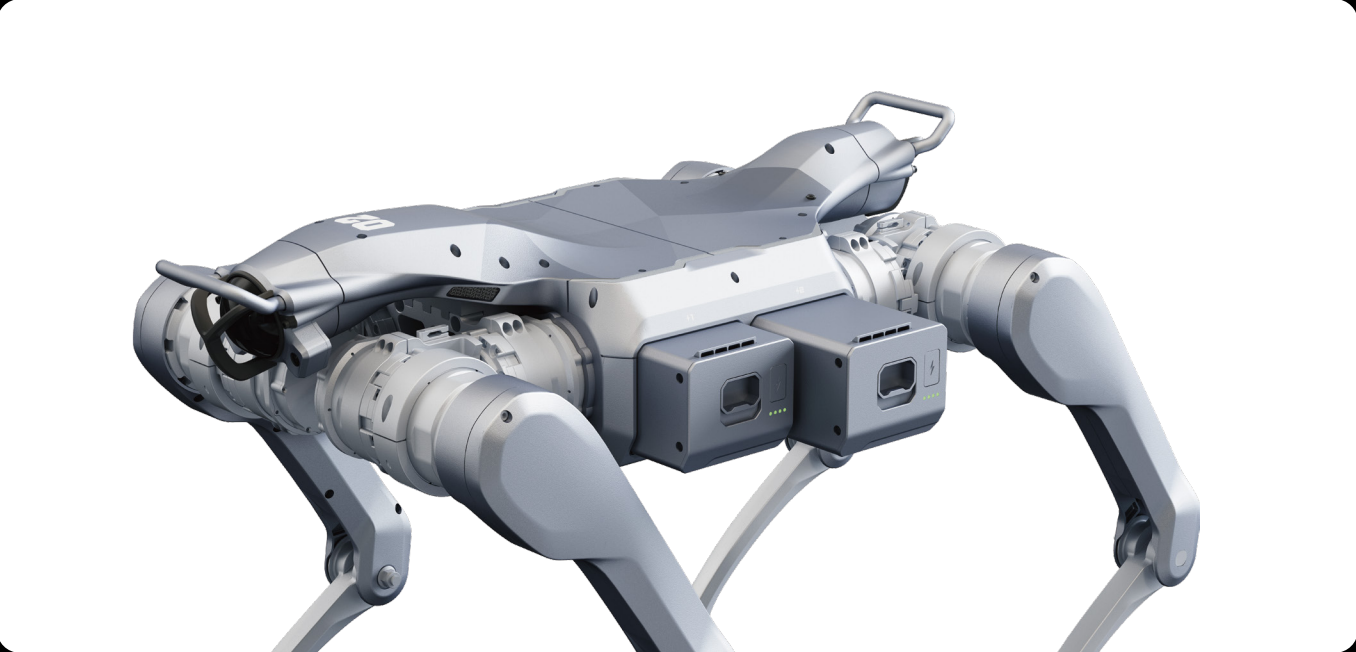
2 industrial LiDARs(front & rear), HD camera+front light to detect the environment ahead



Dual Battery Systrm

「Hot-Swappable Dual Barreries·Unlimited Runtime」 :
Seamless Battery Swap, Uninterrupted Mission

Dual-battery parallel design:swap without stopping, the eternal heart for extreme missions.
Reliable triple power system guarantees from -20°C to 55°C.



Unitree A2 Parameter [3]

Peak Joint Torque
Approx.
180N.m

Extreme Wailing Ability
Max Step Height
30cm
Max Slope Angle
45°

Load Capacity
Continuous Walking Load
25kg
Standing Load
100kg

Material
Aluminum Alloy+High-Strength
Engineering Plastic

Max Running Speed
5m/s

Computing Module
Standard
8-Core High-Performance CPU
(Platform Functions)
+ Intel Core i7(User Development)
Optional
High Computing Power
Expansion Dock

Tracking Module [3]
Remote control or
smart follow choose freely

Front Camera
HD Camera x1

**Voice Intercom
Microphone**
Seamless communication
in any scenario

Rich Expansion Options
Optional rails & external user
interface

Smart Battery
Dual batteries: 9000mAhx2
Dual slots, hot-swappable

Rich External Interfaces
·RS485 x 2
·CAN x 2
·Gigabit Ethernet x 2
·USB 3.0 Type-C(8-Core CPU) x 2
·USB 3.0 TypeC (Intel Core i7) x 2
·Power Output: 12V / 24V / BAT

Powerful Computing Core
-Standard: 8-Core high-performance
CPU(platform functions)+Intel Core i7
(user development)
-Optional: high computing power
expansion dock

Perception Sensors
Industrial-grade LiDAR x2

Front Light
Bright illumination
Lighting every step ahead

12 High Power-Density Motors
Low-inertia, high-speed inner rotor
PMSM Surging power, uncompromised
by heavy payloads

Speaker
Real-time broadcast for
operational safety

Mechanical Parameters	Model	A2		A2 PRO	
	Size (Standing)	820mm x 440mm x 570mm			
	Size (Lying Prone)	720mm x 550mm x 220mm			
	Material	Aluminum Alloy + High-Strength Engineering Plastic			
	Weight (without battery)	About 35kg			
	Weight (with battery)	About 42kg			
	Degrees of Freedom (Joint Motors)	12			
	Joint Bearings	Industrial-grade crossed roller bearings (high precision, high load capacity)			
	Joint Motors	Low-inertia, high-speed inner rotor PMSM(enhanced response & heat dissipation)			
	Max Joint Torque	About 180 N.m			
	Range of Motion	Body: -58~58°	Thigh: -134~-180°/-89~-225°	Shank: -158°~-30°	
	Electrical Characteristics	Supply Voltage	50.4V		
Joint Encoder		Dual encoders			
Cooling System		Local air Cooling			
Power Supply		Dual slots, dual batteries			
Battery Capacity		Single Battery 9000mAh (453.6Wh)		Dual Batteries 18000mAh (907.2Wh)	
Wi-Fi 6, Bluetooth 5.2		YES			
Speaker		YES			
Microphone		Microphone array			
Front Light		YES			
Wireless vector follow module		/ (Optional)		Expand (Optional)	
GPS/4G		/ (Optional)		Expand (Optional)	
Sensor		LiDAR × 1 + HD Camera × 1		LiDAR × 2 + HD Camera × 1	
Control & Compute		Standard: 8-Core high-performance CPU (platform)+Intel Core i7 (user development)		Standard: 8-Core high-performance CPU (platform) + Intel Core i7 (user development) Optional: high computing power expansion dock	
External Interfaces		RS485 x 2, CAN x 2, Gigabit Ethernet x 2, USB3.0-TypeC(8-Core CPU) x 2 USB3.0-TypeC (Intel Core i7)x2, Power Output: 12V / 24V / BAT			
Performance Metrics		Operating Temperature	-20°C ~ 55°C		
	Battery Life	No Load: >5hours continuous walking, approx. 20km With 25kg Load: >3 hours continuous walking, approx. 12.5km			
	Max Standing Load	About 100kg			
	Continuous Walking Load	About 25kg			
	Slope Walking Capability	About 45°			
	Stair Climbing Capability	Max Step Height: 30cm			
	Max Climb Height	About 0.5 ~ 1m			
	Speed	0~3.7 m/s (Up to ~5 m/s)			
	Replace Wheel-leg	Optional			
	Ingress Protection Rating	IP56		IP56-IP67 (Core components rated IP67)	
Other	Smart OTA Upgrade	Continuous Upgrades			
	Secondary Development [1]	Supported			
	Warranty [2]	12 Months			

[1]For detailed functions, please refer to the Secondary Development Manual.
[2]For detailed warranty terms, please refer to the Product Warranty Manual.
[3]The above parameters may vary in different application scenarios and different configurations, please contact sales before purchasing.
[4]This quadruped robot has a complex structure and powerful dynamics. Users must keep a safe distance from the robot at all times. Please use with caution.
[5]Product appearance may be subject to future upgrades and changes, please refer to the actual situati
[6]Some example features shown on this page are under development and testing, and will be made avoile to users gradually.
[7]This product is a civilian robot. We kindly request that all users refrain from making any dangerous modifications or using the robot in a hazardous manner.