Génération ROBOTS

UNITREE A2

Stellar Explorer

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

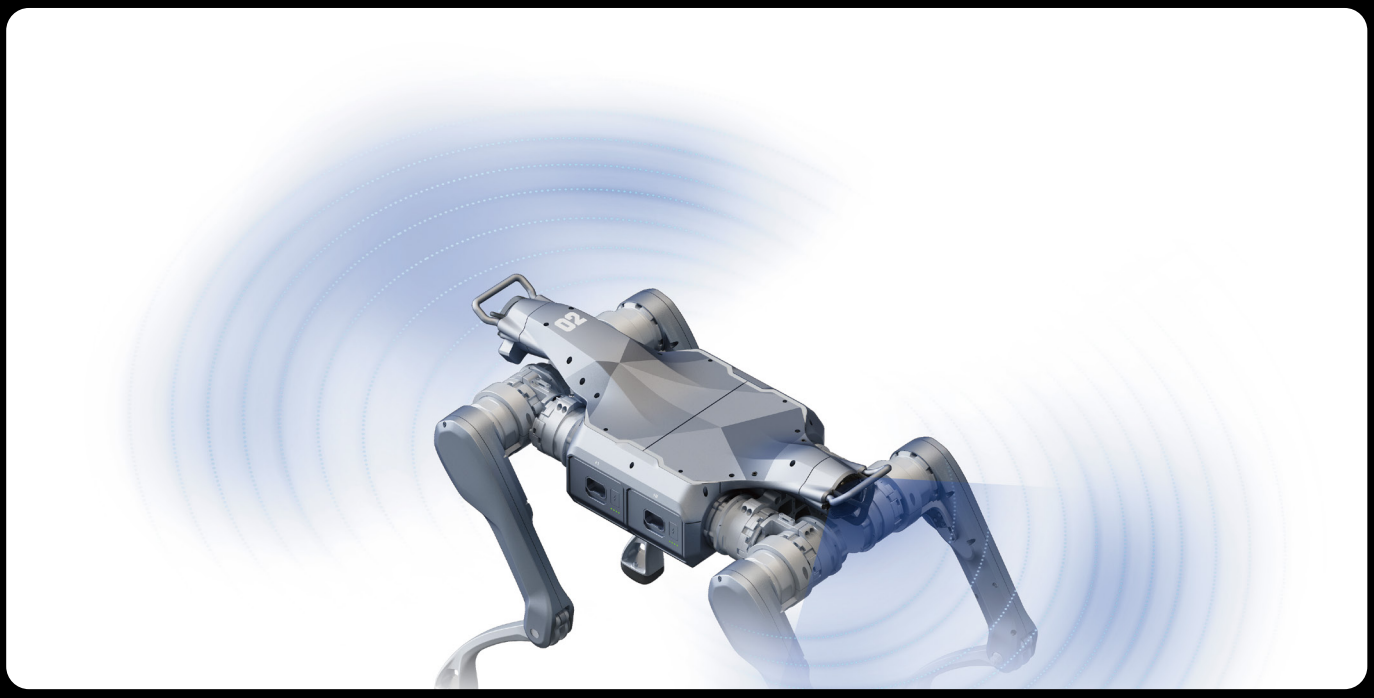
Premium mobile hardware platform,
open for rapid development

Conquer Rugged Terrain with Ease

Wheel-Leg Option Available
Unleash Greater Performance

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

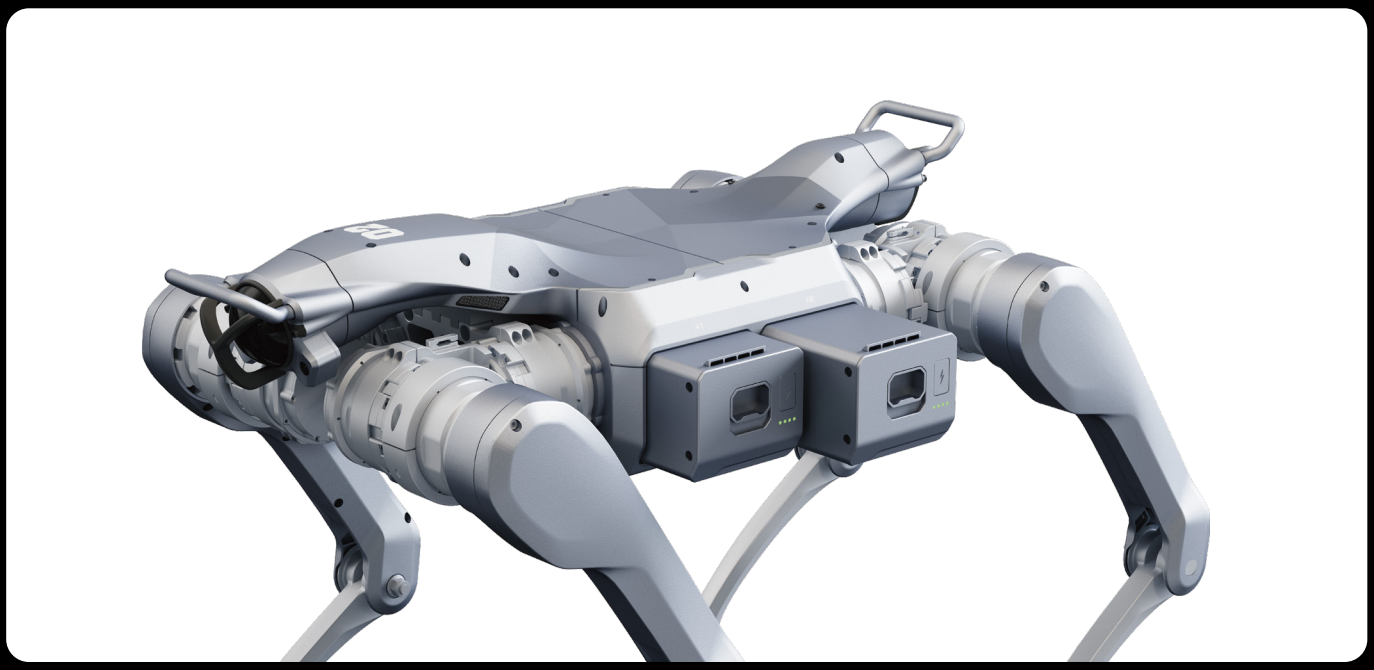
2 industrial LiDARs(front & rear), HD camera+front light to detect the environment ahead



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℃ to 55℃.



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 ×1

Voice Intercom Microphone

Seamless communication in any scenario

Rich Expansion Options

Optional rails & external user interface

Smart Battery

Dual batteries：9000mAh×2
Dual slots，hot-swappable

Perception Sensors

Industrial-grade LiDAR ×2

Front Light

Bright illumination
Lighting every step ahead

Rich External Interfaces

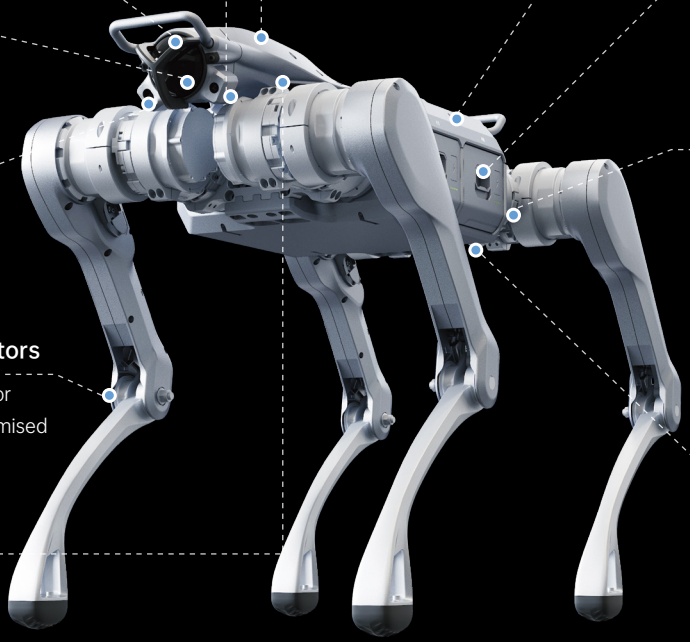
·RS485 x 2
·CAN x 2
·Gigabit Ethernet x 2
·USB 3.0 Type-C(8-Core CPU) x 2
·USB 3.0 TypeC (Intel Core i7) x 2
·Power Output：12V / 24V / BAT

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



Powerful Computing Core

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

	Model	A2	A2 PRO
Mechanical Parameters	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 31kg	
	Weight (with battery)	About 37kg	
	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℃ ~ 55℃	
	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 availe 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.

Generation ROBOTS

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