

Unitree As2 Parameter



Model	As2 AIR	As2 PRO	As2 EDU Custom Industry Solutions
Price (Tax and freight excluded)	Contact Sales	Contact Sales	Contact Sales
Size (Standing)	720mm x 378mm x 457mm	720mm x 378mm x 457mm	720mm x 378mm x 457mm
Size (Lying Prone)	776mm x 378mm x 233mm	776mm x 378mm x 233mm	776mm x 378mm x 233mm
Weight (with battery)	Approx. 18kg	Approx. 18kg	Approx. 18kg
Material	Aluminum Alloy + High-Strength Engineering Plastic	Aluminum Alloy + High-Strength Engineering Plastic	Aluminum Alloy + High-Strength Engineering Plastic
Degrees of Freedom (Joint Motors)	12	12	12
Joint Bearings	Industrial-grade crossed roller bearings (high precision, high load capacity)	Industrial-grade crossed roller bearings (high precision, high load capacity)	Industrial-grade crossed roller bearings (high precision, high load capacity)
Joint Motors	Low-inertia, high-speed inner rotor PMSM (enhanced response & heat dissipation)	Low-inertia, high-speed inner rotor PMSM (enhanced response & heat dissipation)	Low-inertia, high-speed inner rotor PMSM (enhanced response & heat dissipation)
Max Joint Torque	Approx. 65 N.m	Approx. 75 N.m	Approx. 90 N.m
Range of Motion	Body : -45 ~ 45° Thigh : -115° ~ 200° Shank : -159° ~ -47°	Body : -45 ~ 45° Thigh : -115° ~ 200° Shank : -159° ~ -47°	Body : -45 ~ 45° Thigh : -115° ~ 200° Shank : -159° ~ -47°

Product Comparison: UR Series				
Category	UR Series		UR Series	
	UR Series	UR Series	UR Series	UR Series
Electrical Characteristics	Supply Voltage	36V ~ 50.4V	36V ~ 50.4V	36V ~ 50.4V
	Joint Encoder	Dual encoders	Dual encoders	Dual encoders
	Cooling System	Local air Cooling	Local air Cooling	Local air Cooling
	Power Supply	Lithium battery	Lithium battery	Lithium battery
	Wi-Fi 6, Bluetooth 5.2	YES	YES	YES
	Speaker	YES	YES	YES
	Microphone	YES	YES	YES
	Front Light	YES	YES	YES
	ISS 3.0 Intelligent side-follow system	/	YES	YES
	GPS	/	Yes (disabled by default; enabled with user authorization)	Yes (disabled by default; enabled with user authorization)
	4G	/	Yes (disabled by default; enabled with user authorization)	Yes (disabled by default; enabled with user authorization)
	HD Camera	YES	YES	YES
	Ultra-Wide-Angle LiDAR	Unitree L2	Industrial-grade 64~128-line LiDAR	Industrial-grade 64~128-line LiDAR
	Computing Power	8-Core high-performance CPU	8-Core high-performance CPU	8-Core high-performance CPU
External Interfaces	Gigabit Ethernet x 1 SBUS x 1 Power Output : BAT	Gigabit Ethernet x 1 SBUS x 1 Power Output : BAT	Gigabit Ethernet x 1 SBUS x 1 Power Output : BAT	
Performance Metrics	Operating Temperature	-20°C~50°C	-20°C~50°C	-20°C~50°C
	Battery Life(Unloaded) ^[1]	~2 hours continuous walking, approx. 10km	~4 hours continuous walking, approx. 20km	~4 hours continuous walking, approx. 20km
	Battery Life(Loaded) ^[1]	With 10kg loaded, >1.5 hours continuous walking, approx. 7km	With 13kg loaded, >2.5 hours continuous walking, approx. 13km	With 15kg loaded, >2.5 hours continuous walking, approx. 13km
	Max Standing Load	Approx. 45kg	Approx. 55kg	Approx. 65kg
	Continuous Walking Load	Approx. 10kg	Approx. 13kg	Approx. 15kg
	Slope Walking Capability	Approx. 30°	Approx. 40°	Approx. 40°
	Stair Climbing Capability	20cm	25cm	25cm
	Speed	0–3.0 m/s	0–3.7 m/s	0–3.7 m/s (Up to ~5 m/s)
	Protection Rating	/	IP54	IP54

Accessories	Remote Control	Optional	YES	YES
	Battery Capacity	Standard (8000mAh) x1	Long Range (15000mAh) x1	Long Range (15000mAh) x1
	Charger	Standard (50.4V 4A)	Fast Charging (51V 9A)	Fast Charging (51V 9A)
	Charging Dock	/	/	YES
	High Computing Power Expansion Dock	No	No	NVIDIA Jetson Orin NX (Optional)
Other	Secondary Development ^[2]	Not Supported	Not Supported	Supported
	UniStore Platform	Supported	Supported	Supported
	Smart OTA Upgrade	Continuous Upgrades	Continuous Upgrades	Continuous Upgrades
	Warranty ^[3]	6 Months	12 Months	12 Months

[1] The above data was obtained under laboratory conditions. Actual performance may vary based on usage conditions, so please refer to your actual experience.

[2] For detailed functions, please refer to the Secondary Development Manual.

[3] For detailed warranty terms, please refer to the Product Warranty Manual.

[4] The above parameters may vary in different application scenarios and different configurations, please contact sales before purchasing.

[5] 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.

[6] The product appearance is subject to change. Please refer to the final product.

[7] Some example features shown on this page are under development and testing, and will be made available to users gradually.

[8] 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.

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