

# Génération ROBOTS

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# UNITREE R1

Ultra-lightweight, Fully Customizable



# Unitree R1 Parameters



	<b>R1</b>	<b>R1 EDU</b>
<b>Mechanical Dimensions</b>		
Model		
Height, Width and Thickness (Stand)	1210x357x190mm	1210x357x190mm
Weight (With Battery)	About 25kg	About 25kg
Degree of Freedom (Total Joints)	24	24-40
Single Leg Degrees of Freedom	6	6
Single Arm Degrees of Freedom	5	5
Waist Degrees of Freedom	2	2
Head Degrees of Freedom	/	2
Dexterous Hand	/	Optional
Joint output bearing	Crossed roller bearings, Double Hook Ball Bearings	
Joint motor	Low inertia high-speed internal rotor PMSM(permanent magnet synchronous motor, better response speed and heatdissipation)	
Max Torque of Arm Joint [1]	About 2kg	About 2kg
Calf + Thigh Length	675	675
Forearm + Upper Arm Length	435	435
Joint Movement Space	Waist Joint: Y:±150° R:±30° Knee Joint: -10° ~+148° Hip Joint: Y:±157° P:-168° ~+146° R:-60° ~+100°	
<b>Electrical Characteristics</b>		
Electrical Routing	Hollow + Internal Routing	Hollow + Internal Routing
Joint Encoder	Dual + single encoder	Dual + single encoder
Cooling System	Local air cooling	Local air cooling
Power Supply	Lithium battery	Lithium battery
Basic Computing Power	8-core CPU	8-core CPU
Microphone Array	4-Mic Array	4-Mic Array
Speaker	YES	YES
Wifi6, Bluetooth 5.2	YES	YES
Humanoid Binocular Camera	YES	YES
<b>Accessories</b>		
High-Power Computing Module	/	NVIDIA Jetson Orin Optional (40-100Tops)
Smart Battery (Quick Release)	YES	YES
Charger	YES	YES
Manual Remote Control	YES	YES
<b>Other</b>		
Battery Life	About 1h	About 1h
Upgraded Intelligent OTA	YES	YES
Secondary Development[2]	/	YES
Warranty Period [3]	8 Months	12 Months

[1] The maximum load of the arm varies greatly under different arm extension postures.

[2] For more information, please read the secondary development manual.

[3] For more detailed warranty terms, please read the product warranty brochure.

[4] The above parameters may vary in different scenarios and configurations, please subject to actual situation.

[5] 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 people. Please use with caution.

[6] If any change in the appearance of the product, please refer to the actual product.

[7] Some sample functions on this page are still being developed and tested, and will be opened to users in the future.

[8] Currently, the global humanoid robot industry is in the early stages of exploration. Individual users are strongly advised to thoroughly understand the limitations of humanoid robots before making a purchase.

[9] 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.