G1

Applications

	3D Lidar	Depth camera	Extra large quick	Hollow joint wiring,
	LIVOX-MID360	Intel RealSense D435	release battery	no external cables

Arm DOF	Leg DOF	Mobility	Core motion module
Shoulder 3 + elbow 2 + wrist 2 (optional)	Hip 3 + knee 1 + ankle 2	Moving speed of 2 m/s	Maximum torque at joints 120 N·m

Model	G1	G1 EDU (U1, U2, U3 and U4 available)
Size (standing)	1270 × 450 × 200 mm	1270 × 450 × 200 mm
Size (folded)	690 × 450 × 300 mm	690 × 450 × 300 mm
Weight (battery included)	≈ 35 kg	≈ 35 kg+
Total degrees of freedom (joint freedom)	23	23 – 43
Single leg degrees of freedom	6	6
Waist degrees of freedom	1	1 (3 for U3 and U4)
Single arm degrees of freedom	5	5 (7 for U3 and U4)
Single hand degrees of freedom	–	U4: 7 (optional force control of three-fingered hand) + 2 (optional 2 additional wrist DOF) [1][2]
Maximum torque of knee joint [3]	90 N·m	120 N·m
Arm maximum load [4]	≈ 2 kg	≈ 3 kg
Calf + thigh length	0.6 m	0.6 m
Arm span	≈ 0.45 m	≈ 0.45 m
Extra large joint movement space	Waist z-axis joint: ±155°, Knee joint: 0 to 165°, Hip joint: P ±154°, R -30 to +170°, Y ±158°	Waist z-axis joint: ±155°, Knee joint: 0 to 165°, Hip joint: P ±154°, R -30 to +170°, Y ±158°
Full joint hollow electrical routing	✓	✓
Joint encoder	Dual encoder	Dual encoder
Cooling system	Local air cooling	Local air cooling
Power supply	13S lithium battery	13S 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	✓	✓
High computing power module	–	NVIDIA Jetson Orin (optional)
Smart battery (quick release)	9000 mAh	9000 mAh
Charger	54 V, 5 A	54 V, 5 A
Manual controller	✓	✓
Battery life	≈ 2 h	≈ 2 h
Upgraded intelligent OTA	✓	✓
Secondary development [5]	–	✓
Warranty period [6]	1 year	1 year

[1] Three-fingered dexterous hand Dex3-1 parameter: The thumb has 3 active DOF; the index finger has 2 active DOF; the middle finger has 2 active DOF.
[2] Dex3-1 can optionally be installed with tactile sensor arrays.
[3] 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.
[4] The maximum load of the arm varies greatly under different arm extension postures.
[5] For more information, please read the secondary development manual.
[6] For more detailed warranty terms, please read the product warranty brochure.

The above parameters may vary in different scenarios and configurations, please subject to actual situation. 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. If any change in the appearance of the product, please refer to the actual product. Some sample functions on this page are still being developed and tested, and will be opened to users in the future. Please visit unitree.com for more related terms and policies, and comply with local laws and regulations. Errors and technical modification subject to change.

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