Versatile humanoid robot for research, education and industry

Unitree G1 - on RBTX®

The Unitree G1 is a compact, humanoid robot that combines state-of-the-art AI technology with powerful mechanics. It was developed to master complex movements and interactions - at a price that makes it attractive for research institutes, universities and innovative companies. Thanks to its modular design and intelligent software, the G1 is suitable for a wide range of applications: from robotics research and AI development to teaching and training, industrial testing, automation and service tasks.

UNITREE

Software and control system

- AI-controlled movements through imitation and reinforcement learning
- ROS-compatible, EDU versions with SDKs and APIs for developers
- OTA updates and optimised development environment

Technical highlights

	Description
Compact design	1.32m high, approx. 35kg - robust and easy to transport
Degrees of freedom	**Base:** 23 DOF | **EDU version** up to 43 DOF for natural movements
Powerful drives	High-performance PMS motors with precise torque control system, up to 120Nm
Battery and runtime	Lithium battery with ≈9,000mAh for up to 2 hours of use with 2 hours charging time
Sensor technology	3D LIDAR, depth camera, microphones and loudspeakers for environmental perception
Processor performance	8-core CPU | **EDU version** with NVIDIA Jetson Orin for AI boost with 100 tops

Part No. RBTX®	Abbreviation	Note
RBTX-UNIT-0001	G1 | Base	-
RBTX-UNIT-0002	G1 EDU | U1	Formerly Unitree G1 EDU | U2
RBTX-UNIT-0008	G1 EDU | U2	Formerly Unitree G1 EDU | U3
RBTX-UNIT-0009	G1 EDU | U3	Formerly Unitree G1 EDU | U4
RBTX-UNIT-0010	G1 EDU | U4	
RBTX-UNIT-0011	G1 EDU | U5	-
RBTX-UNIT-0014	G1 EDU | U6	
RBTX-UNIT-0017	G1 EDU | U7	
RBTX-UNIT-0018	G1 EDU | U8	Available from approx. end of Q1 2026
RBTX-UNIT-0019	G1 EDU | U9	
RBTX-UNIT-0020	G1 EDU | U10	

Wide range of options

Unitree G1 | Basic version

The basic model in the series helps you get started with humanoid robotics and simple demonstrations.

Unitree G1 EDU | U1 standard version

The version for education and development that builds on the basic model is available in three configurations:

- **G1 EDU | U8:** with 3-finger hands (Dex3-1), without tactile sensors - for basic gripping tasks
- **G1 EDU | U9:** with 3-finger hands (Dex3-1), with tactile sensors - for more precise interactions
- **G1 EDU | U10:** with 5-finger hands (Revo 2 Basic), without tactile sensors - for realistic hand movements

Unitree G1 EDU | U2 advanced version

This extended version has additional degrees of freedom at the wrists. The following versions are based on this platform and differ only in the hand supplied:

- **G1 EDU | U3:** with 3-finger hands (Dex3-1), without tactile sensors - for basic gripping tasks
- **G1 EDU | U4:** with 3-finger hands (Dex3-1), with tactile sensors - for more precise interactions
- **G1 EDU | U5:** with 5-finger hands ((RH56DFTP), without tactile sensors - for realistic hand movements
- **G1 EDU | U6:** with 5-finger hands (RH56DFTP), with tactile sensors - for more precise interactions
- **G1 EDU | U7:** with 5-finger hands (Revo 2 Basic), without tactile sensors - for realistic hand movements

Technical data

	Basic version	Standard version			
	G1 | Base	**G1 EDU | U1**	**G1 EDU | U8**	**G1 EDU | U9**	**G1 EDU | U10**
Total DOF	23	23	37	37	35
Max. load capacity [kg]	2	3	3	3	3
Wrists	-	-	-	-	-
Open source, AI	-	●	●	●	●
NVIDIA Orin NX	-	●	●	●	●
Humanoid hands	-	-	●	●	●
Tactile sensors	-	-	-	●	-

	Advanced version					
	G1 EDU | U2	**G1 EDU | U3**	**G1 EDU | U4**	**G1 EDU | U5**	**G1 EDU | U6**	**G1 EDU | U7**
Total DOF	29	43	43	41	41	41
Max. load capacity [kg]	3	3	3	3	3	3
Wrists	●	●	●	●	●	●
Open source, AI	●	●	●	●	●	●
NVIDIA Orin NX	●	●	●	●	●	●
Humanoid hands	-	●	●	●	●	●
Tactile sensors	-	-	●	-	●	-

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