

ROBOTIX MARKET

PRODUCT BROCHURE
2026 edition

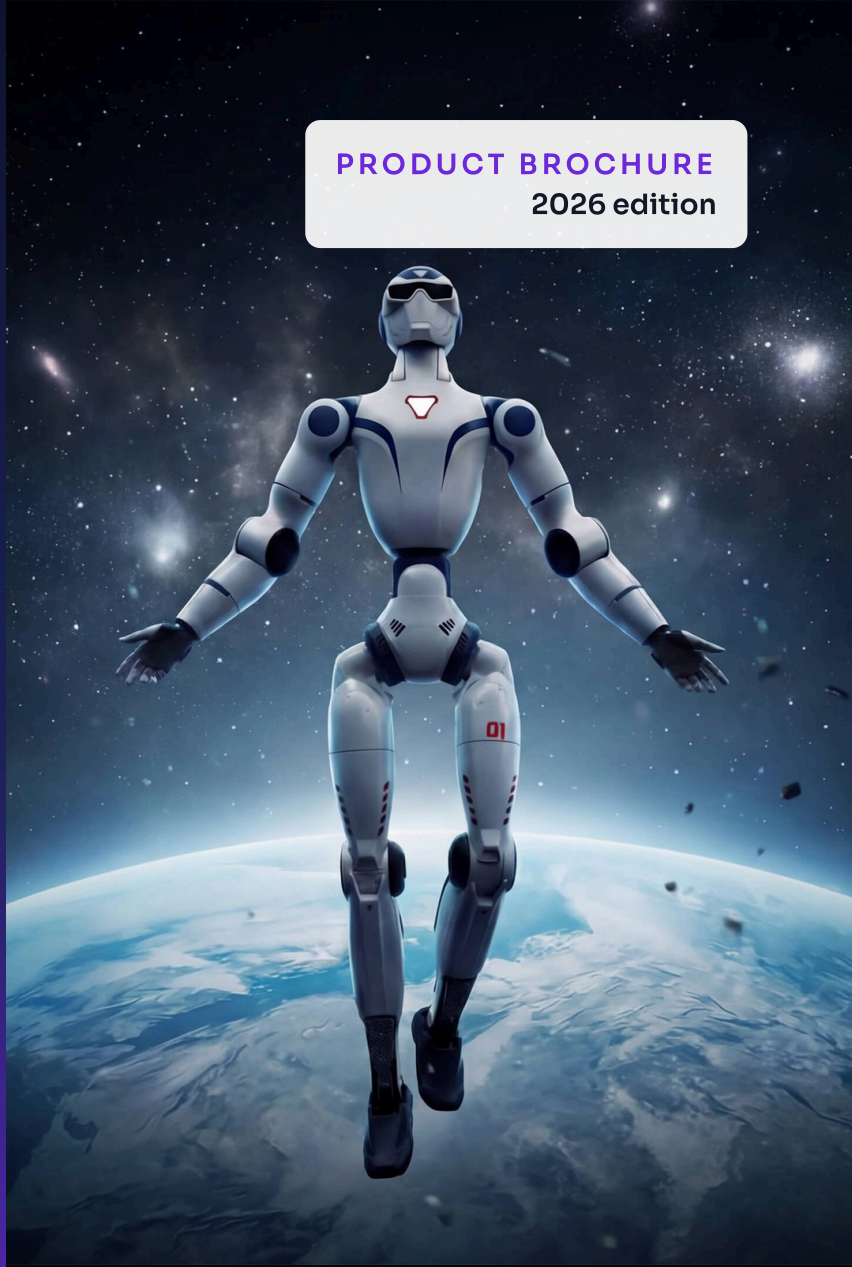
UNITREE · HUMANOID ROBOTS ·
ROBOTIX MARKET

Unitree

R1 and R1 EDU

**Unitree's lightweight humanoid:
the ready-to-use R1 Basic and
the R1 EDU developer edition in
six configurations**

About 1.23 m and 29 kg, with 26 joint motors, a binocular depth camera and a 10 TOPS vision module. The R1 EDU adds secondary development, an NVIDIA Jetson Orin backpack and, on Pro A-D, two dexterous hands.



Available worldwide from Robotix Market
robotixmarket.com

OVERVIEW

Ready to use, or open to develop

Unitree's R1 is a lightweight bipedal humanoid: about 1.23 m tall and 29 kg with its battery, with 26 joint motors, a binocular depth camera and voice and image interaction. Robotix Market offers it as the ready-to-use R1 Basic and as the R1 EDU developer edition in six configurations (U1 to U6), which add secondary development, an NVIDIA Jetson Orin backpack and, on Pro A–D, two dexterous hands.

Light and foldable

1230 × 357 × 190 mm standing and about 29 kg with the battery, folding to 690 × 450 × 300 mm. 6 joints per leg, 5 per arm, 2 in the waist and 2 in the head.

Open for development — R1 EDU

unitree_sdk2 in C++ and Python over DDS, compatible with ROS 2, with high-level and joint-level control and URDF, STEP and MuJoCo models. The R1 Basic has no secondary development: it runs from the app, the remote and voice.

Vision and voice

A binocular depth camera with a 146° × 124° field of view, an 8-core CPU and a 10 TOPS visual computing module, a 4-microphone array, stereo 3 W speakers, Wi-Fi 6 and Bluetooth 5.2.

Dexterous hands — EDU Pro A–D

Two Unitree Dex3-1 three-finger hands (Pro A; with touch sensors on Pro B) or two BrainCo Revo 2 five-finger hands (Pro C; Revo 2 Touch on Pro D). R1 Basic, EDU Standard and EDU Smart: no dexterous hands.

Built for motion

Low-inertia, high-speed inner-rotor joint motors on crossed roller bearings, hollow internal wiring and local air cooling; running, dance and gesture modes on the remote.

Power and warranty

A 6000 mAh quick-release smart battery for about 1 h of use, about 1.5 h to charge. Warranty: 8 months on the R1 Basic, 12 months on every R1 EDU.

1230 mm

HEIGHT

~29 kg

WITH BATTERY

26

JOINT MOTORS

10 TOPS

HEAD VISION

26–40

EDU DOF

Which R1?

ONE BODY, FOUR WAYS TO BUY



R1 Basic

The ready-to-use R1 humanoid

- 26 joint motors, binocular depth camera, 10 TOPS vision module
- App, remote and voice control; voice and image AI
- No secondary development, no dexterous hands
- 8-month manufacturer warranty



R1 EDU Standard • Smart

U1 and U2: the developer edition without hands

- Secondary development: unitree_sdk2, DDS, ROS 2
- Jetson Orin backpack: 40 TOPS (Standard) or 100 TOPS (Smart)
- Dexterous-hand expansion module on the backpack
- 26 DOF · 12-month manufacturer warranty

R1 EDU Pro A · Pro B

U3 and U4: three-finger Unitree hands

- Two Unitree Dex3-1 hands, 7 DOF each
- Pro B: 33 pressure sensors per hand
- Jetson Orin backpack, 100 TOPS
- 12-month manufacturer warranty

2 × Dex3-1
40 DOF
PER ROBOT

R1 EDU Pro C · Pro D

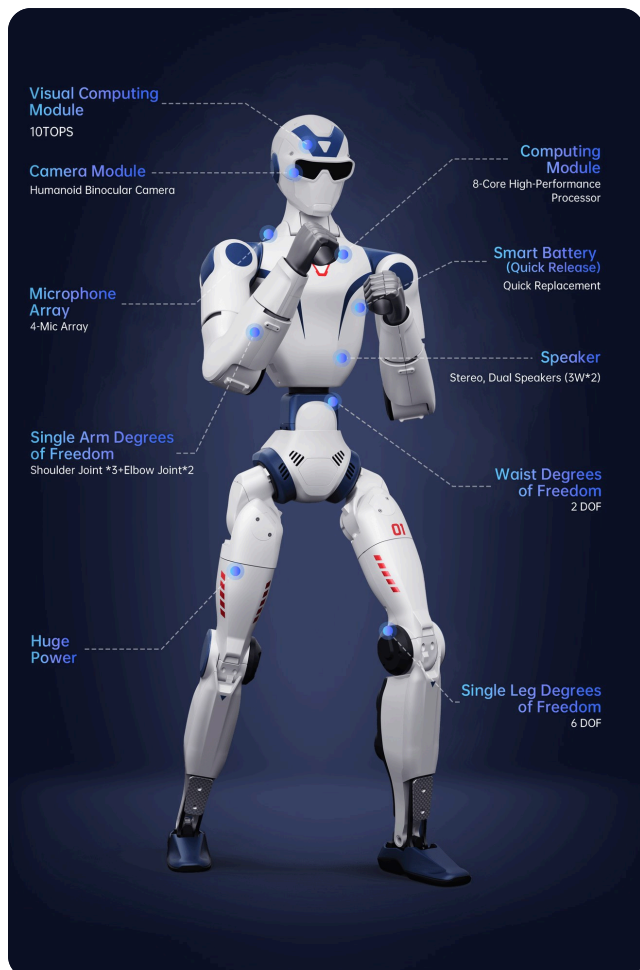
U5 and U6: five-finger BrainCo hands

- Two BrainCo Revo 2 hands, 11 DOF (6 active) each
- Pro D: Revo 2 Touch, fingertip tactile module
- Jetson Orin backpack, 100 TOPS
- 12-month manufacturer warranty

2 × Revo 2
38 DOF
PER ROBOT

What is where on the R1

Unitree's parameter graphic of the R1 humanoid. The R1 Basic and all six R1 EDU configurations share this 26-joint body; the EDU adds the computing backpack on the back and, on Pro A–D, dexterous hands in place of the fixed hands.



Head · 2 DOF

Binocular depth camera: 146° × 124° field of view, RGB 1280 × 720 at 30 Hz, depth 544 × 448 at 10 Hz. Yaw ±115°, pitch ±36°.

Computing

A visual computing module with 10 TOPS in the head and an 8-core high-performance CPU.

Voice

A 4-microphone array and stereo speakers (3 W × 2); voice and image interaction through a large multimodal model.

Arms · 5 DOF each

Forearm + upper arm 420 mm; about 2 kg of payload per arm, varying greatly with arm posture.

Waist · 2 DOF

Yaw ±150° and roll ±30°.

Legs · 6 DOF each

Hip pitch, roll and yaw, knee, ankle pitch and roll; calf + thigh 600 mm; knee -10° to +139°, hip yaw ±157°.

Smart battery

A quick-release 6000 mAh pack: about 1 h of use, about 1.5 h on the supplied charger.

Joints

Low-inertia inner-rotor PMSM motors, crossed roller bearings, dual + single encoders, hollow internal wiring, local air cooling.

In the box

EVERY R1 · UNITREE'S R1 UNBOXING FILM



- The robot in a hard transport case
- R1 smart battery, quick release
- Charger and charging cable
- Remote control with emergency stop
- Stand set: base, support rod, bracket, quick-release clamp, wave washer, protective foam
- Calibration steel shaft
- Body stickers
- User manual

Every R1 EDU adds

The computing backpack with its Jetson Orin module, expansion rails, screws, the dexterous-hand expansion module and leads. EDU Pro A–D add their two dexterous hands with fixing brackets, camera brackets and cables.

Unitree publishes no written packing list per edition: we confirm the full packing list of your configuration with your quotation.

Six R1 EDU configurations compared

The R1 EDU is Unitree's developer edition of the R1: the same 26-joint body with full secondary development, a computing backpack and a port for dexterous hands. Robotix Market offers it in six configurations: two without hands, with 40 or 100 TOPS of computing power, and four with a pair of Unitree or BrainCo dexterous hands.

	EDU Standard U1	EDU Smart U2	EDU Pro A U3	EDU Pro B U4	EDU Pro C U5	EDU Pro D U6
CONFIGURATION						
Computing backpack	NVIDIA Jetson Orin, 40 TOPS	NVIDIA Jetson Orin, 100 TOPS				
Dexterous hands	None		2 × Unitree Dex3-1	2 × Unitree Dex3-1 with touch sensors	2 × BrainCo Revo 2	2 × BrainCo Revo 2 Touch
Hand type	—		Three-finger, 7 DOF per hand		Five-finger, 11 DOF (6 active) per hand	
Touch sensing	—			33 pressure sensors per hand	—	Fingertip tactile module
Total degrees of freedom	26		40		38	
SHARED BY ALL SIX						
Body	R1 humanoid: 1230 × 357 × 190 mm, about 29 kg with battery, 26 joint motors					
Secondary development	unitree_sdk2 in C++ and Python, DDS, ROS 2 (Foxy, Humble); high-level and joint-level control					
Hand-ready	Dexterous-hand expansion module on the backpack, with power, signal and camera connections					
Simulation models	URDF, STEP and MuJoCo models of the R1 from Unitree					
Navigation	Optional LiDAR for Unitree's SLAM and navigation service					
Warranty	12 months					

Unitree publishes one R1 EDU, with dexterous hands and an NVIDIA Jetson Orin module (40–100 TOPS) as options; U1 to U6 name the six configurations Robotix Market offers. Total DOF = 26 body joints + the active joints of both hands. Your configuration is confirmed with your quotation.

The hands on Pro A–D

EACH MAKER'S OWN FIGURES, PER HAND

Unitree Dex3-1

EDU Pro A (U3) · EDU Pro B (U4)

- Three fingers, 7 DOF: thumb 3, index 2, middle 2
- Force control: 6 direct-drive + 1 gear-drive micro brushless joints
- EDU Pro B: 33 pressure sensors in 9 arrays, 10–2500 g
- Unitree's figures for the sensor version: 710 g, 175 × 88 × 77 mm, ±2 mm fingertip repeatability, 500 g grasp load

BrainCo Revo 2

EDU Pro C (U5) · EDU Pro D (U6)

- Bionic five-finger hand: 11 DOF, 6 of them active
- 383 g, 160 mm from the palm base to the middle fingertip
- Full-fist grip ≥ 50 N, pinch ≥ 15 N, payload ≥ 20 kg, 0.1° repeatability
- EDU Pro D: Revo 2 Touch, with a multi-dimensional fingertip tactile module



The EDU computing backpack

A development computing unit on the robot's back with the NVIDIA Jetson Orin module — 40 TOPS on the EDU Standard, 100 TOPS on the other five — plus expansion rails, screws, the dexterous-hand expansion module and its leads. Still from Unitree's R1 EDU backpack film.

Developing on the R1 EDU

Only the R1 EDU supports secondary development. Unitree gives it fully open control interfaces for joints and sensors, with support for mainstream simulation platforms, so algorithms can move from simulation to the physical robot. Development runs on the backpack's development computing unit.

unitree_sdk2

C++ (unitree_sdk2) and Python (unitree_sdk2_python) on DDS middleware, with publish / subscribe and request / response.

ROS 2

Unitree's DDS IDL is compatible with ROS 2, tested on Ubuntu 20.04 (Foxy) and 22.04 (Humble). Develop on Ubuntu 20.04; macOS and Windows are not supported.

Two control levels

High-level interfaces for locomotion (LocoClient), arm actions, audio and video; low-level joint control in debug mode.

Simulation models

A URDF model of the R1, simplified STEP models of the R1 EDU with its backpack, hand interface and dual cameras, and a MuJoCo model.

Vision streams

The head's binocular module delivers a 1280 × 720 image, left and right 544 × 448 RGB and a 544 × 448 depth map to the computing backpack.

SLAM and navigation

Unitree's service runs on an R1 EDU with the optional LiDAR, in static, flat indoor spaces under 45 m, for education and research.

Voice interface

The voice assistant answers to "Hello Robot" or press-to-talk, with local offline speech recognition; local text-to-speech in the SDK is Chinese only for now.

Development computer

Developers use only the backpack's development computing unit (192.168.123.164); the R1 EDU can carry one external computing unit.

Status light

A 256-colour RGB chest light shows the state: cyan breathing while booting, white running, purple zero-torque, orange damping, red fault and more.

Remote data

The remote's two joysticks (x and y, -1.0 to 1.0) and its button codes reach your programs through the robot's low-level state.

Audio playback

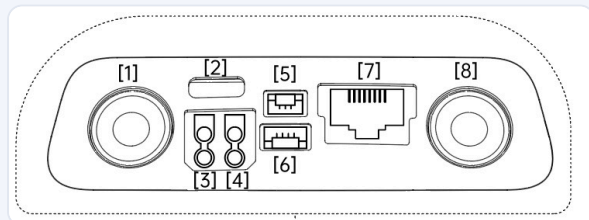
Play your own audio — WAV, 16 kHz, mono — or recordings made in the Unitree Explore app through the R1's speakers.

System backup

Unitree recommends backing up the backpack's NVMe system drive right after delivery; its guide covers backup and recovery.

Top panel

EVERY R1 · UNITREE'S DEVELOPER GUIDE



[1]	Stand up / lie down button
[3]	XT30 power output, 24 V / 3 A
[4]	XT30 power output, 36 V / 5 A
[7]	RJ45, gigabit Ethernet
[2] [5] [6] [8]	Not connected; removed on new machines

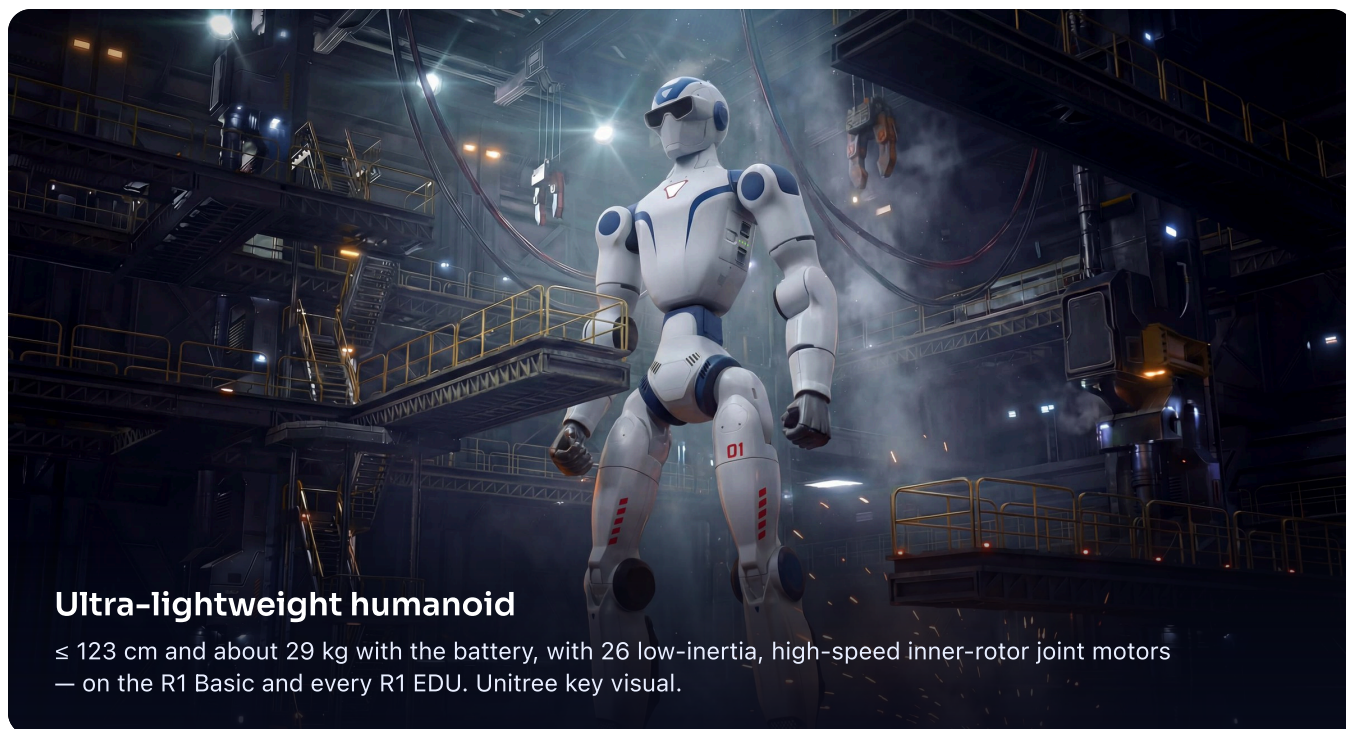
Hands and backpack

EDU PRO A-D · UNITREE'S EDU GUIDES

- Each hand connects to XT30 power, a signal port and a camera port; Unitree publishes a step-by-step fitting film for each hand, the Dex3-1 and the Revo 2 included.
- Unitree's tip: keep hands and body clear of each other — increase the shoulder motors' outward offset — and avoid violent movements such as running or balance tests with the hands fitted.
- Unitree's docking-station images: R1 NANO for the 40 TOPS module and R1 NX for the 100 TOPS module, on JetPack 5.1.1 with an internal NVMe SSD.

HIGHLIGHTS

Light, agile and expressive



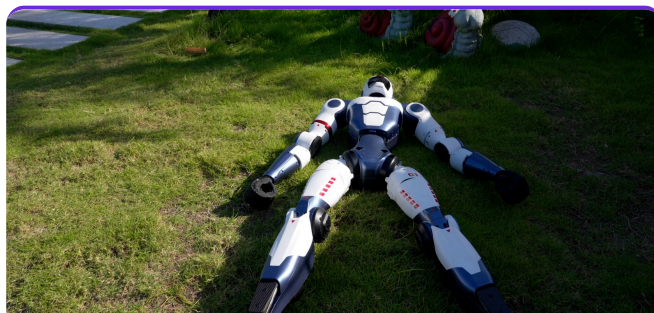
Ultra-lightweight humanoid

≤ 123 cm and about 29 kg with the battery, with 26 low-inertia, high-speed inner-rotor joint motors — on the R1 Basic and every R1 EDU. Unitree key visual.



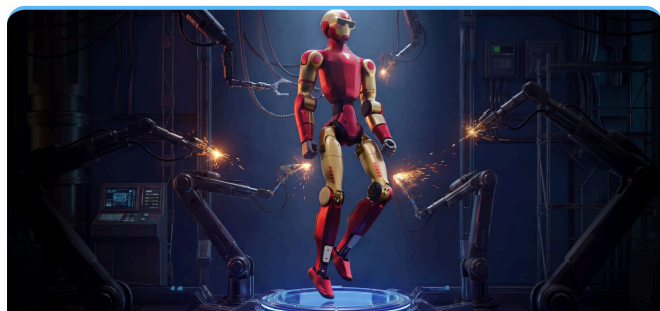
Agile motion

Running mode at low or high speed, dance modes — Kung Fu, Dance 1–3, Jeet Kune Do, Twist — and gestures such as handshake, wave and clap, all on the remote.



Starts from lying flat

Power it on lying flat and it stands up on a remote command, or start it hanging on the supplied stand. A soft stop (L2 + B) and a hard emergency-stop button sit on the remote.



Your look

A white or red body, with creative stickers to change the look as you like. Unitree's image shows a sticker livery.



2-DOF head and waist

The head turns $\pm 115^\circ$ and tilts $\pm 36^\circ$ with the binocular depth camera; the waist turns $\pm 150^\circ$ and rolls $\pm 30^\circ$ — 26 joints in all.

From the lab to the stage

Research and development

R1 EDU

Full secondary development: high-level and joint-level control through `unitree_sdk2`, DDS and ROS 2, on the backpack's NVIDIA Jetson Orin computer.

Sim-to-real

R1 EDU

URDF, STEP and MuJoCo models of the R1: develop and test in simulation, then run the same algorithms on the robot.

Dexterous manipulation

R1 EDU PRO A-D

Two Dex3-1 three-finger or BrainCo Revo 2 five-finger hands on a walking humanoid; Pro B and Pro D add touch sensing.

Perception and navigation

R1 EDU

RGB and depth streams from the binocular head camera, plus Unitree's SLAM and navigation service with the optional LiDAR, indoors.

Voice and image interaction

R1 BASIC · R1 EDU

A large multimodal model for voice and images, a 4-microphone array and stereo speakers; wake it with "Hello Robot" or press to talk.

Shows and demonstrations

R1 BASIC · R1 EDU

Built-in dance modes, gestures and running mode on the remote, in a white or red body with creative stickers.



R1, Unitree image



R1, Unitree image



R1, Unitree image

Unitree's own advice: the R1 has a complex structure and powerful motors — keep a sufficient safety distance at all times and operate it with care. Use it at 0–40 °C on flat ground, at least 2 m from obstacles and crowds, and away from water and dust: it is neither waterproof nor dustproof. The R1 is not a toy and not intended for persons under 18. It is a civilian robot: no dangerous modifications.

Getting started with the R1

FROM UNITREE'S R1 USER MANUAL

1

Set up the stand

Base, support rod and bracket; lift the robot onto the stand as the manual shows.

2

Insert the battery

Slide the charged quick-release smart battery into the robot.

3

Power on

On the stand, or lying flat on level ground.

4

Connect app and remote

Unitree Explore app over Bluetooth, then AP or Wi-Fi; bind the remote.

5

Stand up and walk

From lying flat it stands up on a remote command; R2 + A selects walking and running.

6

Stop safely

Soft stop: hold L2 + B for 5 s; or press the remote's hard emergency-stop button.

Unitree Explore app, manuals and developer guide

The R1 connects to the Unitree Explore app (iOS and Android) — Bluetooth for setup, then a direct AP or Wi-Fi link — with a first-person view and OTA upgrades. Unitree publishes the R1 user manual, the battery-and-charger and remote-control manuals, tutorial films from unboxing to hand fitting, and the SDK developer guide for the R1 EDU. Technical support is coordinated with the manufacturer's service network.

SPECIFICATIONS

R1 Basic and R1 EDU in full

R1 Basic

The ready-to-use edition

R1 EDU

U1–U6 · configuration figures on page 4

BODY		
Size, standing · folded	1230 × 357 × 190 mm (height × width × thickness) · folded 690 × 450 × 300 mm	
Weight	About 29 kg with battery	
Colours	White or red; creative stickers to change the look	
JOINTS AND MOTION		
Degrees of freedom	26	26–40, with dexterous hands
Per leg · per arm	6 · 5	
Waist · head	2 · 2	
Leg · arm length	Calf + thigh 600 mm · forearm + upper arm 420 mm	
Range of motion	Knee −10° to +139° · hip yaw ±157°, pitch −168° to +146°, roll −60° to +100° · waist yaw ±150°, roll ±30° · head yaw ±115°, pitch ±36°	
Arm payload	About 2 kg, varies greatly with arm posture	
Hands	Fixed hands, not actuated	No dexterous hands on Standard and Smart · two dexterous hands on Pro A–D
Drive	Low-inertia, high-speed inner-rotor PMSM · crossed roller and ball bearings · dual + single encoders · hollow internal wiring, local air cooling	
PERCEPTION, COMPUTING AND AUDIO		
Camera	Binocular depth camera, 146° × 124° field of view · RGB 1280 × 720 at 30 Hz, depth 544 × 448 at 10 Hz	
Computing	8-core high-performance CPU + 10 TOPS visual computing module	
Computing backpack	—	NVIDIA Jetson Orin: 40 TOPS (Standard) or 100 TOPS (Smart, Pro A–D)
Audio · interaction	4-microphone array, stereo speakers 3 W × 2 · voice and image AI through a large multimodal model	
Wireless	Wi-Fi 6 · Bluetooth 5.2	
POWER		
Battery	Quick-release smart battery, 6000 mAh	
Use · charging	About 1 h · about 1.5 h	
Charger · remote	Both included; the remote has an emergency-stop button	
SOFTWARE AND SUPPORT		
Control · updates	Unitree Explore app (iOS, Android), remote control, voice · smart OTA upgrades	
Secondary development	—	unitree_sdk2 (C++, Python), DDS, ROS 2
Environment	0–40 °C, flat ground · not waterproof, not dustproof	
Warranty	8 months	12 months

Options and accessories

UNITREE'S R1 POWER AND CONTROL PARTS, QUOTED ON REQUEST

R1 smart battery

BT2-72, white or red



- 6000 mAh quick-release pack
- About 1 h of use in the R1
- Unitree BMS: balanced charging, over-charge, over-discharge and short-circuit protection
- Switches on only when inserted in the robot

Battery charger

Mains, 100–240 V

- Output 38 V, 3 A, 114 W
- About 1.5 h per charge
- The battery charges outside the robot
- Only Unitree's charger may charge the R1 battery

Remote control

With emergency-stop button

- 780 mAh battery, about 5 h
- More than 100 m in an open environment
- Hard emergency stop, plus a soft stop (L2 + B)
- USB-C charging; pairs through the Unitree Explore app

Sources: unitree.com/R1 and /Dex3-1, shop.unitree.com, Unitree's R1 user manual, battery-and-charger and remote-control manuals, the R1 developer guide (support.unitree.com) and Unitree's R1 films, BrainCo's Revo 2 parameters; October 2026. All figures are the manufacturers'; they may vary with scenario and configuration.

Unitree R1 and R1 EDU · Robotix Market

NEXT STEP

Order your R1

Tell us what the R1 will do — research and development, manipulation, interaction or demonstrations — and whether you need secondary development, more computing power or dexterous hands. We will recommend the R1 Basic or the right R1 EDU configuration, confirm it and come back with a delivery estimate to your address and a formal quotation.

Request a quotation

Configuration and delivery are confirmed with your quotation. Robotix Market ships worldwide.

Web · robotixmarket.com
Email · info@robotixmarket.com

SCAN OR CLICK A MODEL FOR ITS PRODUCT PAGE



R1 Basic



R1 EDU Standard
(U1)



R1 EDU Smart
(U2)



R1 EDU Pro A
(U3)



R1 EDU Pro B
(U4)



R1 EDU Pro C
(U5)



R1 EDU Pro D
(U6)

Sourced new

Supplied new through established distribution channels.

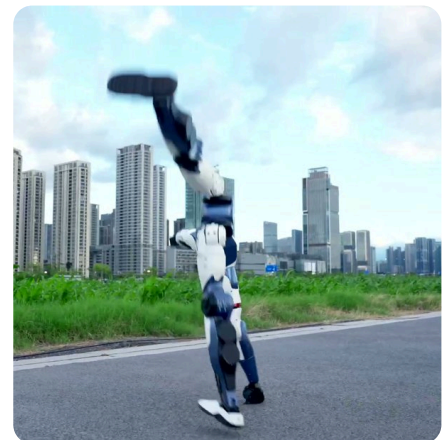
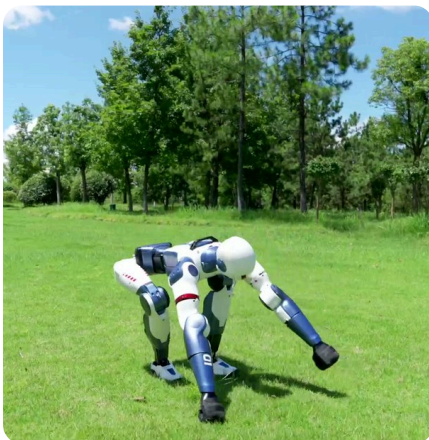
Manufacturer warranty

Every robot ships with Unitree's manufacturer warranty:
8 months on the R1 Basic,
12 months on every R1 EDU, per Unitree's published terms.

Support

Technical support is coordinated with the manufacturer's service network.

See it in action · Unitree R1 launch film: youtube.com/watch?v=v1Q4Su54iho · Unitree's film of the R1 humanoid.



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