

UNITREE R1 Edu Smart - Rational Guardian

Gamintojas: **UNITREE** · Modelis: **R1 EDU U2** · EAN: **5905156109117** · Prekės kodas: **760411**



22 098,90 €

Kaina su PVM

Be PVM: **18 263,55 €**

Sandėlyje



Prekė internetu

Nuskenaukite kodą arba apsilankykite www.shopro.lt



Aprašymas

UNITREE R1 Edu Smart Humanoid Robot - Rational Guardian

The Unitree R1 EDU Smart is an advanced humanoid robot designed as a comprehensive research and development platform for work in robotics and artificial intelligence. Measuring 1210 mm in height, weighing approximately 25 kg, and featuring as many as 26 degrees of freedom, its design ensures very high mobility and precision of movement, while remaining compact and easy to transport. The EDU Smart version combines all the capabilities of the R1 Basic and EDU U1, expanding them with powerful computing power, support for AI algorithms, and additional degrees of freedom for the head. All of this makes the device a comprehensive tool for advanced experiments, simulations, and more.

Advanced kinematics and natural movement

The robot offers a total of 26 degrees of freedom, which translates to highly realistic, fluid, and complex full-body movements. The Unitree R1 Edu Smart effortlessly jumps, runs, walks on its hands, and even performs sequences inspired by martial arts. Each leg has 6 DoF, the waist has 2 DoF, each arm has 5 DoF, and the head has 2 DoF. The wide ranges of motion in the waist, hips, and knees enable testing of advanced algorithms for locomotion, balance, and manipulation in dynamic scenarios.

Precision Joint Design

The Unitree R1 EDU Smart features a refined joint design with internal cable routing through hollow axles, which enhances reliability and protects mechanical components during intensive use. The use of dual and single encoders ensures high position reading accuracy, while local air cooling

helps maintain stable operating parameters even during prolonged testing. In addition, the arm's maximum payload of 2 kg enables experiments involving grasping and manipulating objects.

AI-Ready Platform

The EDU Smart expansion introduces an expansion dock offering up to 100 TOPS of computing power, based on an 8-core high-performance CPU. The platform has been designed with intensive development of AI algorithms, machine learning, and perception in mind, offering ready-to-use algorithmic support as well as full access to robot models, APIs, and development tools. Added to this is compatibility with popular simulation environments, including Isaac SIM, which enables a seamless transition from simulation to real-world testing.

Perception, Communication, and Interaction

The robot is equipped with a humanoid binocular camera, which serves as the foundation for visual perception and computer vision algorithms. A built-in speaker and microphone array enable natural-sounding voice communication, while Wi-Fi 6 and Bluetooth 5.2 connectivity ensure stable data transmission.

A Ready-to-Use Ecosystem for Research

The Unitree R1 EDU Smart is designed as a complete solution for laboratories, universities, and R&D teams; its smart lithium-ion battery with a quick-release system provides approximately 1 hour of operation, and the included charger allows the robot to be quickly restored to working order. The package is complemented by comprehensive technical and ecosystem support, which facilitates the device's implementation even in highly advanced research projects.

Included in the set

- Unitree R1 EDU Smart humanoid robot
- Remote control
- Charger
- Robot carrying case

Manufacturer	Unitree
Model	R1 EDU Smart
Color variant	Rational Guardian
Dimensions (standing position)	1210 × 357 × 190 mm
Weight (with battery)	Approx. 25 kg
Total degrees of freedom	26 DoF
Degrees of freedom of the legs	6 DoF per leg
Degrees of freedom of the waist	2 DoF
Degrees of freedom of the arms	5 DoF per arm
Degrees of freedom of the head	2 DoF
Range of motion of the waist joints	Yaw: ±150° Roll: ±30°
Range of motion of the hip joints	Yaw: ±157° Pitch: from -168° to 146° Roll: from -60° to 100°

Range of motion of knee joints	From -10° to 148°
Joint design	Internal cable routing through hollow axles
Encoders	Dual + single encoder
Cooling	Local air cooling
Maximum arm payload	2 kg
Thigh + lower leg length	0.675 m
Arm span	Approx. 0.435 m
Power supply	Lithium-ion battery
Operating time	Approx. 1 h
Base processor	High-performance 8-core CPU
Expansion dock - computing power	100 TOPS
Perception sensor	Humanoid binocular camera
Audio	Speaker, microphone array
Connectivity	Wi-Fi 6, Bluetooth 5.2

GPSR Link: https://psr-assets.innpro.pl/robots/robots_humanoid_robots.pdf, Gross weight: 50000, Net weight: 40000, Box length: 88,00, Box width: 53,00, Box height: 42,00

Techninė specifikacija

Specifications

Sandėlio grupė Robots/Roboty Humanoidalne/Seria R1 [+2][-3]

Matmenys ir svoris

Matmenys (l × P × A) 88,00cm × 53,00cm × 42,00cm

Svoris 50,00kg