ROKAE

Wheeled Dual-Arm Robot

Helios ›

Helios is a wheeled dual-arm robot independently developed by ROKAE. Through deep integration of multi-modal fusion perception technology and artificial intelligence algorithms, combined with SLAM, it can autonomously navigate and make decisions in complex environments to accomplish challenging tasks.

With 42 degrees of freedom throughout its body, Helios possesses efficient mobility and flexible operation capabilities, making it suitable for various fields such as industrial production, commercial services, and educational research.

Total DoF
42

Arm Operation Accuracy
±0.1 mm

Operating Height
2.2 m(Vertical) **1.5 m**(Horizontal)

Multi-Modal Fusion Perception
Tactic of Pose + Vision + Force

Max. Payload per Arm
5 kg

Industrial-Grade Mobile Positioning Accuracy
10 mm

ROKAE Robotics
400-010-8700
www.rokae.com
sales@rokae.com

Parameter Specifications

Parameter Category		Parameter
Hardware Specifications	Height	Dimensions(Extended)≤600×600×1800 mm
		Dimensions(Folded)≤600×600×1100 mm
	Weight	Approx.100 kg
	Degrees of Freedom	Head: 2
		Arms: 7 for each (left and right)
		Torso: 4
		Fingers: 6 for each hand
		Mobile Base: 2
Arm	Number of Joints	7
	Reach	650 mm
	Single-Arm Payload	5 kg (excluding end - effector)
	Precision	Repeatability ±0.1 mm
	Joint Performance	Lightweight compact force-controlled joints with built-in torque sensors, dual encoders, and EtherCAT communication
Dexterous Hand (Optional)	DoF per Hand	6
	Number of Joints	12
	Payload	3 kg
	Weight	540 g
	Grip Force	Thumb: 15 N; Others: 10 N
	Thumb Movement Range	65°
Mobile Base	Drive Mode	Differential drive
	Maximum Speed	Maximum moving speed: 1.2 m/s
	Navigation Method	SLAM navigation algorithm with a single LiDAR
	Obstacle-Crossing Ability	1.5 cm
Battery Performance	Battery Capacity	Lithium iron phosphate battery, 24V 40AH
	Operational Time	Approx.5 h
	Charging Method	Automatic charging pile
	Charging Pile Input	220V AC/50 - 60Hz
	Charging Pile Output	25.2V 15A
	Charging Time	4 h
Computing Power	Processor	Performance superior to 12th Gen Intel Core i7
Sensors	Head Vision	Binocular structured light
		Ideal working range: 0.2m~4.8m
		Maximum frame rate: 30fps
		Relative measurement accuracy: <2% (0.2m~3m)
		RGB image resolution: 1280 x 720; Depth image resolution: 640 x 360
	Obstacle-Avoidance Vision	3D Camera on Chassis
	Interaction	Microphone and speaker, supporting voice playback and quiet-scene conversation
Secondary Development	Interfaces	Provides low-level joint and sensor interfaces as well as high-level motion interfaces
		Compatible with ROS2 communication protocol, with uniformly encapsulated SDK interfaces
	Communication Interfaces	Ethernet, WIFI
Working Environment	Working Temperature	0~40°C
	Working Humidity	5%~85%
	Environment Requirements	Dust-free, non-corrosive gas, and static-free particles

Applications

Suitable for mobile operation scenarios in warehouses and workshops:
Transporting / Picking / Assembling / Inspection

扫码查看中文版本
For Chinese Version