Robify

Product Manual

Robify |
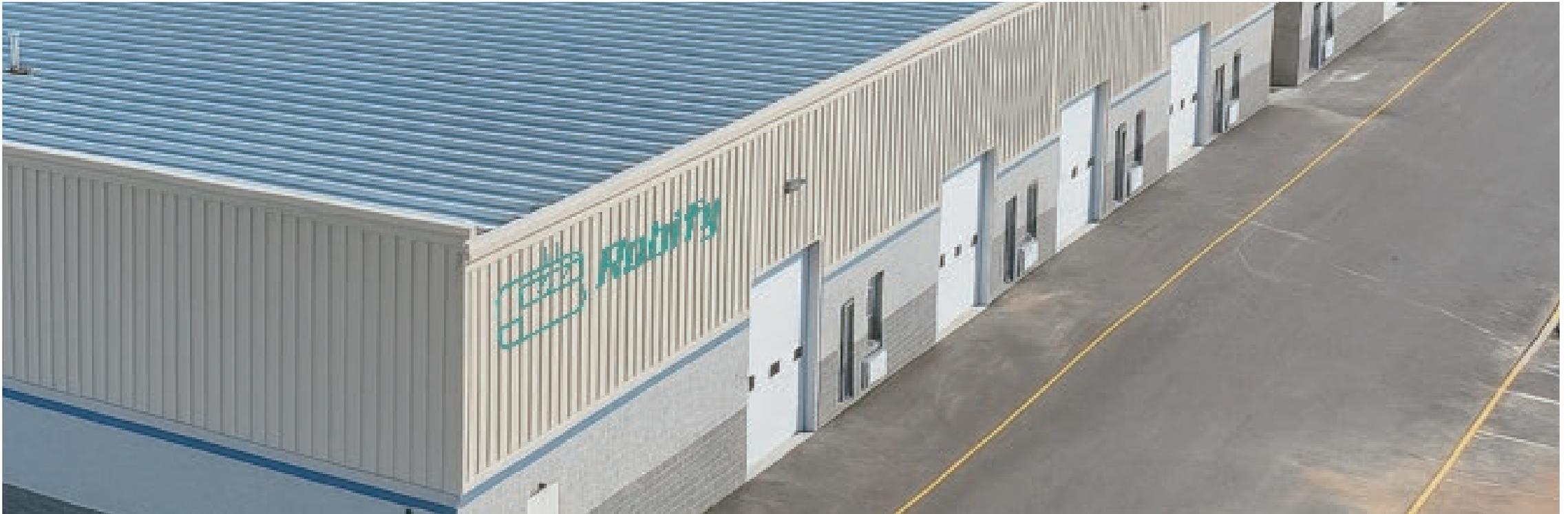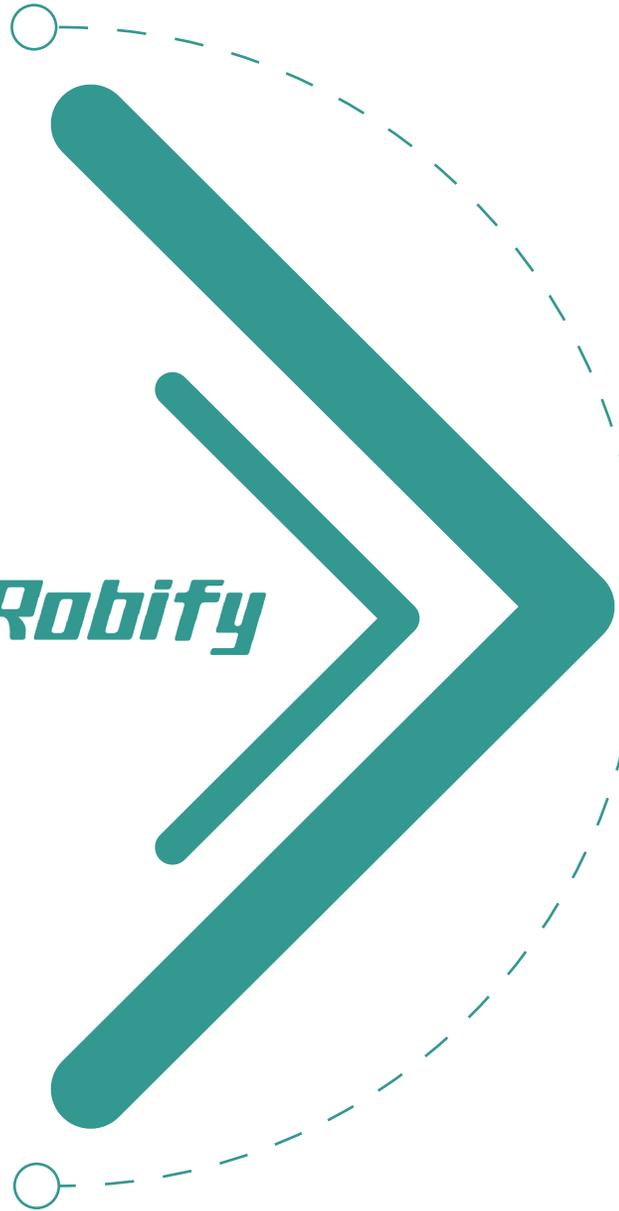
- Robify Robotics (Robify LLC,Delaware, USA). is dedicated to the technological R&D and application of the Robify™ series of mobile robot products. Our team possesses over 7 years of R&D experience in this industry, focusing on intelligent tracked robot design, intelligent motion control, and indoor/outdoor autonomous navigation technologies.

- Our products cover advanced unmanned robots, intelligent patrol robots, autonomous delivery robots, and factory transport AGVs. These technologies are widely used in various fields such as education, inspection, factory and campus delivery. We not only provide standard products but also offer autonomous navigation solutions based on ROS/Autoware to meet various practical needs.

CONTENTS

Robify

RobiX

Model	An autonomous robot based on ROS/Autoware		
Product illustration			
Drive type	Ackerman/ Differential	Sensor	3D laser radar/depth camera RTK positioning/inertial measurement unit
Size	995*715*740 (mm)	Computer	Mini computer (Intel i7 andNvidia 1650 or higher)
Vertical load	80kg	Software	Autoware / ROS
Maximum speed	1.2m/s	Other options	360-degree panoramic view/ remote monitoring
Battery life	≤6h	Body Control System	Support
Battery capacity	48V 40AH	Application	Research/ndustrial/ Prototype Development

RobiS

Model	An autonomous robot based on ROS/Autoware		
Product illustration			
Drive type	Ackerman/ Differential	Sensor	3D laser radar/depth camera RTK positioning/inertial measurement unit
Size	450*380*390(mm)	Computer	Mini computer (Intel i7 andNvidia 1650 or higher)
Vertical load	20kg	Software	Autoware / ROS
Maximum speed	1.5m/s	Other options	360-degree panoramic view/ remote monitoring
Battery life	2H	Body Control System	Support
Battery capacity	24V 12AH	Application	Research/ndustrial/ Prototype Development

Mobile Manipulation RobiDuo Series

Model	An autonomous robot based on ROS/Autoware		
Product illustration			
Drive type	Omni/Differential	Sensing	3D laser radar / depth camera / inertial measurement unit
Mechanical arm control	Remote operation / Virtual reality solution	Arm model	Customizable
Size	710*490*385(mm)	Calculation	NVIDIA Jetson Orin Series

Humanoid robot

Model	Mini Pi+	Mini Hi	Mini Pi
Product illustration			
Type of robot	Human form		Two-legged
Height	650(mm)	820(mm)	590(mm)
DOF	20	23	12
Weight	10kg	17kg	7kg
Load	5kg	5kg	20kg
Bounce	10cm	10cm	20cm

AgileX Products

Model	PiPPER Arm	Scout Mini	
Product illustration			
DOF	6	Drive mode	Differential drive
Range	70*70(mm)	Size	612*580*245(mm)
Working radius	4.2kg	Weight	23kg
Base size	626mm	Load	10kg/20kg
Battery life	2H	Maximum speed	3m/s
Work voltage	24V	Battery life	10km
method	Remote operation /Drag-and-drop teaching /Trajectory planning	Clearance height	115mm

Featured Products

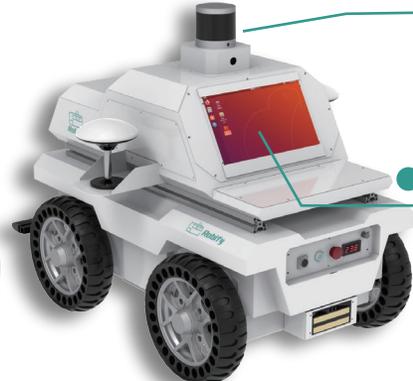## RobiX
Autonomous driving robot
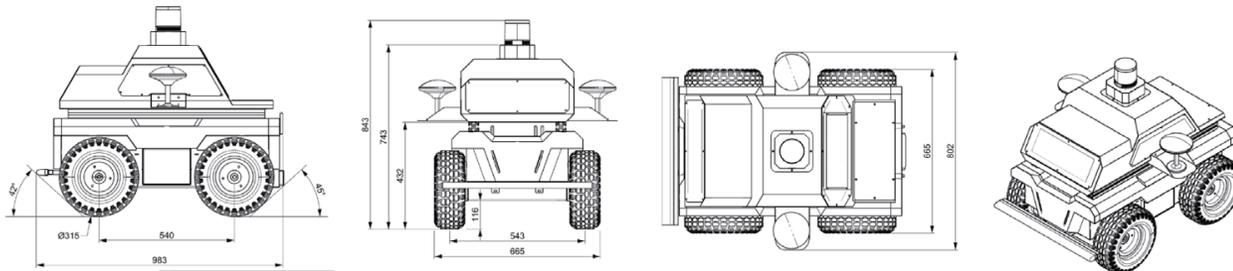
- 3D LiDAR
- Four-wheel differential
- RGBD camera
- Touchscreen

Product parameters

Size	995*715*740 (mm)	Speed	1.2m/s
Load capacity	80kg	Battery life	≤6h
Battery capacity	48V 40Ah	Vertical steps	10mm
Ground clearance	105MM	Wheelbase	550MM
Wheelbase	540MM	Turning radius	Rotate in place (0°)
Wheel diameter	315MM	Communication mode	Support 232 serial portcommunication

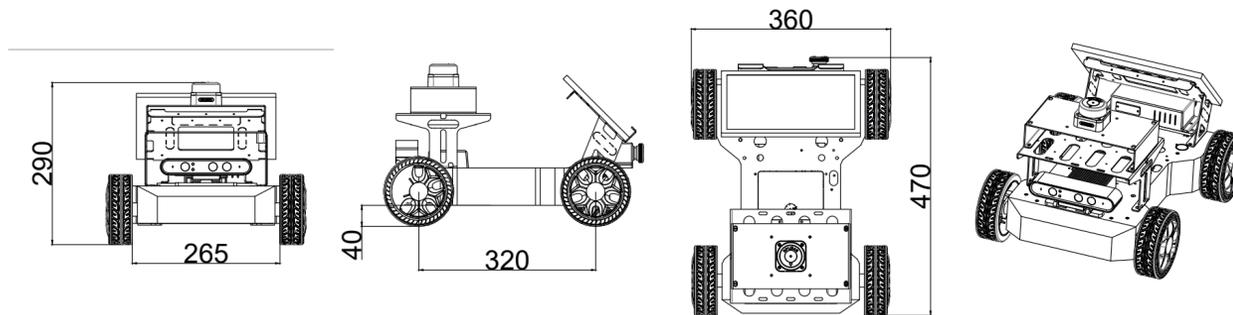## Product size

Application Case

Featured Products

RobiS
Autonomous driving robot

- Touchscreen
- Four-wheel differential
- 3D LiDAR
- RTK Navigation
- RGBD camera

Product parameters

Size	450*380*390 (mm)	Speed	1.5m/s
Load capacity	20kg	Battery life	≤2h
Battery capacity	24V 12Ah	Vertical steps	30mm
Operating temperature	-10-60°	Motor current	0.3A/2.3A/7A
Upper-level computer system	ROS/Autoware	Turning radius	Rotate in place (0°)
Number ofencoder lines	500	Communication mode	Support 232 serial portcommunication

Product size

Application Case

Featured Products

RobiSolo
Compound robotic arm

- Electric gripper
- Multi-axis robotic arm
- Control cabinet
- Single-line lidar

- Power switch button
- Emergency power stop button
- Voltage and current meters
- Charging port
- Charging port

Product functions

- Indoor laser mapping with dynamic obstacle avoidance function
- Standardized communication protocol for navigation and robotic arm control
- Customized Gripper Solution
- Closed-loop multi-sensor feedback (inertial measurement unit / odometer / voltage)
- Lidar navigation
- Customized arm solution

Product parameters

Size	450*380*390 (mm)
Chassis quality	35kg
Vertical loadVertical load	50kg
Battery capacity	24V 20Ah

Featured Products

RobiSolo-L
Compound robotic arm

- Vertical lifting platform
- Electric gripper
- Single-line lidar
- Charging module

- Charging port
- Power switch button
- Emergency power stop button
- Voltage and current meters
- Remote control antenna

▶ Product functions

Indoor laser mapping with dynamic obstacle avoidance function

Standardized communication protocol for navigation and robotic arm control

Customized Gripper Solution

Closed-loop multi-sensor feedback (inertial measurement unit / odometer / voltage)

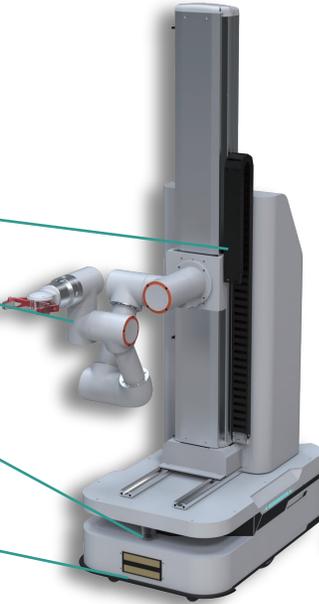Lidar navigation

Customized arm solution

▶ Product parameters

Size	730*460*260 (mm)
Chassis quality	46kg
Vertical loadVertical load	120kg
Battery capacity	24V 40Ah
1000 mm vertical electric lifting device, speed 250 mm/second	

Featured Products

**RobiDuo-L
Compound robotic arm**

- Depth camera
- Vertical electric sliding platform
- Multi-axis robotic arm
- Single-line lidar
- Charging module

- Charging port
- Power switch button
- Emergency power stop button
- Voltage and current meters
- Remote control antenna

Product functions

- Indoor laser mapping with dynamic obstacle avoidance function
- Standardized communication protocol for navigation and robotic arm control
- Customized Gripper Solution

- Closed-loop multi-sensor feedback (inertial measurement unit / odometer / voltage)
- Lidar navigation
- Customized arm solution

Product parameters

Size	730*460*260 (mm)
Chassis quality	46kg
Vertical loadVertical load	120kg
Battery capacity	24V 40Ah
1000 mm vertical electric lifting device, speed 250 mm/second	

Featured Products

RobiSolo-LO
Compound robotic arm

- Reconfigurable gripper
- Vertical electric sliding platform
- Multi-axis robotic arm
- Single-line lidar
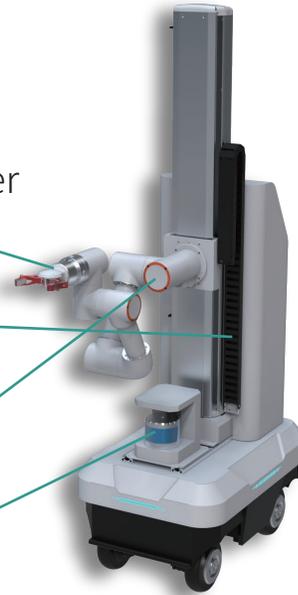
- Charging port
- Power switch button
- Emergency power stop button
- Voltage and current meters
- Remote control antenna
- Charging port

▶ Product functions

- Indoor laser mapping with dynamic obstacle avoidance function
- Standardized communication protocol for navigation and robotic arm control
- Customized Gripper Solution
- Closed-loop multi-sensor feedback (inertial measurement unit / odometer / voltage)
- Lidar navigation
- Customized arm solution

▶ Product parameters

Size	710*490*385 (mm)
Chassis quality	70kg
Vertical loadVertical load	120kg
Battery capacity	48V 25Ah
1000 mm vertical electric lifting device, speed 250 mm/second	

Featured Products

RobiDuo-LO Compound robotic arm

- Depth camera
- Multi-axis robotic arm
- Vertical electric sliding platform
- Reconfigurable gripper
- Single-line lidar

- Charging port
- Power switch button
- Emergency power stop button
- Voltage and current meters
- Remote control antenna

Product functions

Indoor laser mapping with dynamic obstacle avoidance function

Standardized communication protocol for navigation and robotic arm control

Customized Gripper Solution

Closed-loop multi-sensor feedback (inertial measurement unit / odometer / voltage)

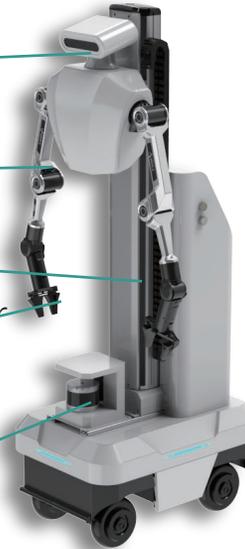Lidar navigation

Customized arm solution

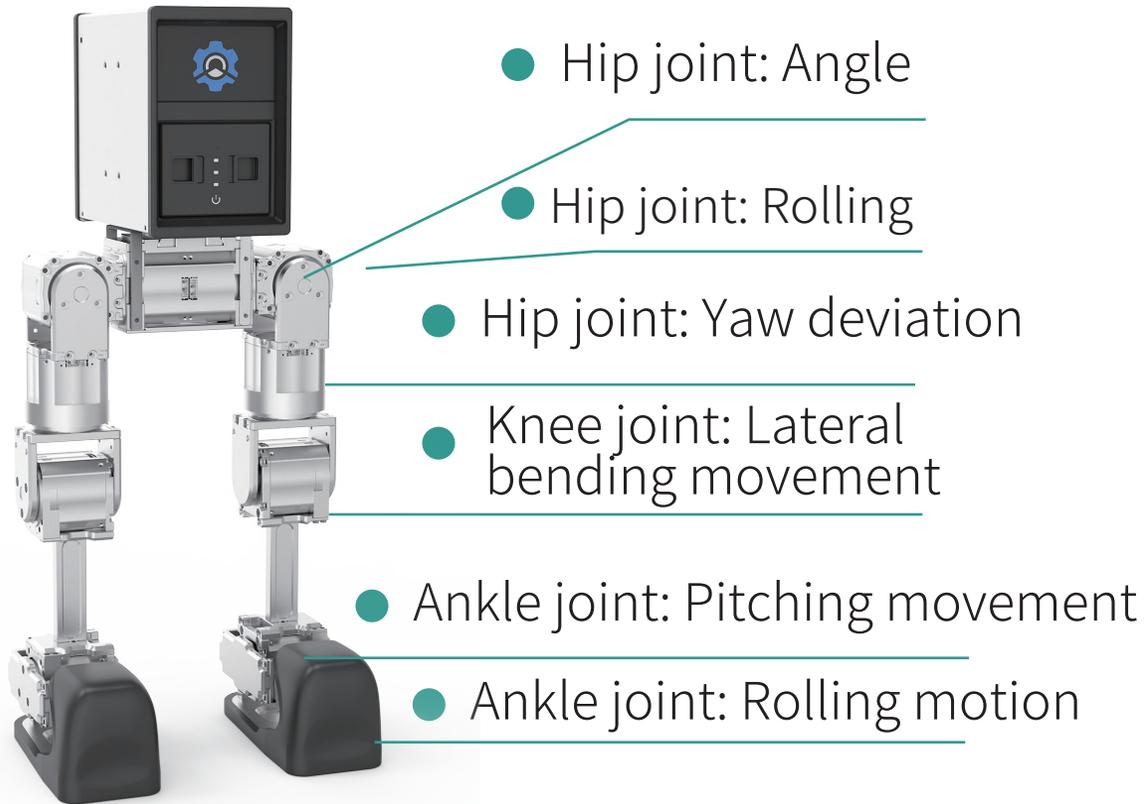## Product parameters

Size	710*490*385 (mm)
Chassis quality	70kg
Vertical loadVertical load	120kg
Battery capacity	48V 25Ah
1000 mm vertical electric lifting device, speed 250 mm/second	

Featured Products

▶ **Mini Pi**
Bipedal robot

● Hip joint: Angle

● Hip joint: Rolling

● Hip joint: Yaw deviation

● Knee joint: Lateral bending movement

● Ankle joint: Pitching movement

● Ankle joint: Rolling motion

▶ **Product parameters**

Standing height	520（mm)	Movement speed	1.5m/s
Weight (including battery)	7kg	Load	15kg
Working voltage	24V	DOF	12

▶ **Product functions**

High value for money   Ultra-small size

Ultra-high perfor-mance   Flexible and stable

Featured Products

▶ **Mini Pi+**
Bipedal robot

● Hip joint: Angle

● Hip joint: Rolling

● Hip joint: Yaw deviation

● Knee joint: Lateral bending movement

● Ankle joint: Pitching movement

● Ankle joint: Rolling motion

▶ **Product parameters**

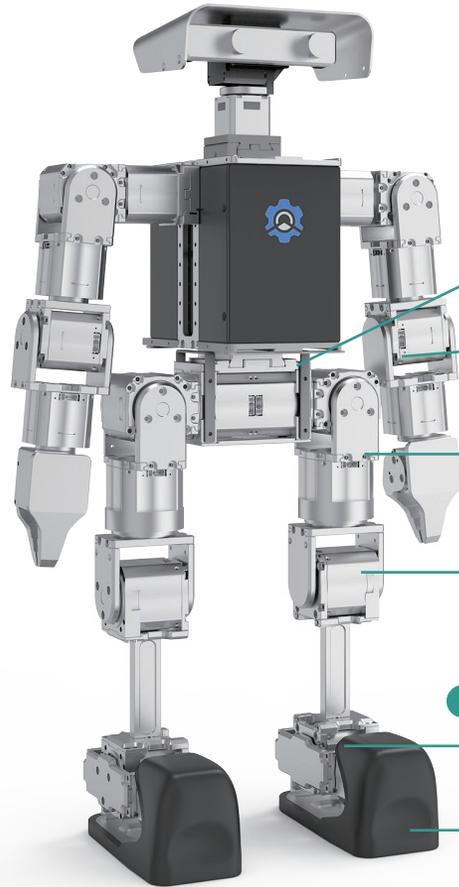| Standing height	652.5 (mm)	Movement speed	16Nm
Weight (including battery)	10.9kg	Load	10kg
Working voltage	24V	DOF	26

▶ **Product functions**

🛜 High value for money

🔄 Ultra-small size

📄 Ultra-high performance

△ Flexible and stable

Featured Products

Mini Hi Bipedal robot

- Hip joint: Angle
- Hip joint: Rolling
- Hip joint: Yaw deviation
- Knee joint: Lateral bending movement
- Ankle joint: Pitching movement
- Ankle joint: Rolling motion

Product parameters

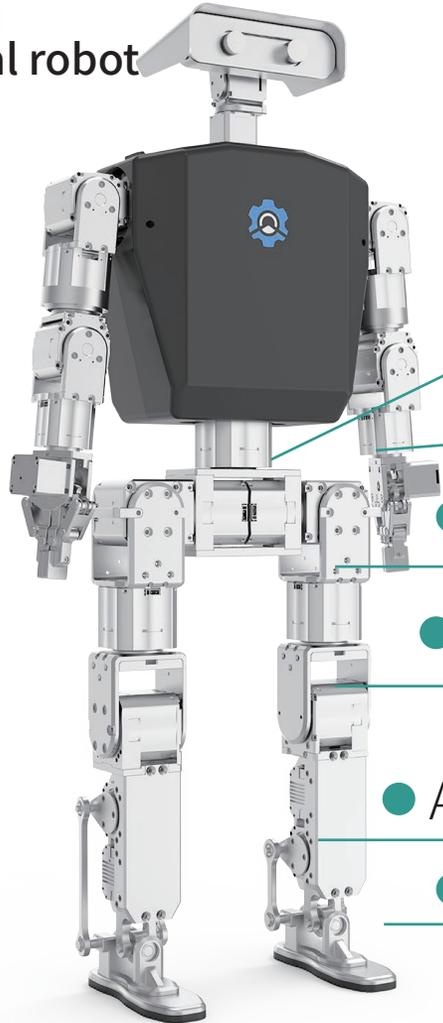| Standing height	890 (mm)	Movement speed	0.5m/s
Weight (including battery)	20kg	Load	20kg
Working voltage	48V	DOF	29

Product functions

- High value for money
- Ultra-small size
- Ultra-high performance
- Flexible and stable

Featured Products

▶ Pipper Mechanical arm

▶ Product accessories

| Only the robotic arm | Claw | Teaching Pendant |

▶ Product functions

◆ Lightweight and agile, with stable load capacity

◆ Extremely large working radius

◆ Beautiful, durable, stable and reliable

◆ Intelligent communication, expanding boundaries without limits.

▶ Product parameters

DOF	6
Weight	4.2kg
Payload	1.5kg
Working radius	626.75mm

Featured Products

▶ RML63-B
Mechanical arm

▶ RML63-6F
Mechanical arm

▶ Product parameters

DOF	6
Weight	10kg
Payload	3kg
Working radius	900mm

▶ Product parameters

DOF	6
Weight	10.1kg
Payload	3kg
Working radius	928.5mm

Featured Products

FR3WML Mechanical arm

Product parameters

DOF	6
Weight	11.25kg
Payload	3kg
Working radius	922mm

FR3C Mechanical arm

Product parameters

DOF	6
Weight	10kg
Payload	3kg
Working radius	622mm

FR5 Mechanical arm

Product parameters

DOF	6
Weight	22kg
Payload	5kg
Working radius	922mm

FR10 Mechanical arm

Product parameters

DOF	6
Weight	40kg
Payload	10kg
Working radius	1400mm

Customized products

Silent Guardian, All-Area Insight

Born for inspection in complex environments. Possesses powerful obstacle-crossing and all-weather capabilities, equipped with intelligent perception modules for autonomous path planning, anomaly recognition, and automatic alerts. Significantly reduces labor costs and safety risks, the expert in unmanned security for industrial parks, warehouses, substations, and more.

Customized products

Bringing the Robot to the Workstation

Integrate the precise mechanical arm with the agile mobile chassis seamlessly.

Precise in Action Grasping the Future

It overcomes the spatial limitations of fixed-position robots, enabling cross-workstation operations, flexible grasping and precise assembly.

Mobile Manipulation Flexible Futurethe Workstation

The positioning accuracy is highly repeatable, and the response is rapid. It is an ideal platform for intelligent manufacturing, laboratory automation, and dexterous operations.

Multi-functional device

Create a truly mobile and intelligent workspace for you.No longer confined to a single spot, it's the "versatile craftsman" of the entire space.

Smart Flow, Carrying Efficiency

The core carrier of smart logistics systems.ensuring every item reaches the right place at the right time, directly boosting your production capacity.

Accurate Delivery, Born for Efficiency

Say goodbye to repetitive, heavy manual transport. It never tires, finds the optimal path, and has minimal error.

Empowered by Technology Cultivating the Future

A robust chassis designed for fields, offering exceptional off-road traversability.

The "Intelligent Cultivator" in the Fields

Can be equipped with multi-spectral cameras, spraying systems, etc.

The Data-Driven Harvest Revolution

for crop growth monitoring, variable-rate fertilization, and precise pesticide application.


Gliding Lightly, Precisely Nurturing Every Plant

Collects field data to build digital models, making farming smarter, greener, and more efficient.

Customized products

From Ground to Sky,
Your Comprehensive Intelligent Partner

The ground unit handles detailed inspection and sustained operation, while the air unit provides broad-area coverage and rapid mobility. Real-time data exchange enables holistic perception from macro to micro and coordinated response, tackling extremely complex scenarios.
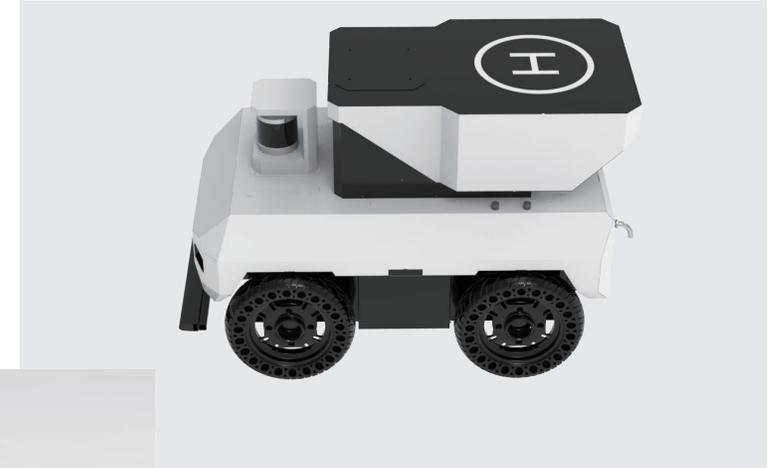
An All-Domain Perspective
Unbounded Decision-Making

Integrates unmanned ground and aerial systems to create a comprehensive air-ground" handles large-scale facility management, emergency rescue, 3D mapping, and more with ease and capability

Two-wheel drive series

RobiHaul1.0
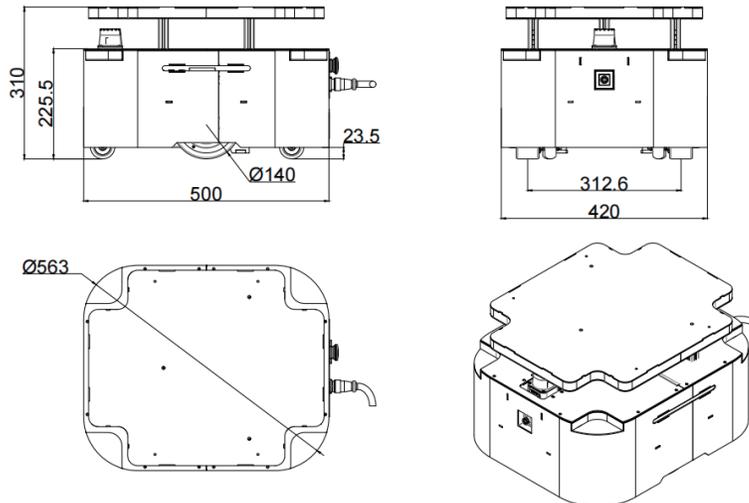## Two-wheel differential drive chassis

- Automated operation
- Precise navigation and positioning
- Efficient production
- with Custom Development & Peripherals

- Application fields: Indoor storage, indoor inspection, logistics handling

Product parameters

Size	543*420*311 (mm)	System support	ROS/WIN/UBUNTU
Chassis quality	35KG	Turning radius	Rotate in place
Chassis structure	Two-wheel differential	Wheelbase	360MM
Battery capacity (expandable)	24V 12AH	Wheel diameter	150MM
Battery life (load capacity)	3H	Charging time	2-3H
Maximum speed	1.3m/s	Charging method	Manual charging / Automatic charging
Motor power	60w*2	Export power supply	24V/19V/12V
Control mode	232Serial port	Emergency stop button	Support
Ground clearance	25mm	Protection level	IP22 (Supports Customization)
Optional configuration	Magnetic navigation kit / Laser navigation kit / Automatic recharging device		

Product size

Application Case

Disinfection and Inspection

Material Handling

▶ RobiHaul2.0
Two-wheel differential drive chassis

- ● Automated operation
- ● Precise navigation and positioning
- ● Efficient production
- ● with Custom Development & Peripherals

● Application fields: Indoor storage, indoor inspection, logistics handling
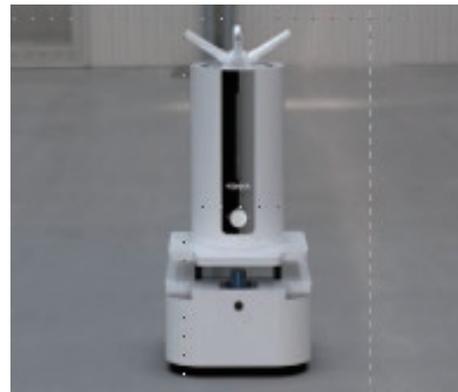
▶ Product parameters

Size	684*460*292 (mm)	System support	ROS/WIN/UBUNTU
Chassis quality	65KG	Turning radius	Rotate in place
Chassis structure	Two-wheel differential	Wheelbase	363MM
Battery capacity (expandable)	24V 20AH	Wheel diameter	140MM
Battery life (load capacity)	4H	Charging time	3H
Maximum speed	1.5m/s	Charging method	Manual charging / Automatic charging
Motor power	100w*2	Export power supply	24V/19V/12V
Control mode	232Serial port	Emergency stop button	Support
Ground clearance	47mm	Protection level	IP22 (Supports Customization)
Optional configuration	Magnetic navigation kit / Laser navigation kit / Automatic recharging device		

▶ Product size

▶ Application Case

Material Handling

Interior inspection

Raw material handling
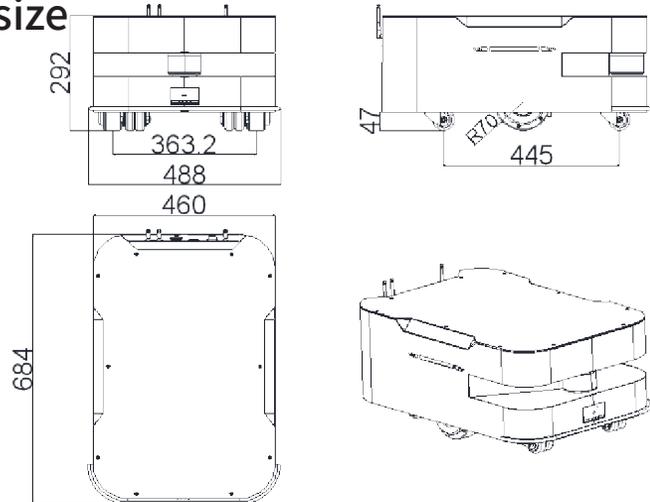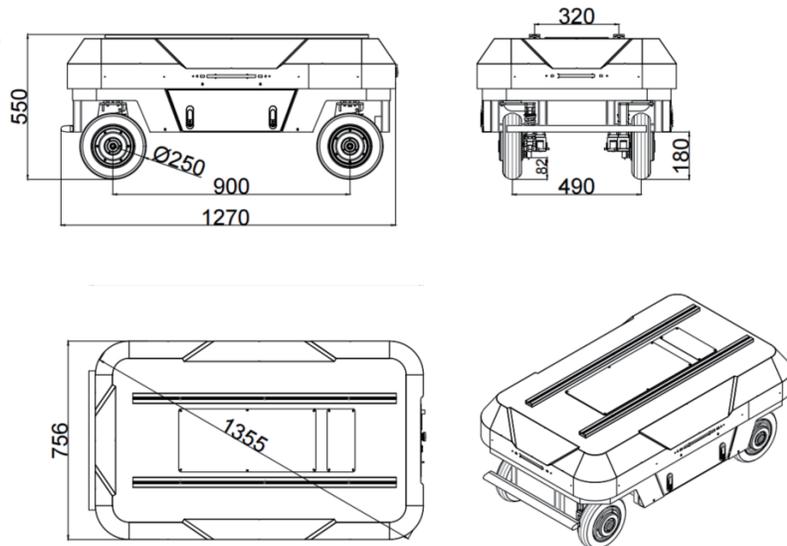
Omni-Chassis Series

RobiOmni Omni-Chassis Series

- Automated operation
- Precise navigation and positioning
- Efficient production
- with Custom Development & Peripherals

Application fields: Indoor storage, indoor inspection, logistics handling

Product parameters

Size	1270*756*550 (mm)	System support	ROS/WIN/UBUNTU
Chassis quality	130KG	Turning radius	Rotate in place
Chassis structure	Ackerman Mode / Omnidirectional Movement Mode	Wheelbase	490MM
Battery capacity (expandable)	48V 40AH	Wheel diameter	250MM
Battery life (load capacity)	3H	Charging time	3-4H
Maximum speed	1.5m/s	Charging method	Manual charging / Automatic charging
Motor power	280w4	Export power supply	48V/24V/19V/12V
Control mode	CAN2.0B	Emergency stop button	Support
Ground clearance	180mm	Protection level	IP44
Optional configuration	Laser navigation kit / RTK module / sensor bracket (including display)		

Product size

Application Case
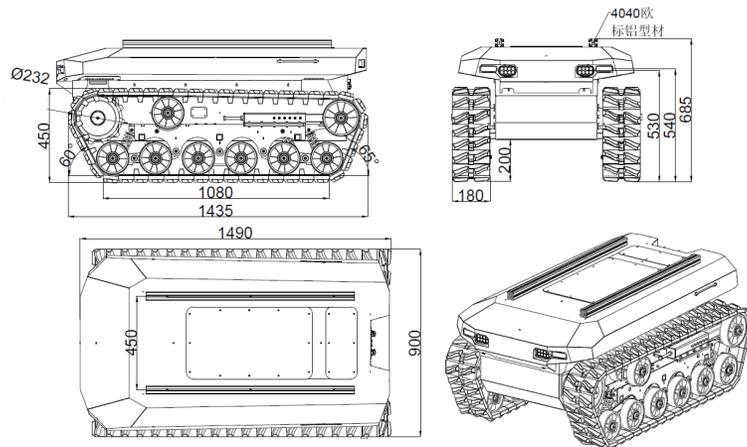
Track series

▶ RobiTrac Track series

- Automated operation
- Precise navigation and positioning
- Efficient production
- with Custom Development & Peripherals

- Application fields: Inspection security, logistics transportation, scientific research and education

▶ Product parameters

| Size	1435*900*685 (mm)	System support	ROS/WIN/UBUNTU
Chassis quality	310KG	Turning radius	Rotate in place
Battery capacity (expandable)	48V 40AH	Parking method	Servo slope stabilization
Battery life (load capacity)	>3H	Vertical load	300KG
Maximum speed	1.4M/S	Uphill (with load)	30°
Motor power	1500W*2	Obstacle Crossing (Vertical Staircase)	12cm
Ground clearance	200MM	Charging time	3H
Wheelbase	720MM	Export power supply	48V/24V/19V12V
Number of motors	2	Control mode	CAN
Remote control	2.4G remote controller	Emergency stop button	Support
Battery BMS data	Support (485 communication)	Protection level	IP44
		Quick battery removal	Support
Optional configuration	Laser navigation kit / RTK module / Automatic recharging module		

▶ Product size

▶ Application Case

Track series

## ► RobiTracmini
Track series
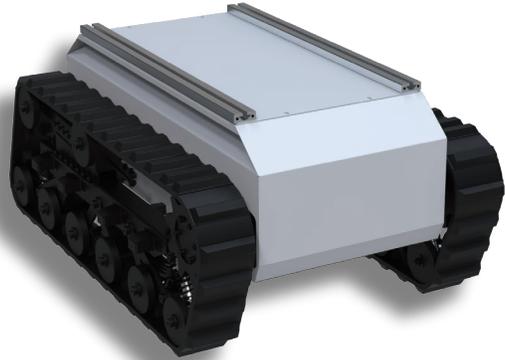
- Automated operation
- Precise navigation
- Efficient production
- Customization

● Application fields: Inspection security, logistics transportation, scientific research and education

► Product parameters

Size	895*600*406 (mm)	System support	ROS/WIN/UBUNTU
Chassis quality	80KG	Turning radius	Rotate in place
Battery capacity (expandable)	48V 20AH	Parking method	Servo slope stabilization
Battery life (load capacity)	>3H	Vertical load	50KG
Maximum speed	1.2M/S	Uphill (with load)	30°
Motor power	400W*2	Obstacle Crossing (Vertical Staircase)	10cm
Ground clearance	135MM	Charging time	3H
Wheelbase	490MM	Export power supply	48V/24V/19V12V
Number of encoder lines	1000	Control mode	CAN
Remote control	2.4G remote controller	Emergency stop button	Support
Battery BMS data	Support (485 communication)	Protection level	IP54
		Quick battery removal	Support
Optional configuration	Laser navigation kit / RTK module / Automatic recharging module		
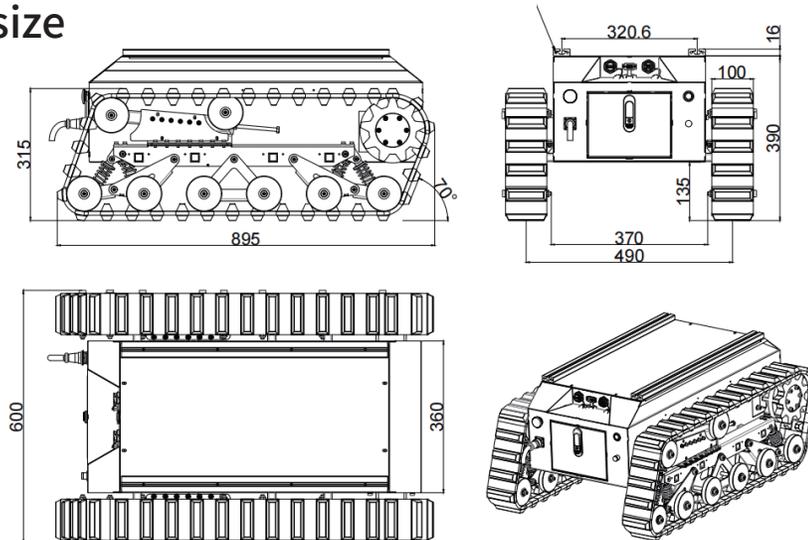
► Product size

► Application Case

Four-wheel drive series

▶ Scout Mini
Four-wheel differential chassis

- Application fields: Inspection security, logistics transportation, scientific research and education

▶ Product parameters

Size	612*580*245 (mm)	wheelbase	451mm
Track width	490mm	Tare weight	23kg
Minimum clearance from the ground	115mm	Minimum turning radius	0m
Maximum speed	3m/5 (road wheels) 3m/s (McNamag wheels)	Rated operating load	10 kilograms (for road wheels) 20kg (McNamur wheels)
Steepness of the slope	30° Load-bearing	Obstacle clearance ability	70mm
Drive form	Four-wheel four-wheel drive	Maximum mileage	10KM
Working temperature	-10 to 45 degrees Celsius	Charger	AC 220V independent charger
Charging time	2H	Export power supply	24V
Communication interface	CAN	Communication interface	CAN232

▶ Product features

- Automated operation

- Precise navigation and positioning

- Efficient production

- with Custom Development & Peripherals

▶ Product sample

Track series

▶ Bunker Mini 2.0 Track series

● Application fields: Inspection security, logistics transportation, scientific research and education

▶ Product parameters

Size	690*570*335 (mm)	Chassis height	63.5mm
Track width	100mm	Tare weight	54.8g
Rated load capacity	25kg	Moving speed	1.0m/s
Steepness of slope	30° without load	Minimum turning radius	0M
Obstacle clearance capability	115mm	Working temperature	-20°C to 60°C
Power supply to external devices	24V/15A	Drive form	Left and right independent drive Track differential steering
Motor parameters	250W * 2 (brushed DC motor)	Rated torque	17 N-M
Encoder parameters	1024 lines magnetic encoder	Communication interface	CAN
Charging time	3 - 4 hours	Protection level	IP67

▶ Product features

● Automated operation

● Precise navigation and positioning

● Efficient production

● with Custom Development & Peripherals

▶ Product sample

Track series

▶ Bunker Pro 2.0 Track series

● Application fields: Inspection security, logistics transportation, scientific research and education

▶ Product parameters

Size	690*570*335 (mm)	Suspension system	Christie suspension + Matilda four-wheel balanced suspension
Chassis height	120mm	Tare weight	225 kg
Rated load capacity	120kg	Battery	72V 50Ah Lithium Iron Phosphate Battery
Charging time	2.5 hours	Motor	2x1800W brushless servo motor
Running speed	1.5m/s	Working temperature	-20°C to 60°C
Power supply to external devices	24V/15A	Brake	Servo brake
Maximum climbing	30° without load	Battery life	3h
Minimum ground clearance	120mm	Communication interface	CAN
Charging time	2.5h	Protection level	IP67

▶ Product features

● Automated operation

● Precise navigation and positioning

● Efficient production

● with Custom Development & Peripherals

▶ Product sample

Multimodal

▶ LIMO Pro

- Application fields: Inspection security, logistics transportation, scientific research and education

▶ Product parameters

Size	322*220*251 (mm)	Wheel base	200mm
Tread	175mm	Dead load	4.8kg
Load	4kg	Minimum ground clearance	24mm
Drive type	Hub motor(4x14.4W)	No-load max. speed	1 m/s
Ackermann minimum turning radius	0.4m	Working temperature	-10-+40℃
Max. climbing capacity	20°	Power interface	DC (5.5x2.1mm)
Battery	30° without load	Battery life	3h
Minimum ground clearance	10Ah 12V	Stand-by time	4h
OS	Ubuntu20.04	IPC	jetson orin nano

▶ Product features

- Automated operation
- Precise navigation and positioning
- Efficient production
- with Custom Development & Peripherals

▶ Product sample

Robify

Comprehensive Robotics Solutions