

YUHESSEN

Product Catalog



Modular Intelligent Mobile Robotic Platform
www.yuhesen.com

COMPANY PROFILE

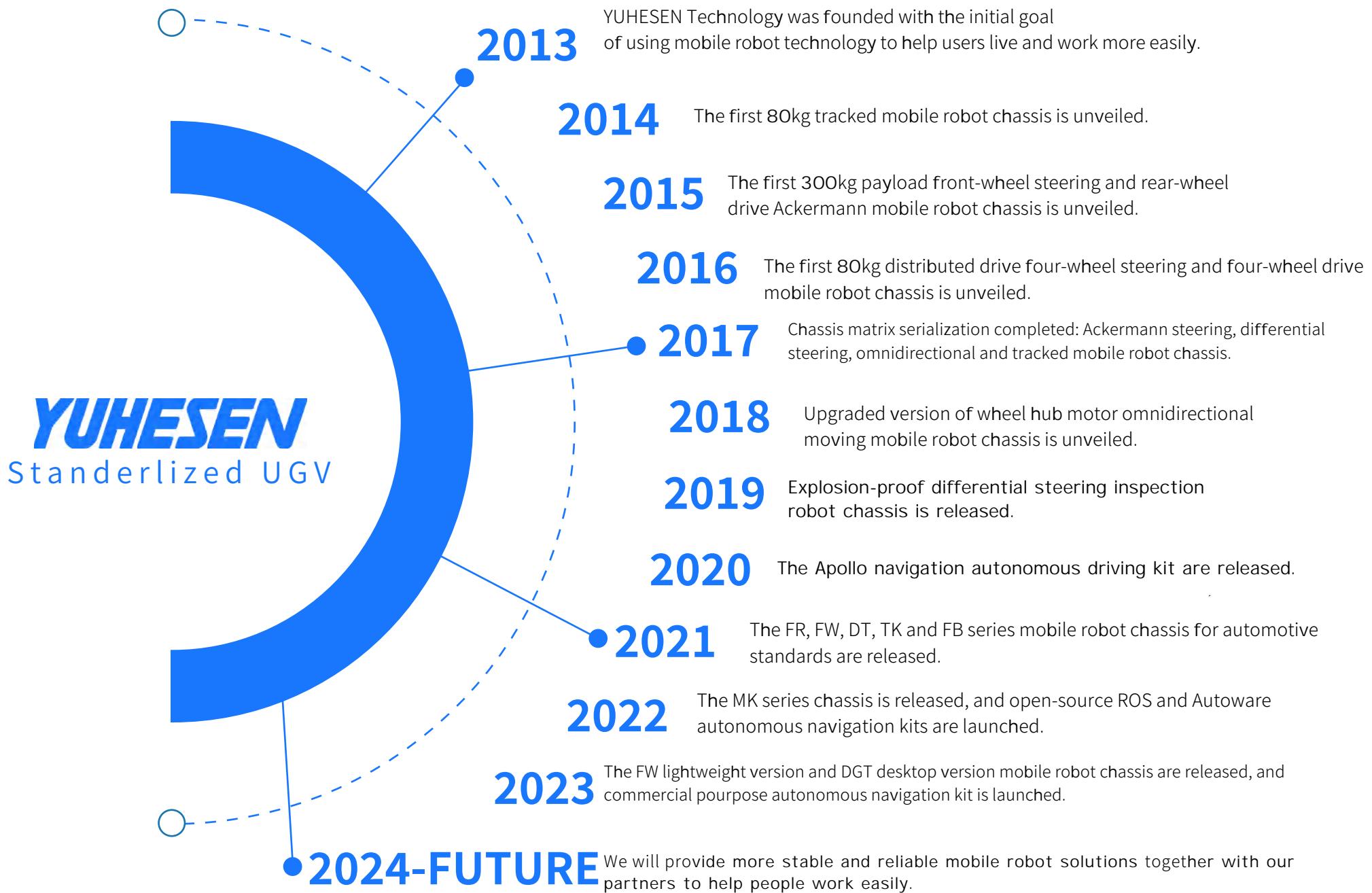


Yuhesen Technology was founded in 2013 and is a leading manufacturer of modular mobile robot platforms worldwide. Currently, Yuhesen Technology provides a range of indoor and outdoor modular mobile robot chassis and complementary autonomous navigation solutions to assist scientific research experts in promoting the development of mobile robot technology in multidisciplinary fields such as artificial intelligence, autonomous driving, mechanical control, robotics, and vehicle engineering. As a core component supplier, the company helps industrial partners in the logistics, security, energy, agriculture, and construction industries transform and upgrade their industrial chains. The founding and R&D teams are from well-known domestic scientific research institutions such as AVIC and Harbin Institute of Technology, dedicated to solving difficulties in transportation and harsh working environments and promoting easier human life and work through independent research and development of advanced mobile robot technology.

The company's R&D capabilities cover multidisciplinary technologies such as outdoor mobile robot line control chassis structure, motion control, autonomous positioning, intelligent navigation SLAM, multi-sensor fusion, and robot decision planning. With over 10 years of technical accumulation in outdoor mobile robot scenarios, the company has a full-chain comprehensive ability in research and development, engineering, production, marketing , sales, and after-sales, with a research and development and technical team of nearly 50 people.



R&D HISTORY





● 2016-2023

Explore robotics applications with industry pioneers and be honored as a national high-tech enterprise.

The first domestically developed four wheel drive swerve steering inspection robot;

The first domestically developed 30m underwater operation robot.

The first domestically developed firefighting robot.

The first domestically developed intelligent law enforcement defense robot.

The first domestically developed underground pipeline operation robot with a range of 2km

The first domestically developed intelligent coal mine working face data collection robot.

The first domestically developed outdoor unmanned logistics robot.

The first domestically developed autonomous navigation hazardous inspection robot.

The first domestically developed ultra-lightweight individual reconnaissance robot.

● 2024

By leveraging and applying robotic technology in various industries, we have focused on modular mobile robot platforms to achieve a series of applications in outdoor scenarios.

Through this approach, we have formed partnerships with over **3000** companies to break new ground in the field.

● FUTURE

More excellencies developed together with partners

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NAVIGATION
SOLUTIONS

HONORS & QUALIFICATIONS



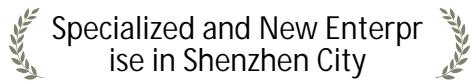
Over 20 honors and awards



National high-tech
enterprise.



ISO9001/CE
Certificate.



Specialized and New Enterpr
ise in Shenzhen City

"Thanks to the company's technological advantages, it has received multiple government honors since 2013 to the present."



CORE PATENTS /



10+

Invention patents



50+

Invention patents



30+

Design patents



100+

Software
copyrights



COOPERATIVE CLIENT



COOPERATIVE CLIENT

The FR series chassis is highly stable, fast, and precise. We have been using their products on our industrial production line, and the results have been excellent. Their after-sales service is exceptionally professional, promptly addressing our concerns and resolving any issues.

—Lyric Corp.

The automotive-grade chassis FR series is highly suitable for our logistics needs, and we are extremely satisfied with the products and services. Their after-sales system is well-established, with quick responsiveness to our inquiries and providing effective solutions.

—SF Express

The omnidirectional chassis FW-mid has outstanding performance and reliability, meeting the requirements of various application scenarios. The company provides excellent pre-sales and after-sales services, making them a trustworthy supplier of robot chassis.

—Inspur Group

I came across your four-wheel drive vehicle in another department, and their feedback about your products was quite positive. They have been using your previous model for several years without any issues. Since this project is for the military, which has high-quality requirements for products, we decided to choose your company.

—China Aerospace Science and Industry Corporation Limited

We are quite satisfied with your robots, and the accompanying documentation is comprehensive. They are very convenient for students to use. In fact, we had purchased other chassis before choosing your product. However, when we requested documentation from them, it took them half a day to provide it. The whole purpose of buying the chassis was for convenience, but we ended up doing a lot of the work ourselves. Choosing your product has significantly improved the research efficiency for our students.

—Harbin Institute of Technology

The FW-mid vehicle from Yuheisen offers diverse motion modes and stable performance. Their after-sales support is prompt and they provided significant assistance during our secondary development process.

—SHOUGANG Group

SELECTION GUIDE

Applicable sites	Indoor and outdoor smooth ground scenes (asphalt roads, grass, gravel roads, epoxy flooring)				Indoor and outdoor multiple-scene complex road conditions (asphalt roads, grass, gravel roads, epoxy flooring)			
Drive Form	Differential Steering and Motor Drive				Front Ackermann Steering and Rear Motor Drive			
Model No.	DT-mini	DT-01M	DT-mid	DT-01L (not available)	MK-mini	MK-mid	FR-mid	FR-max
Picture								
Dimensions	600*500*200mm	680*580*380mm	920*740*350mm	1055*743*540mm	840*600*310mm	920*740*350mm	1320*765*490mm	1600*820*520mm
Payload	10KG	50KG	50KG	200KG	50KG	80KG	100KG	300KG
Max Speed (Full loads)	3km/h	5km/h	5.4km/h	4km/h	9.7km/h	9.7km/h	8km/h	23km/h
Mileage (without load)	10km	20km	10km	20km	25km	35km	20km	40km
Detachable Battery	—	—	•	—	•	•	•	•
Battery Capacity	24V/10AH	48V/20AH	48V/18AH	48V/70AH	48V/12AH	48V/18AH	48V/20AH	48V/40AH
Battery Upgrade	—	48V/40AH	48V/30AH	—	—	48V/30AH	48V/60AH	48V/70AH
IP Rating	 IP33	 IP44	 IP42	 IP44	 IP44	 IP42	 IP44	 IP44

Applicable sites	Indoor and outdoor multiple-scene complex road conditions (asphalt roads, grass, gravel roads, epoxy flooring)				Outdoor complex off-road conditions (agriculture fields)	Indoor and outdoor multiple-scene complex road conditions (asphalt roads, gravel roads, epoxy flooring)	
Drive Form	Four-wheel/Two-wheel Motor Drive and Swerve Steering(Omnidirectional Moving)				Differential Steering and Motor Drive	Differential Steering/Swerve Steering	
Model No.	FW-mini	FW-mid/mid pro	FW-max	FW-max pro	TK-mid	FB-DT-IIB	FB-FW-IIC
Picture							
Dimensions	495*360*320mm	680*550*440mm	960*550*395mm	960*550*395mm	1070*700*345mm	1178*762*1020mm	1100*650*1010mm
Payload	30KG	50kg/80KG	150KG	250KG	80KG	80KG	100KG
Max Speed (Full loads)	3.6km/H	5.4km/h	5.4km/h	7.2km/h	4km/h	3km/h	3.6km/h
Mileage (without load)	30km	40km	25km	30km	20km	15km	45km
Detachable Battery	•	•	•	•	—	—	•
Battery Capacity	24V/20AH	48V/20AH	48V/27AH	48V/40AH	48V/40AH	48V/50AH	48V/50AH
Battery Upgrade	—	48V/40AH	48V/40AH	48V/60AH	48V/70AH	—	—
IP Rating							

Applicable Conditions	Indoor and outdoor scientific research experiments and teaching scenarios.						Scientific Research	Commercial scenarios.
Positioning Accuracy	± 15cm	± 15cm	± 15cm	± 15cm	± 10cm	± 10cm	± 10cm	± 5cm
Applicable Sites	Closed Area							
Model No.	OS-nano	OS-lite/lite2	OS-mate/mate2	OS-mars	OS-saturn	OS-mate plus	OS-work	NV-magic
LiDAR SLAM Navigation	Desktop ROS Learning Robot	Open Source ROS Robot	Open Source ROS Robot	Autoware Self-driving Kit	Apollo Self-driving Kit	Open Source ROS Robot + GPS	Open Source ROS Robot + Robotics Arm	Non Open Source ROS Robot
Picture								
Mapping	•	—	•	•	•	•	•	•
Path Planning	•	—	•	•	•	•	•	•
Obstacle Avoidance	•	•	•	•	•	•	•	•
Positioning	•	•	•	•	•	•	•	•
Sensors	2D LiDAR+IMU +camera	2D LiDAR+IMU +camera	3D LiDAR +IMU +camera	3D LiDAR+Ultrasonic +GPS+IMU+camera+ Millimeter Wave	3D LiDAR+Ultrasonic +GPS+IMU+camera+ Millimeter Wave	3D LiDAR+Ultrasonic +GPS+IMU+camera	3D LiDAR+Ultrasonic +GPS+IMU+camera	3D LiDAR+IMU+ Ultrasonic +camera
Camera Recognition	•	•	•	•	•	•	•	•
Status Surveillance	•	•	•	•	•	•	•	•
Secondary Development	•	•	•	•	•	•	•	•
Source Code	•	•	•	•	•	•	•	—
Code Editing	•	•	•	•	•	•	•	—
APP	—	—	—	—	—	—	—	•
API Interface	—	—	—	—	—	—	—	•

DT-mini Differential Steering UGV

- Open-Source Mobile Robot Function Design
- Robot Teaching, Autonomous Driving Learning
- Cutting-edge Research Exploration and Application Development Platform



-  • Transparent Structure Mobile Robot Function Design
-  • Lightweight Integrated Body Design
-  • Modular Rapid Expansion Development Platform
-  • Comprehensive Automotive-Grade Safety Assurance Design

• Application Field /

Robot teaching, robotics and automotive technology research, ROS robot research education, new energy vehicle autonomous driving education, and other new engineering education applications

• Customer Case /



Open Source ROS Educational Robot

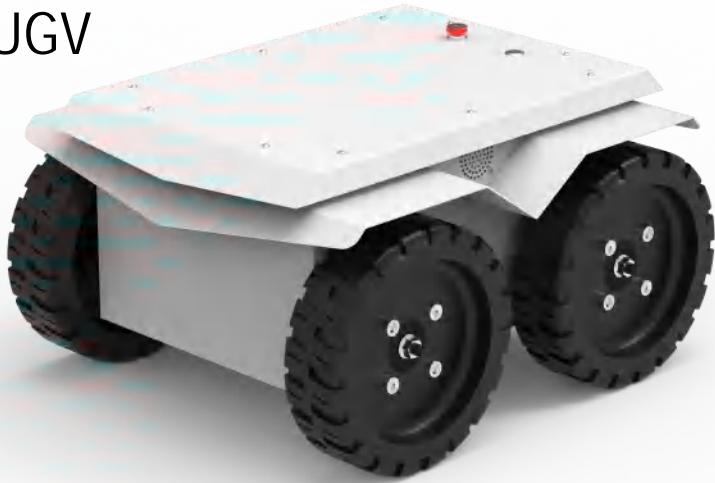
• Product Parameter /

Size	600*500* 200mm	Power Supply	12V/10A
Weight	20kg	Braking Method	Motor braking
Drive Form	Differential steering: motor drive	Parking Method	Motor parking
Material	Aluminium Alloy	Payload	10kg
Ground Clearance	57 mm	Max Speed	3km/h
Wheelbase	360mm	Mileage	10km
Wheel Track	448mm	Wading Depth	40mm
Tire Diameter	200mm	Climbing Capacity	10°
Motor	100W*2 DC motor	Span Width	120mm
Battery	24V/10AH Lithium battery	Obstacle Surmounting	50mm
Charging Time	2-3h	IP Rating	IP33
Charging Method	24V/5A charging adapter	Communication	CAN 2.0B
Optional Configuration			
Open Source ROS Navigation Kit			

DT-01M

Differential Steering UGV

- High precision control
- Modular platform for industrial application development



• High precision 4 wheel drive control



• Modular development



• Comprehensive Automotive-
Grade Safety Assurance Design



• High strength load-bearing frame
design

• Application Field /

Scenarios including inspection, payload operation, indoor/outdoor transportation, robot teaching, and robotic technology research in multiple industries such as energy, construction, agriculture, and industrial applications.

• Customer Case /



Agritulcure Data Collection Robot



Inspection Robot

• Product Parameter/

Size	680*580*380mm	Power Supply	24V/15A-12V/15A
Weight	72kg	Braking Method	Motor braking
Drive Form	Differential steering: motor drive	Parking Method	Motor parking
Material	Q235	Payload	50kg
Ground Clearance	84mm	Max Speed	5km/h
Wheelbase	380mm	Mileage	20km
Wheel Track	495mm	Wading Depth	70mm
Tire Diameter	300mm	Climbing Capacity	20°
Motor	400W*2 DC brushless motor	Span Width	120mm
Battery	48V/20AH Lithium battery	Obstacle Surmounting	60mm
Charging Time	4- 5h	IP Rating	IP44
Charging Method	48V/5A charging adapter/station	Communication	CAN 2.0 B
Optional Configuration Open Source ROS Navigation Kit/NV Magic LiDAR SLAM Navigation Kit			

DT-mid

Differential Steering UGV

- High precision all terrain 4WD design
- Modular platform for industrial application development



• High precision 4 wheel drive control



• Dual wishbone independent suspension



• All terrain 4WD design



• Modular Rapid Expansion Development Platform



• Comprehensive Automotive-Grade Safety Assurance Design

• Application Field /

Scenarios including inspection, payload operation, indoor/outdoor transportation, robot teaching, and robotic technology research in multiple industries such as energy, construction, agriculture, and industrial applications.

• Customer Case /



Cobot for Construction Application

• Product Parameter /

Size	920* 750*350mm	Power Supply	48V/10A-24V/15A-12V/15A
Weight	70kg	Braking Method	Motor braking
Drive Form	Differential steering: motor drive	Parking Method	Electromagnetic power-off parking
Material	Indenpendent suspension	Payload	50kg
Ground Clearance	150mm	Max Speed	5.4km/h
Wheelbase/Wheel Track	600mm/600mm	Mileage	10km
Tire Diameter	324mm	Climbing Capacity	30°
Motor	4*400W Servo motor	Span Width	250mm
Battery	48V/18AH Lithium battery	Obstacle Surmounting	150mm
Charging Time	≤ 4h	IP Rating	IP42
Charging Method	48V/5A charging adapter/station	Communication	CAN 2.0B
Optional Configuration		Open Source ROS Navigation Kit/NV Magic LiDAR SLAM Navigation Kit	

DT-01L (NOT AVAILABLE)

Differential Steering UGV

- Heavy duty 4WD design
- Modular platform for industrial application development



• Long Time Running

• Modular Rapid Expansion Platform

• Comprehensive Automotive-Grade Safety

Assurance Design

• High strength load-bearing frame

design

• Application Field /

Scenarios including inspection, payload operation, indoor/outdoor transportation, robot teaching, and robotic technology research in multiple industries such as energy, construction, agriculture, and industrial applications.

• Customer Case /



Indoor Painting Robot

• Product Parameter /

Size	1055*743*540 mm	Power Supply	24V/15A-12V/15A
Weight	150kg	Braking Method	Motor braking
Drive Form	Differential steering, motor drive	Parking Method	Motor parking
Material	Q235	Payload	200kg
Ground Clearance	120mm	Max Speed	4km/h
Wheelbase	580mm	Mileage	20km
Wheel Track	643mm	Wading Depth	100mm
Tire Diameter	400mm	Climbing Capacity	15°
Motor	1000W*4 Servo motor	Span Width	200mm
Battery	48V/70AH Lithium battery	Obstacle Surmounting	100mm
Charging Time	4-5h	IP Rating	IP44
Charging Method	48V/20A charging adapter/station	Communication	CAN 2.0 B
Optional Configuration	Open Source ROS Navigation Kit/NV Magic LiDAR SLAM Navigation Kit		

MK-mini Ackermann Steering UGV

- Rapid Expansion
- Modular platform for industrial application development



• High Accuracy Chassis



• Rapid Secondary Development



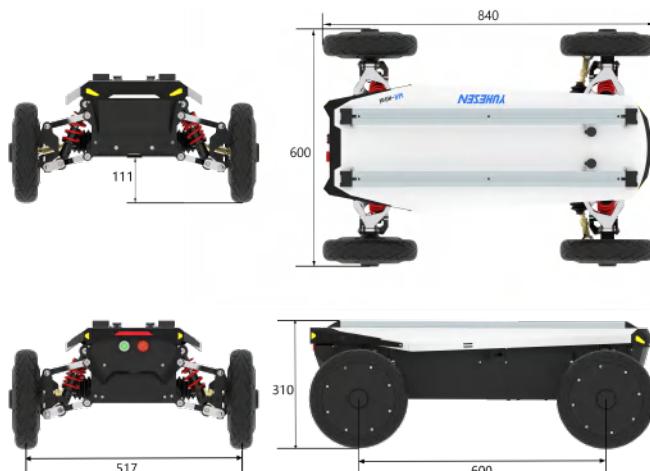
• Modular Rapid Expansion Platform



• 4 wheels Independent Suspension

• Application Field /

Scenarios including inspection, payload operation, indoor/outdoor transportation, robot teaching, and robotic technology research in multiple industries such as energy, construction, agriculture, and industrial applications.



• Product Parameter /

Size	840*600*310mm	Power Supply	48V/10A-24V/15A-12V/15A
Weight	50kg	Braking Method	Motor parking
Drive Form	Ackermann steering	Parking Method	Motor braking
Suspension	Independent suspension	Payload	50kg
Ground Clearance	111mm	Max Speed	9.7km/h
Wheelbase/Wheel Track	600mm/517mm	Mileage	32km
Tire Diameter	240mm	Climbing Capacity	10°
Turning Radius	1.6m	Span Width	140mm
Battery	48V/12AH	Obstacle Surmounting	50mm
Charging Time	≤3h	IP Rating	IP44
Charging Method	48V/5A Charging adapter	Working Temperature	-20°C~50°C
Optional Configuration			
Open Source ROS Navigation Kit/NV Magic LiDAR SLAM Navigation Kit			
Autoware/Apollo Self-driving Kit			

MK-mid Ackermann Steering UGV

- Rapid Expansion
- Modular platform for industrial application development



• High Accuracy Chassis



• Rapid Secondary Development



• Modular Rapid Expansion Platform



• 4 wheels Independent Suspension

• Application Field /

Scenarios including inspection, payload operation, indoor/outdoor transportation, robot teaching, and robotic technology research in multiple industries such as energy, construction, agriculture, and industrial applications.

• Customer Case /



Cobot for Construction Application



Scientific Research UAV Platform

• Product Parameter /

Size	920*740*350mm	Power Supply	48V/10A-24V/15A-12V/15A
Weight	71kg	Braking Method	Motor braking
Drive Form	Ackermann steering	Parking Method	Electromagnetic power off parking
Suspension	Independent suspension	Payload	80kg
Ground Clearance	150mm	Max Speed	9.7km/h
Wheelbase/Wheel Track	600mm/600mm	Mileage	35km
Tire Diameter	324mm	Climbing Capacity	10°
Turning Radius	1.6m	Span Width	180mm
Battery	48V/18AH Lithium Battery	Obstacle Surmounting	50mm
Charging Time	≤4h	IP Rating	IP42
Charging Method	48V/5A charging adapter	Working Temperature	-20°C~50°C
Optional Configuration	Open Source ROS Navigation Kit/NV Magic LiDAR SLAM Navigation Kit Autoware/Apollo Self-driving Kit		

FR-mini Ackermann Steering UGV

- Rapid Expansion
- Modular platform for industrial application development



• High Accuracy Chassis



• Rapid Secondary Development



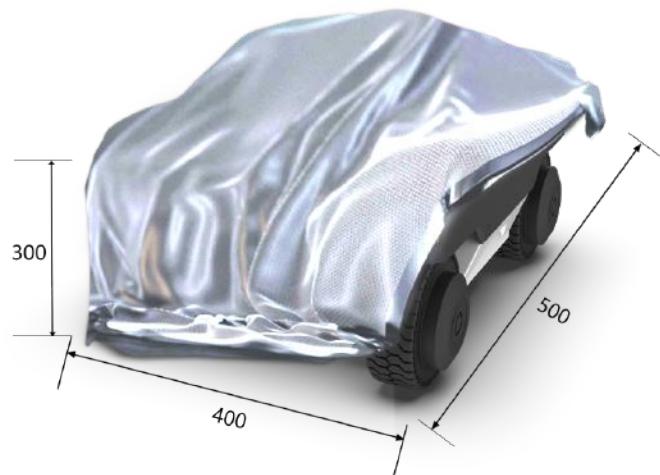
• Modular Rapid Expansion Platform



• 4 wheels Independent Suspension

• Application Field /

Applications such as intelligent connected vehicle autonomous driving education, robot teaching, and research in the fields of robotics and automotive technology, as well as new engineering education applications like ROS robot research and education.



• Product Parameter /

Size	500*400*300mm	Power Supply	24V/10A-12V/10A
Weight	10kg	Braking Method	Motor braking
Drive Form	Ackermann steering	Parking Method	Motor parking
Suspension	Independent suspension	Payload	10kg
Ground Clearance	50mm	Max Speed	5.4km/h
Wheel Track	300mm	Mileage	10km
Tire Diameter	150mm	Climbing Capacity	10°
Motor	2*100W servo motor	Span Width	180mm
Battery	24V/10AH	Obstacle Surmounting	30mm
Charging Time	≤4h	IP Rating	IP42
Charging Method	24V/5A charging adapter	Working Temperature	-20°C~50°C
Optional Configuration		Open Source ROS Navigation Kit/NV Magic LiDAR SLAM Navigation Kit	

FR-mid Ackermann Steering UGV

- Rapid Expansion
- Modular platform for industrial application development



• High Accuracy Chassis



• Rapid Secondary Development



• Comprehensive automotive-grade security design



• Modular Rapid Expansion Platform

• Application Field /

Scenarios including inspection, payload operation, indoor/outdoor transportation, robot teaching, and robotic technology research in multiple industries such as energy, construction, agriculture, and industrial applications.

• Customer Case /



Industrial Field Patrol Robot



Industrial Field Delivery Robot

• Product Parameter /

Size	1320*785*490mm	Power Supply	48V/10A-24V/15A-12V/15A
Weight	125kg	Braking Method	Motor braking
Drive Form	Ackermann steering	Parking Method	Electromagnetic power off parking
Suspension	Non-independent suspension	Payload	100kg
Ground Clearance	115mm	Max Speed	8km/h
Wheelbase	660mm	Mileage	20km
Wheel Track	645mm	Wading Depth	80mm
Tire Diameter	420mm	Climbing Capacity	10°
Turning Radius	1.65米	Span Width	200mm
Battery	48V/20AH	Obstacle Surmouting	60mm
Charging Time	≤4h	IP Rating	IP44
Charging Method	48V/5A charging adapter	Communication	CAN 2.0B
Optional Configuration		Open Source ROS Navigation Kit/NV Magic LiDAR SLAM Navigation Kit	

FR-max Ackermann Steering UGV

- Rapid Expansion
- Modular platform for industrial application development



· Automative-grade robot platform

· 300KG Loading Capacity

· Electronic Hydraulic Disc Brake System

· Comprehensive automotive-grade security design

• Application Field /

Logistics, energy, construction, agriculture, and industrial sectors, among others, are industries where long-term inspections, heavy-load operations, heavy-load transportation, teaching of new energy vehicles, and research on autonomous driving in the automotive field are commonly applied.

• Customer Case /



Harbour Patrol Robot



Community Delivery Robot

• Product Parameter /

Size	1600 * 820 * 520 mm	Power Supply	48V/20A-24V/5A-12V/5A
Weight	156kg	Braking Method	EHB+Motor braking
Drive Form	Ackermann steering	Parking Method	Electromagnetic power off parking
Suspension	Non-independent suspension	Payload	300kg
Ground Clearance	110mm	Max Speed	23km/h
Wheelbase	850mm	Mileage	40km
Wheel Track	645mm	Wading Depth	100mm
Tire Diameter	420mm	Climbing Capacity	10°
Turning Radius	2.1m	Span Width	200mm
Battery	48V/40AH	Obstacle Surmounting	60mm
Charging Time	<4h	IP Rating	IP44
Charging Method	48V/10A charging adapter	Communication	CAN 2.0B
Optional Configuration		Open Source ROS Navigation Kit/NV Magic LiDAR SLAM Navigation Kit	

FW-mini Omnidirectional UGV

- Modular Light-weight Design
- Industry application development platform for small, portable omnidirectional robots.



- Omnidirectional Multi-motion Models
- Light-weight Integrated Structure Design
- Comprehensive automotive-grade security design
- Long-time Running Mileage

• Application Field /

Lightweight inspections, payload operations, indoor/outdoor transportation, robot teaching, and robotics technology research are common scenarios in multiple industries such as energy, construction, agriculture, and industrial applications.

• Customer Case /



Road Detection Robot



Industrial Data Collection Robot

• Product Parameter /

Size	495*360*320 mm	Power Supply	24V/10A-12V/15A
Weight	32kg	Braking Method	Motor braking
Drive Form	Swerve Steering and Motor Drive	Parking Method	Motor parking
Suspension	N/A	Payload	30kg
Ground Clearance	170mm	Max Speed	3.6Km/h
Wheelbase	350mm	Mileage	30km
Wheel Track	250mm	Wading Depth	50mm
Tire Diameter	5.5寸/140mm	Climbing Capacity	15°
Motor	100W*4 wheel hub motor	Span Width	100mm
Battery	24V/20AH lithium battery	Obstacle Surmounting	40mm
Charging Time	4~5h	IP Rating	IP55
Charging Method	24V/5A charging adapter/station	Communication	can2.0B
Optional Configuration	Open Source ROS Navigation Kit/NV Magic LiDAR SLAM Navigation Kit		

FW-mid Omnidirectional UGV

- Modular Integrated Design
- Industry application development platform for omnidirectional robots.



- Omnidirectional Multi-motion Models
- Modular Development
- Comprehensive automotive-grade security design
- Quick Removeable Battery

• Application Field /

Lightweight inspections, payload operations, indoor/outdoor transportation, robot teaching, and robotics technology research are common scenarios in multiple industries such as energy, construction, agriculture, and industrial applications.

• Customer Case /



Agriculture Fruits



Patrol Robot in Power Grid System

Harvest Robot

• Product Parameter /

Size	680*550*440mm	Power Supply	12V/15A-24V/15A-48V/10A
Weight	68kg	Braking Method	Motor braking
Drive Form	Swerve Steering and Motor Drive	Parking Method	Motor parking
Suspension	Independent Suspension	Payload	50kg
Ground Clearance	120mm	Max Speed	5.4km/h
Wheelbase	400mm	Mileage	40km
Wheel Track	420mm	Wading Depth	100mm
Tire Diameter	240mm	Climbing Capacity	15°
Motor	350W*4 wheel hub motor	Span Width	150mm
Battery	48V/20AH	Obstacle Surmounting	50mm
Charging Time	4~5h	IP Rating	IP33
Charging Method	48V/5A charging adapter/station	Communication	CAN 2.0B
Optional Configuration	Open Source ROS Navigation Kit/NV Magic LiDAR SLAM Navigation Kit		

FW-mid pro

Omnidirectional UGV

- Modular Integrated Design
- Industry application development platform for omnidirectional robots.



- Omnidirectional Multi-motion Models
- Modular Development
- Comprehensive automotive-grade security design
- Quick Removeable Battery

• Application Field /

Lightweight inspections, payload operations, indoor/outdoor transportation, robot teaching, and robotics technology research are common scenarios in multiple industries such as energy, construction, agriculture, and industrial applications.

• Customer Case /



Agriculture Fruits



Patrol Robot in Power Grid System

Harvest Robot

• Product Parameter /

Size	680*550*440mm	Power Supply	12V/15A-24V/15A-48V/10A
Weight	68kg	Braking Method	Motor braking
Drive Form	Swerve Steering and Motor Drive	Parking Method	Motor parking
Suspension	Independent Suspension	Payload	80kg
Ground Clearance	120mm	Max Speed	5.4km/h
Wheelbase	400mm	Mileage	40km
Wheel Track	420mm	Wading Depth	100mm
Tire Diameter	240mm	Climbing Capacity	15°
Motor	350W*4 wheel hub motor	Span Width	150mm
Battery	48V/20AH	Obstacle Surmounting	50mm
Charging Time	4~5h	IP Rating	IP33
Charging Method	48V/5A charging adapter/station	Communication	CAN 2.0B
Optional Configuration	Open Source ROS Navigation Kit/NV Magic LiDAR SLAM Navigation Kit		

FW-max

Omnidirectional UGV

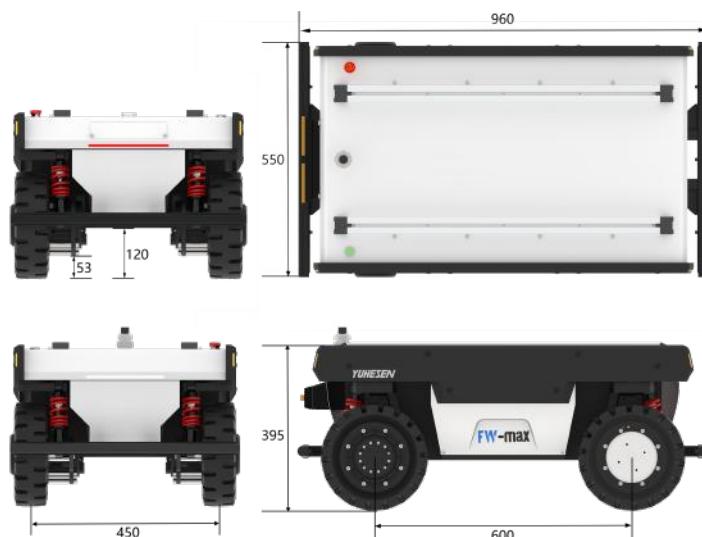
- Modular Integrated Design
- Industry application development platform for heavy-duty payload omnidirectional robots.



- Omnidirectional Multi-motion Models
- Modular Development
- Comprehensive automotive-grade security design
- Quick Removeable Battery
- Heavy-duty Payload

• Application Field /

Inspections, payload operations, indoor/outdoor heavy-duty transportation, robot teaching, and robotics technology research are common scenarios in multiple industries such as energy, construction, agriculture, and industrial applications.



• Product Parameter /

Size	960* 550* 395mm	Power Supply	12V/15A - 24V/15A-48V/10A
Weight	115KG	Braking Method	Motor braking
Drive Form	Swerve Steering and 2 Motors Drive	Parking Method	Electromagnetic power off parking
Suspension	Independent Suspension	Payload	150kg
Ground Clearance	120mm	Max Speed	5.4km/h
Wheelbase	600mm	Mileage	25km
Wheel Track	450mm	Wading Depth	50mm
Tire Diameter	250mm	Climbing Capacity	10°
Motor	600W*2 Servo motor	Span Width	120mm
Battery	48V/27AH	Obstacle Surmounting	40mm
Charging Time	3h	IP Rating	IP44
Charging Method	48V/10A charging adapter/station	Communication	CAN 2.0B
Optional Configuration		Open Source ROS Navigation Kit/NV Magic LiDAR SLAM Navigation Kit	

FW-max pro

Omnidirectional UGV

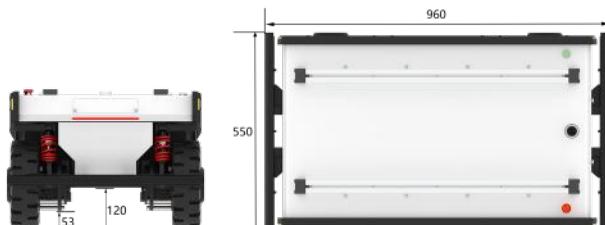
- Modular Integrated Design
- Industry application development platform for heavy-duty payload omnidirectional robots.



- Omnidirectional Multi-motion Models
- Modular Development
- Comprehensive automotive-grade security design
- Quick Removeable Battery
- Heavy-duty Payload

Application Field /

Inspections, payload operations, indoor/outdoor heavy-duty transportation, robot teaching, and robotics technology research are common scenarios in multiple industries such as energy, construction, agriculture, and industrial applications.



• Product Parameter /

Size	960* 550* 395mm	Power Supply	12V/15A - 24V/15A-48V/10A
Weight	125KG	Braking Method	Motor braking
Drive Form	Swerve Steering and 4 Motors Drive	Parking Method	Electromagnetic power off parking
Suspension	Independent Suspension	Payload	250kg
Ground Clearance	120mm	Max Speed	7.2km/h
Wheelbase	600mm	Mileage	30km
Wheel Track	450mm	Wading Depth	50mm
Tire Diameter	250mm	Climbing Capacity	10°
Motor	600W*4	Span Width	120MM
Battery	48V/40AH	Obstacle Surmounting	50mm
Charging Time	4-5h	IP Rating	IP44
Charging Method	48V/10A charging adapter/station	Communication	CAN 2.0B
Optional Configuration	Open Source ROS Navigation Kit/NV Magic LiDAR SLAM Navigation Kit		

TK-mid

Tracked Differential UGV

- All Terrain High Precision Design
- Industrial complex off-road application development platform for tracked robot



- OAll terrain high precision design
- Christie Independente Suspension
- Modular Rapid Development
- Comprehensive automotive-grade security design

• Application Field /

Complex scene inspections, composite payload operations, indoor/outdoor transportation, robot application teaching, and robotics technology research are common scenarios in multiple industries such as agriculture, municipal services, and military applications.

• Customer Case /



Agriculture Fruits Harvest Robot



• Product Parameter /

Size	1070*700*345mm	Braking Method	Motor braking
Weight	140kg	Parking Method	Motor parking
Damping system	Independent shock absorbers*8	Communication	CAN 2.0B
Suspension	Christie suspension	Payload	80kg
Weight	Q235	Max Speed	4km/h
Ground Clearance	103mm	Mileage	20km
Wheelbase	570mm	Wading Depth	100mm
Drive Wheel Diameter	224mm	Climbing Capacity	15°
Motor	1000W*2 DC brushless motor	Span Width	250mm
Battery	48V/40AH	Obstacle Surmounting	150mm
Charging Method	48V/10A charging adapter/station	IP Rating	IP 65
Power Supply	24V/15A-12V/15A	Working Temperature	-20°C~50°C
Optional Configuration		Open Source ROS Navigation Kit/NV Magic LiDAR SLAM Navigation Kit	

FB-DT-IIB

Exd IIB T4 Gb Explosion Proof Mobile Robot Platform

- High Precision Navigation
- Modular robot application platform suitable for hazardous and explosive special scenarios.



• Full-scene autonomous navigation in hazardous and chemical areas.



• Modular Development



• All-terrain Four Wheels Drive



• High Accuracy Servo Control, ±5cm Navigation

Positioning Accuracy

• Application Field /

Hazardous and Special Scenarios: Professional and Reliable Data Collection and Composite Operation Robot Platform for Flammable Gas and Dust Environments, Petrochemical Plants, Gas Stations, Hydrogenation Stations, Ammunition Depots, and Hazardous Chemical Ports. It possesses functions such as mapping, localization, autonomous navigation, path planning, and obstacle avoidance to meet the requirements of explosive hazardous environments.

• Customer Case /



Hazardous and Special Energy Scene Data Collection and Operation Robot.

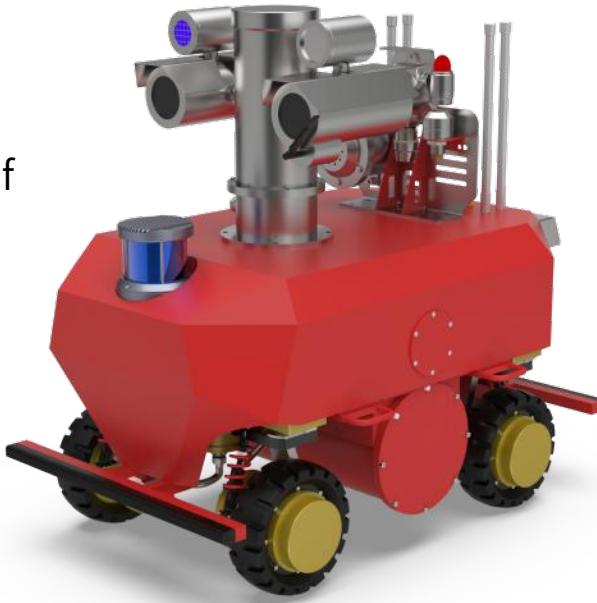
• Product Parameter /

Size	1178*762*970mm	Working Temperature	-20°C~ 50°C
Weight	330kg	Braking Method	Motor braking
Drive Form	Differential Steering and Motor Drive	Parking Method	Motor parking
Material	Q235	Payload	80KG
Ground Clearance	138mm	Max Speed	3km/h
Wheelbase	580mm	Running Mileage	15km
Wheel Track	662mm	Wading Depth	140mm
Tire Meter	400mm	Climbing Capacity	15°
Motor	1000W*4 Servo motor	Span Width	250mm
Battery	48V/50AH	Obstacle Surmounting	80mm
Charging Time	3-4h (charging adapter)	IP Rating	IP65
Charging Method	48V/18A charging adapter	Communication	CAN 2.0B
Optional Configuration	NV Magic LiDAR SLAM Navigation Kit		

FB-FW-IIC

Exd IIC T6 Gb Elexplosion Proof Mobile Robot Platform

- Design of IIC-class explosion-proof four-wheel drive motion structure.
- Modular robot application platform suitable for hazardous and explosive special scenarios.



· EX IIC Explosion-proof Structure Design.



· Modular Development



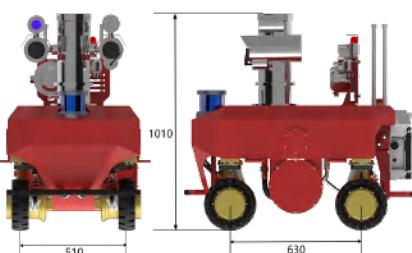
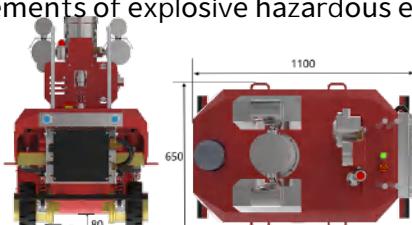
· Comprehensive automotive-grade security design



· Real-time responsive system for omnidirectional multi-motion models.

• Application Field /

Hazardous and Special Scenarios: Professional and Reliable Data Collection and Composite Operation Robot Platform for Flammable Gas and Dust Environments, Petrochemical Plants, Gas Stations, Hydrogenation Stations, Ammunition Depots, and Hazardous Chemical Ports. It possesses functions such as mapping, localization, autonomous navigation, path planning, and obstacle avoidance to meet the requirements of explosive hazardous environments.



• Product Parameter /

Size	1100*650*1010mm	Power Supply	12V/15A-24V/15A
Weight	300kg	Braking Method	Motor braking
Drive Form	Swerve Steering and 4 Motors Drive	Parking Method	Electromagnetic power off parking
Suspension	Independent suspension	Payload	100kg
Ground Clearance	70mm	Max Speed	3.6km/h
Wheelbase	630mm	Mileage	45km
Wheel Track	510mm	Wading Depth	50mm
Tire Diameter	250mm	Climbing Capacity	15°
Motor	700W*4	Span Width	120mm
Battery	48V/50AH	Obstacle Surmounting	50mm
Charging Time	3-4h	IP Rating	IP65
Charging Method	48V/18A charging adapter/station	Communication	CAN2.0B
Optional Configuration NV Magic LiDAR SLAM Navigation Kit			

OS-nano

Desktop ROS Mobile Robot Development Kit

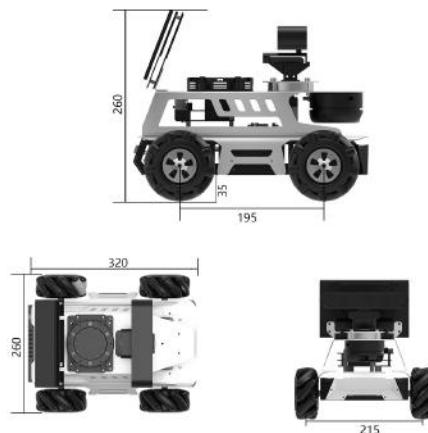
- Lightweight Portable Design.
- Robot learning application development platform for artificial intelligence education.



- Lightweight Portable Structure Design.
- Self-driving Motion Planning Teaching.
- Robot Motion Configuration Teaching.
- Graphical mapping, localization, path planning, and autonomous obstacle avoidance research and teaching.
- Various fun experimental content accompanied by sand table and competitive gaming scenarios.

• Application Field /

Intelligent connected vehicle autonomous driving and mobile robot algorithm development teaching platform, supporting full open-source code for multi-level learning and research in application, from beginner to advanced levels.



• Product Parameter /

Size	380mm*268mm*350mm
Weight	3.5 KG
Drive Form	Differential Steering and Motor Drive
Material	Aluminium Alloy
Mileage	3km
Charging Time	2h
Climbing Capacity	25°
Navigation Config.	Jetson Nano, 2D Lidar, Depth Cameras, Monitor
Function	motion control, mapping and navigation, path planning, tracking and obstacle avoidance, autonomous driving, human feature recognition, motion sensing interaction, voice interaction, integrated vision for robotic arm
OS-nano, through various optional configurations, better meets users' learning and validation needs for robot SLAM functionality, providing a fast and convenient integration solution for ROS development.	
Pre-install OS	linux/ROS1/ ROS 2

OS-lite/OS-lite2

ROS1/ROS2 2D LiDAR SLAM

Open Source Navigation Kit

- Convenient development and learning platform for autonomous navigation research and education in the fields of automotive and robotics.



- High Accuracy Self-driving Motion Plan Teaching.
- Multi-level Application Research and Teaching.
- Robot Configuration Teaching.
- Modular Development Teaching.
- Mapping, Positioning, Path Planning and Obstacle Avoidance Teaching.

• Application Field /

Intelligent connected vehicle autonomous driving and mobile robot components and sensor functionality training and algorithm education platform, with full open-source code support for multi-level application research and teaching from industry applications to professional learning.

• Customer Case /



Open-source ROS robot for research and educational scenarios.

• Product Parameter /

Navigation Config. Embedded Computer, 2D LiDAR, Depth Camera, Router	
Function	Based on ROS, control the movement of a mobile robot chassis, enabling hardware assembly, decomposition training, and learning of three-dimensional point cloud map construction for autonomous driving. It also includes learning features such as recording and tracking map paths, obstacle detection, free navigation, track following navigation, and vehicle-road coordination for the use and learning of autonomous driving functions.
Computing Unit	i3-8145U/2.1GHz
LiDAR	16m detecting range 2D LiDAR
Cameras	1280×720@7fps 640×480@30fps
IMU	Gyroscope and accelerometer
Available chassis	FR series/FW series/MK series/DT series
Pre-installed OS	Linux Ubuntu/ROS1/ROS2
Navigation Accuracy	Indoor ±5cm; mission point ±4cm

OS-mate/OS mate2

ROS1/ROS2 3D LiDAR SLAM

Open Source Navigation Kit

- Convenient Development and Learning Platform for Multi-Scenario Research and Education in the Field of Vehicles and Robots.



- High Accuracy Self-driving Motion Plan Teaching.
- Multi-level Application Research and Teaching.
- Robot Configuration Teaching.
- Modular Development Teaching.
- Mapping, Positioning, Path Planning and Obstacle Avoidance Teaching.

• Application Field /

Intelligent connected vehicle autonomous driving and mobile robot components and sensor functionality training and algorithm education platform, with full open-source code support for multi-level application research and teaching from industry applications to professional learning.

• Customer Case /



Open-source ROS for research and competition.

• Product Parameter /

Navigation Config.	
Embedded Computer, 3D LiDAR, Depth Camera, Router	
Function	Based on ROS, control the movement of a mobile robot chassis, enabling hardware assembly, decomposition training, and learning of three-dimensional point cloud map construction for autonomous driving.
Computing Unit	i5-8265U/1.6GHz
LiDAR	3D LiDAR
Cameras	1280*720@7fps 640*480@30fps
IMU	Gyroscope and accelerometer
Available chassis	FR series/FW series/MK series/DT series
Pre-installed OS	Linux Ubuntu /ROS1/ROS2
Navigation Accuracy	Indoor: repeating positioning accuracy ±5cm; Outdoor: repeating positioning accuracy ±10cm;

OS-mars

Autoware Self-driving Open Source R&D Platform

- Efficient Development and Learning Platform for Autonomous Driving Research in the Field of Vehicle-Grade Chassis and Autoware Open-Source Code Design for Vehicles and Robots.



- Vehicle-Grade Standard Chassis CAN Communication Development Teaching.
- Modular Development and Design Teaching for Intelligent Driving Onboard Modules.
- Teaching on Development of 3 Major Wire Control Components and Integration of 8 Types of Autonomous Driving Sensors for Perception.
- Teaching on Autonomous Driving Safety Logic and Training Testing through Sensor Fusion.
- Teaching on Deep Algorithm Development for Fully Open-Source Autonomous Driving Code.
- Teaching on Algorithm Development for Single Sensor Autonomous Driving.
- Teaching on Algorithm Development for Multi-Sensor Fusion Autonomous Driving.

• Application Field /

Intelligent connected vehicle autonomous driving and mobile robot autonomous navigation research and education platform, with full open-source code support for deep algorithm development and single-sensor algorithm development. It supports multi-level research and teaching in various professional domains.

• Customer Case /



Intelligent Networked Vehicle Training Robot

• Product Parameter /

Navigation Config. Embedded Computer, 3D LiDAR, Cameras, Millimeterwave Radar, Ultrasonic Radar, RTK, IMU	
Function	Based on ROS2, control the movement of a mobile robot chassis, enabling hardware assembly decomposition training, and learning of three-dimensional point cloud map construction for autonomous driving, path point recording and tracking, obstacle detection and avoidance, free navigation.
Computing Unit	AGX32
LIDAR	3D LiDAR-16 channels
Ultrasonic Radar	8 in 1 Ultrasonic Radar
Millimeterwave Radar	250m detecting range
IMU	Gyroscope and accelerometer
Available Chassis	FR-mid/FR-max/MK-mid/MK-mini
Pre-installed OS	Linux / Autoware
Navigation Accuracy	Outdoor ±20cm

OS-saturn

Apollo 3.0 /7.0 Self-driving Open Source Educational Platform

- Vehicle-grade chassis and Apollo open-source code.
- Efficient Development and Learning Platform for Research and Education in the Field of New Energy Vehicle Autonomous Driving.



- Millisecond-level Response Wire-Controlled Chassis and Teaching of Autonomous Driving Sensor Installation and Disassembly.
- Modular Development and Design Teaching for Intelligent Driving Onboard Modules.
- Development and Teaching of Graphical Mapping, Localization, Path Planning, and Autonomous Obstacle Avoidance.
- Teaching on Algorithm Development for Multi-Sensor Fusion Autonomous Driving.
- Teaching on Autonomous Driving Safety Logic and Training Testing through Sensor Fusion.
- Teaching Experimental Dynamic Planning for High-Precision Autonomous Driving.
- Teaching Multi-level Application Research and Education from Industry Applications to Professional Learning.

• Application Field /

Intelligent connected vehicle autonomous driving and mobile robot autonomous navigation research and education platform, with full open-source code support for deep algorithm development and single-sensor algorithm development. It supports multi-level research and teaching in various professional domains.

• Customer Case /



Intelligent Connected Vehicle Training Robot

• Product Parameter /

Navigation Config. Embedded Computer, 3D LiDAR, Cameras, Millimeterwave Radar, Ultrasonic Radar, RTK, IMU	
Function	Based on Apollo, control the movement of a mobile robot chassis, enabling hardware assembly decomposition training, and learning of three-dimensional point cloud map construction for autonomous driving, path point recording and tracking, obstacle detection and avoidance, free navigation.
Computing Unit	AGX32/Intel i9
LIDAR	3D LiDAR-16 channels
Camera	High-precision Binocular Vision Camera.
Ultrasonic Radar	8 in 1 Ultrasonic Radar
Millimeterwave Radar	250m detecting range
IMU	Gyroscope and accelerometer
Available Chassis	FR-mid/FR-max /mk-mid/mk-mini
Pre-installed OS	Linux / Apollo 3.0/Apollo 7.0

OS-mate plus

LiDAR SLAM based and RTK Open Source Navigation Kit

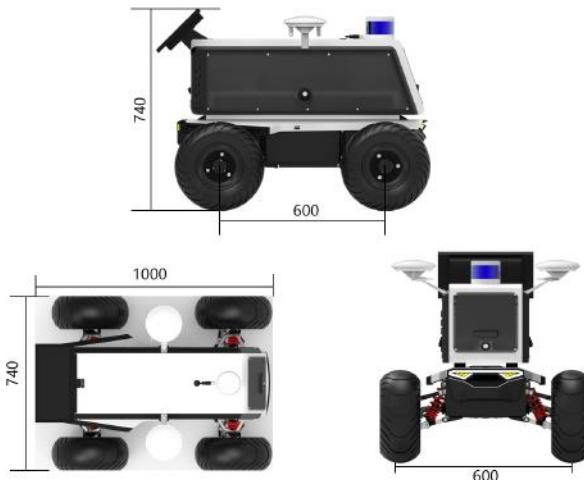
• Multi-sensor-equipped Development and Learning Platform for Research and Education in Robot Multi-Scene Autonomous Navigation.



- High Accuracy Self-driving Motion Plan Teaching.
- Multi-level Application Research and Teaching.
- Robot Configuration Teaching.
- Modular Development Teaching.
- Mapping, Positioning, Path Planning and Obstacle Avoidance Teaching.

• Application Field /

Research and Education in the Integration of Multi-Sensor Fusion in Artificial Intelligence Industry Applications and Mobile Robotics across Multiple Industries such as Automotive, Energy, Agriculture, and Construction.



• Product Parameter /

Navigation Config. Embedded Computer, 3D LiDAR, Cameras, Ultrasonic Radar, RTK, IMU	
Function	Based on ROS, control the movement of a mobile robot chassis, enabling hardware assembly, decomposition training, and learning of three-dimensional point cloud map construction for autonomous driving.
Computing Unit	i5-8265U/1.6GHz
LiDAR	3D LiDAR
Cameras	1280*720@7fps 640*480@30fps
Ultrasonic Radar	8 in 1 Ultrasonic Radar
IMU	Gyroscope and accelerometer
Available Chassis	FR series/FW series/DT series/ MK series/TK series
Pre-installed OS	Linux Ubuntu ROS1/ROS2

OS-work

Open-Source Autonomous Navigation and Manipulation Robot.

- Multi-Scene Compound Mobile Robot for Research and Education Purposes in Artificial Intelligence Industries such as Automotive, Energy, Agriculture, and Construction, both indoors and outdoors.



• High Accuracy Self-driving Motion Plan Teaching.

• Multi-level Application Research and Teaching.

• Robot Configuration Teaching.

• Modular Development Teaching.

• Mapping, Positioning, Path Planning and Obstacle Avoidance Teaching.

• Application Field /

Research and Education in the Integration of Multi-Sensor Fusion in Artificial Intelligence Industry Applications and Mobile Robotics across Multiple Industries such as Automotive, Energy, Agriculture, and Construction.

• Customer Case /



Power Line Operation



Agricultural Harvesting Robot.

• Product Parameter /

Navigation Config. Embedded Computer, 3D LiDAR, Cameras, Ultrasonic Radar, IMU	
Function	Based on ROS, control the movement of a mobile robot chassis, enabling hardware assembly, decomposition training, and learning of three-dimensional point cloud map construction for autonomous driving.
Computing Unit i5-8265U/1.6GHz	
LiDAR	3D LiDAR
Cameras	
	1280*720@7fps 640*480@30fps
IMU	Gyroscope and accelerometer
Available Chassis	
	FR series/FW series/DT series/ MK series/TK series
Pre-installed OS	
	Linux Ubuntu ROS1/ROS2

NV-magic

High-precision Low-speed Level 4 Commercial Autonomous Driving Kit.

· Integrated Development and Application Platform for Commercialization of Energy, Construction, and Agriculture Scenarios.



- High-precision Dynamic Path Planning.
- Modular Expansion Development Platform.
- Modular Rapid Map Construction for Mobile Applications.
- API Interface Protocol.

• Application Field /

Commercial Applications and Research Education of Mobile Robots in Artificial Intelligence Industry Scenarios such as Automotive, Energy, Agriculture, and Construction.

• Customer Case /



Commercial Autonomous Delivery Robot



Intelligent Connected Educational Robot.

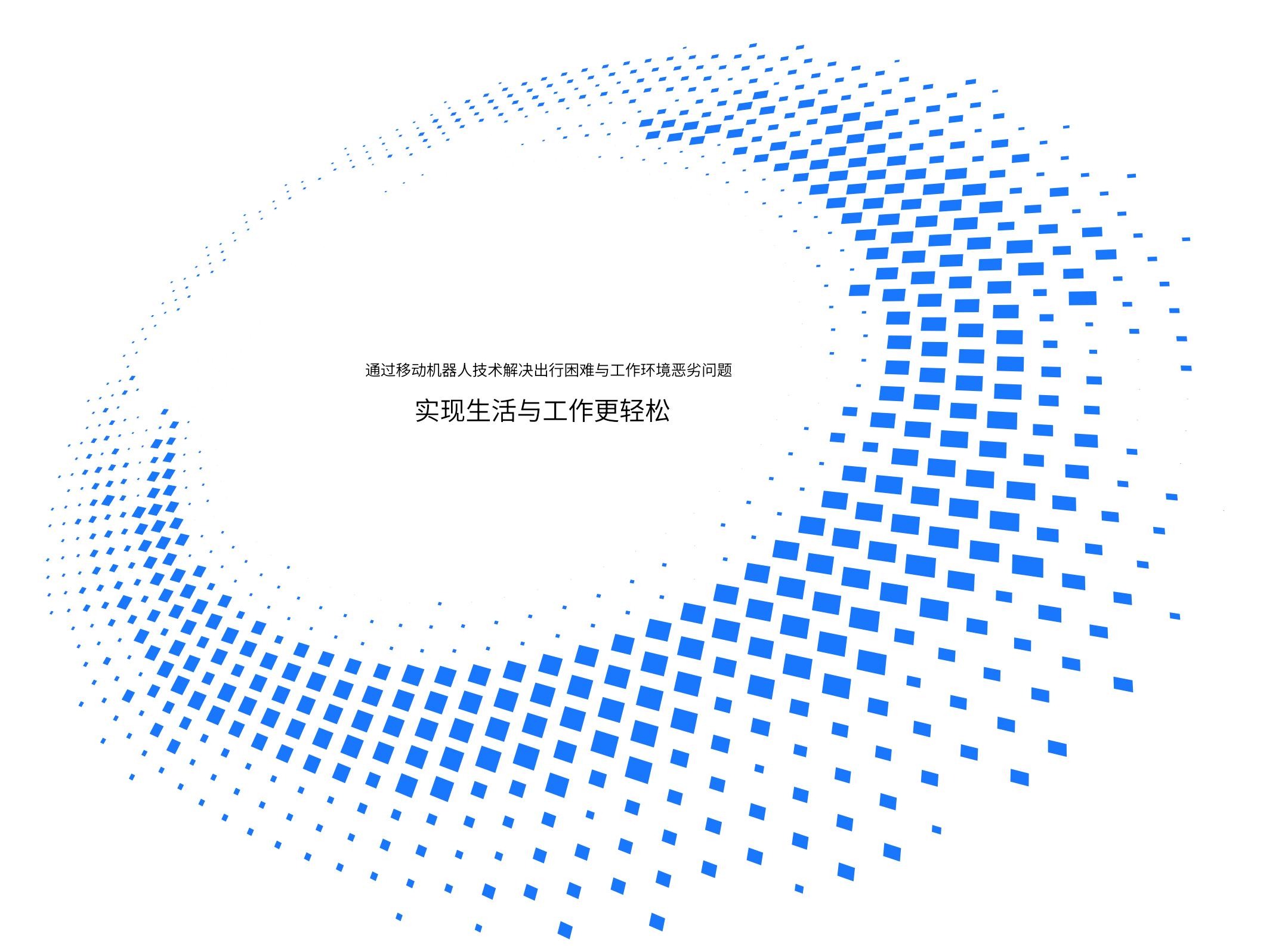
• Product Parameter /

Navigation Config. Embedded Computer, 3D LiDAR, Cameras, Ultrasonic Radar, IMU	
Function	APP supporting various robot functionalities such as viewing, controlling, mapping, navigation, and parameter configuration. The app also showcases the capability to construct a 70,000-square-meter 2D map.
Computing Unit	Intel i5
LiDAR	3D LiDAR
Cameras	1280*720@7fps 640*480@30fps
Ultrasonic Radar	8 in 1 Ultrasonic Radar
IMU	Gyroscope and accelerometer
Available Chassis	FR series/FW series/DT series/ MK series/TK series
Pre-installed OS	Linux/ROS1
Positioning Accuracy	Indoor & outdoor repeating positioning accuracy ±5cm

YUHESEN

MAKE LIFE AND WORK EASIER





通过移动机器人技术解决出行困难与工作环境恶劣问题
实现生活与工作更轻松