

Cobot Magic

1) Diagram



2) Spec

Item	Model	Specification	Description
1	Chassis	TRACER	<ul style="list-style-type: none"> ■ Dimensions:685mm*570mm*155mm ■ Gross Vehicle Weight:28-30KG ■ Charger:AC 220V Independent Charger ■ Drive Form:Two-wheel Differential Drive ■ Landing Capacity: 100KG ■ Charging Period: 4H ■ Warranty:1 year ■ AgileX remote controller
2	Camera	Orbbec-DABAI	<ul style="list-style-type: none"> ■ Depth Range: 0.3-3m ■ Depth Resolution: 640*400@30FPS, 320*200@30FPS

			<ul style="list-style-type: none"> ■ Depth Fov: H 67.9° V 45.3° ■ RGB Resolution: 1920*1080@30FPS、1280*720@30FPS、640*480@30FPS ■ RGB Fov: H 71° V 43.7° @1920*1080
3	Router	B535-836	<ul style="list-style-type: none"> ■ Transmission : 2.4GHz +5GHz, ■ Dual-frequency signal ■ Port: 3 Gigabit LAN ports & 1 WAN/LAN port ■ Network: 4G
4	Arm	Customized Arm	<ul style="list-style-type: none"> ■ Degrees of freedom: 6 ■ Reach: 509mm ■ Repeatability: 1mm ■ Rated load: 1500g ■ Peak load: 3000g
5	Computer	Nvidia Orin nano 8G Developer Kit	<ul style="list-style-type: none"> ■ Jetson Orin Nano 8GB: ● For Data acquisition
7	IMU	CH110	<ul style="list-style-type: none"> ■ Maximum range of the three-axis accelerometer: $\pm 8G$, maximum range of the three-axis gyroscope: $\pm 2000^\circ/s$, maximum range of the three-axis magnetic sensor: $\pm 8G$ (Gauss) ■ Roll/Yaw operational angle range: -180° to 180°, Pitch operational angle range: -90° to 90°, static error 0.4° (RMS), dynamic error 1° (RMS)
8	Shell	Sensors stand	<ul style="list-style-type: none"> ■ Customized service

3) OS

	Item	Description
System configuration	System	Ubuntu 18.04 LTS
	ROS version	ROS Melodic

	Development tool	VSCode , Gazebo, Moveit, rqt, No Machine
	Supervisory control	Rviz
car_base	Chassis package	tracer_base
	Software package	ugv_sdk
sensors	LiDar package	lidar
	Camera package	camera
	Gripper package	gripper
SLAM	Algorithm support	amcl, gapping, RF2O, pointcloud_to_laserscan

4) List

	Item	Qty	Unit	
Hardware	Robot chassis certificate	1	PCS	
	Robot chassis User manual	1	PCS	
	Cobot Mobile AlhoaSecondary development document	1	PCS	
	Cobot Mobile ALOHA Sensors User manual	1	PCS	
Software	Robot chassis Model package	1	PCS	
	Robot chassis ROS package	1	PCS	https://github.com/agilexrobotics
	Robot chassis Gazebo package	1	PCS	https://github.com/agilexrobotics/AgileX-Robotics-all-products-user-manuals
	Open source DEMO package	1	PCS	

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