

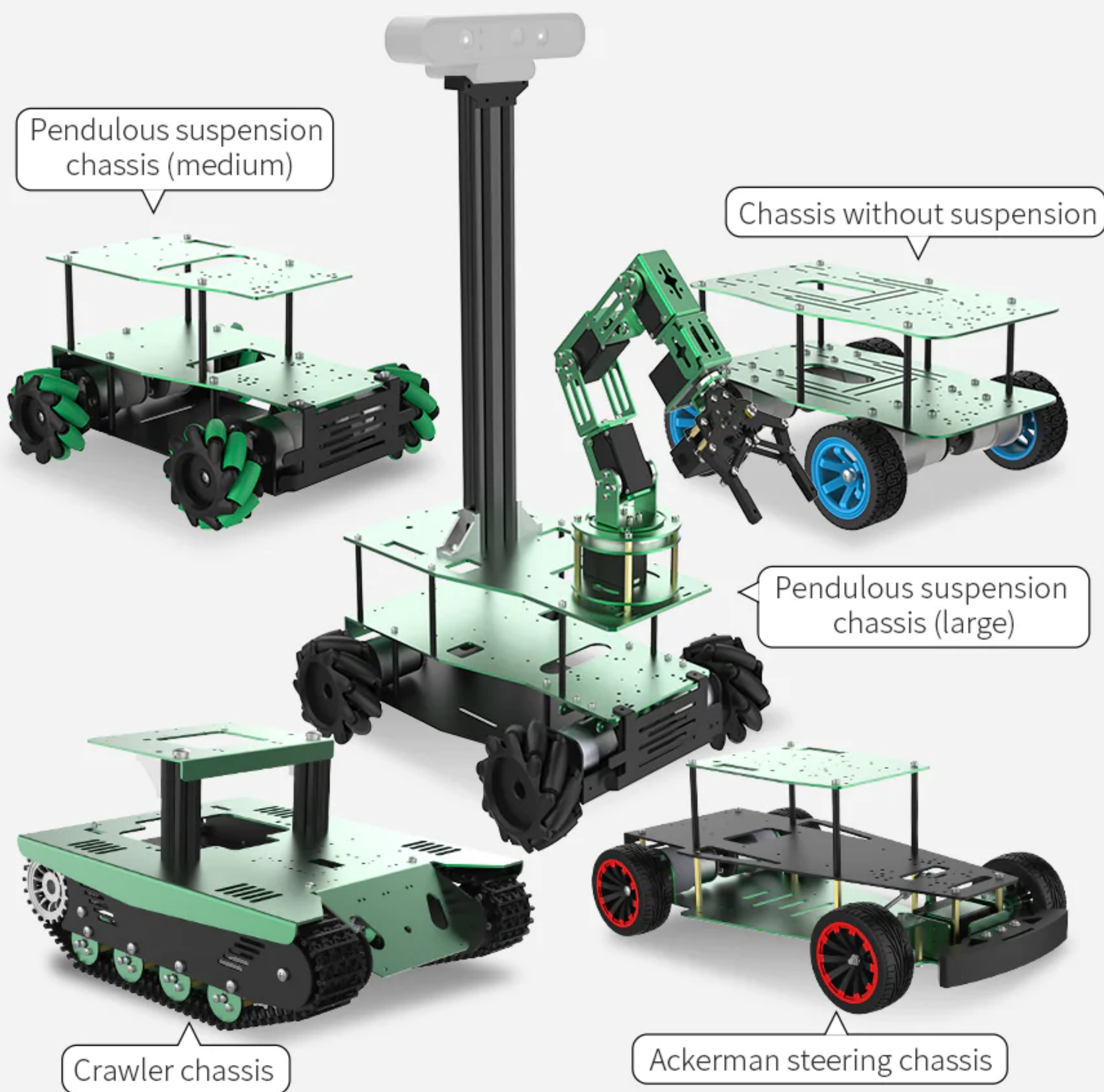
ROS Robot Car Chassis








All aluminum alloy frame

High precision motor with encoder

Multiple chassis structures are available

Compatible with many ROS accessories



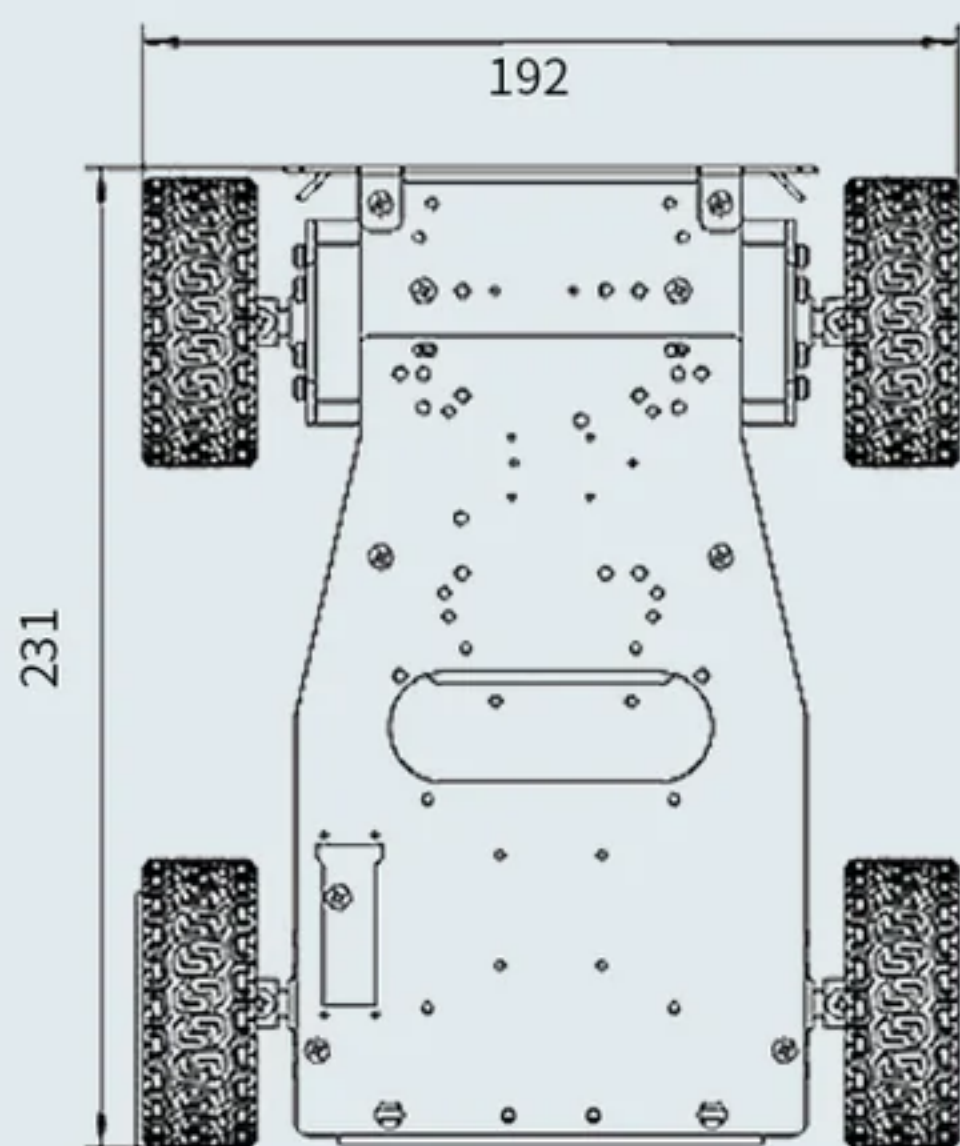
Chassis Type							
	4WD chassis without suspension	Mecanum wheel chassis without suspension	Pendulous suspension 4WD chassis (medium)	Pendulous suspension Mecanum wheel chassis (medium)	Ackerman steering chassis	Crawler chassis	Pendulous suspension Mecanum wheel chassis (large)
Car Model Description	Four wheels are driven independently, which can control the speed of each motor independently, it has abundant power and better expansion ability.	Four wheels are driven independently, 360° omnidirectional movement can be achieved, which is more flexible than other robot cars.	Four wheels are driven independently, which can control the speed of each motor independently. The pendulous suspension can make the four wheels touch the ground at the same time, so as to avoid the wheel slipping in the air.	Four wheels are driven independently, 360° omnidirectional movement can be achieved, which is more flexible than other robot cars. The pendulous suspension can make the four wheels touch the ground at the same time, so as to avoid the wheel slipping in the air.	Classic car model, rear drive differential drive, The front wheel steering gear controls the direction of rotation.	Crawler type mechanical structure can adapt to different terrain. It is characterized by differential rotation, strong load capacity, etc	Four wheels are driven independently, 360° omnidirectional movement can be achieved. The pendulous suspension can make the four wheels touch the ground at the same time. Large chassis can load more accessories; Support install robotic arm.
Drive structure	Four wheel independent drive				Rear drive differential, Ackerman steering	Crawler type	Four wheel independent drive
Car weight	1275g	1296g	1328g	1350g	1173g	2010g	2020g
Dimension (including wheel width)	242*189*125mm	242*196.4*125mm	231*192*135mm	231*199*135mm	337*191*131mm	311.98*239*164.6mm	300*245*131mm
Wheel type	65mm High friction wheel	65mm Mecanum wheel	65mm High friction wheel	65mm Mecanum wheel	65mm Two color wheel anti-skid rubber tire	Nylon track	80mm Mecanum wheel
Motor reduction ratio	1:30				1:19	1:56	
Motor speed	333				550	205	
No load speed	About 1.12M/S				About 1.87M/S	About 0.69M/S	
Load capacity	3-4kg	4-6kg	3-4kg	4-6kg	2-3kg	8-11kg	7-10kg
Optional	/					3DOF quick release robotic arm	6DOF robotic arm, camera heiger bracket

Pendulous Suspension Chassis (medium)

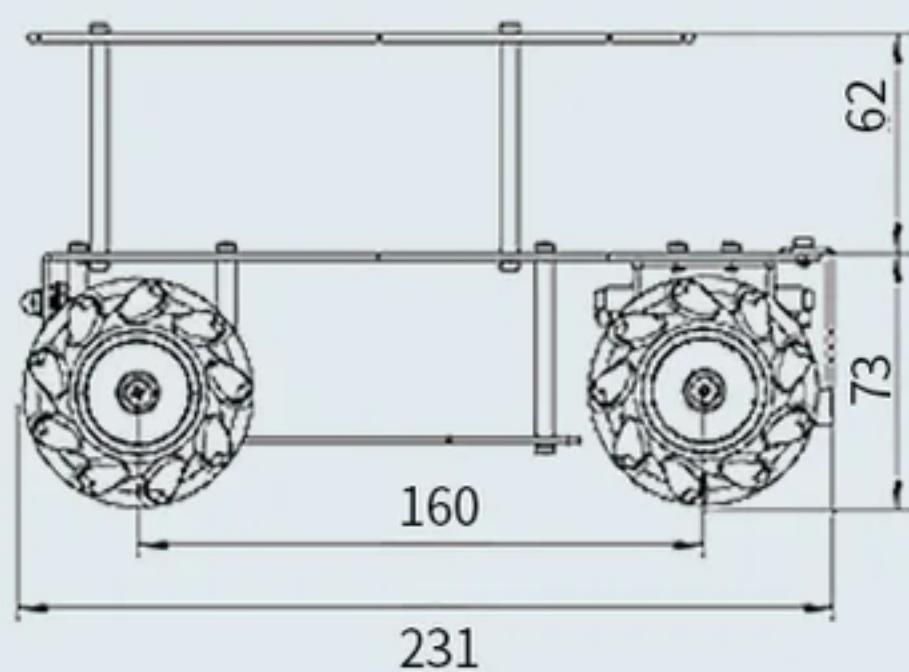
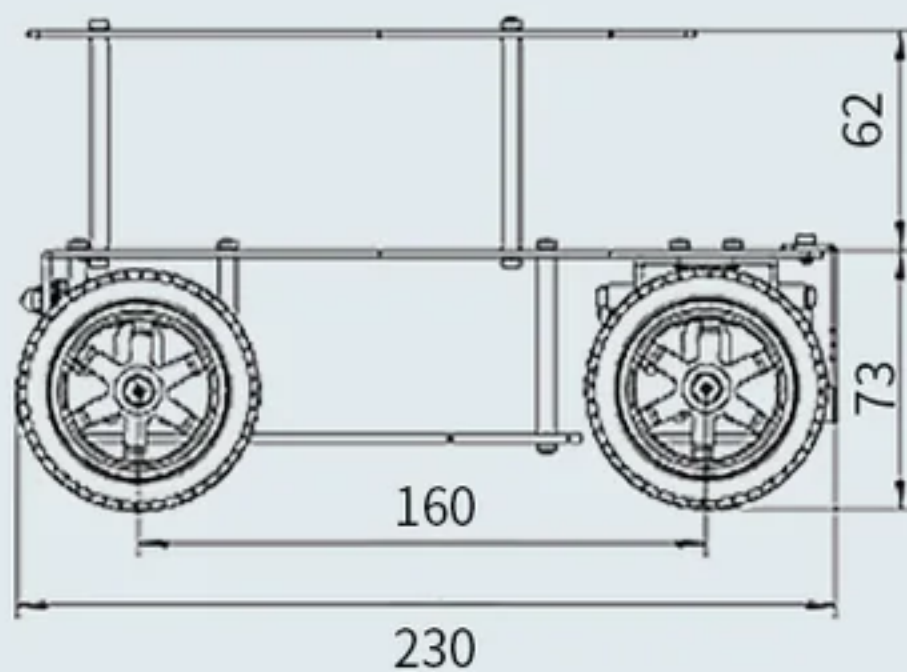
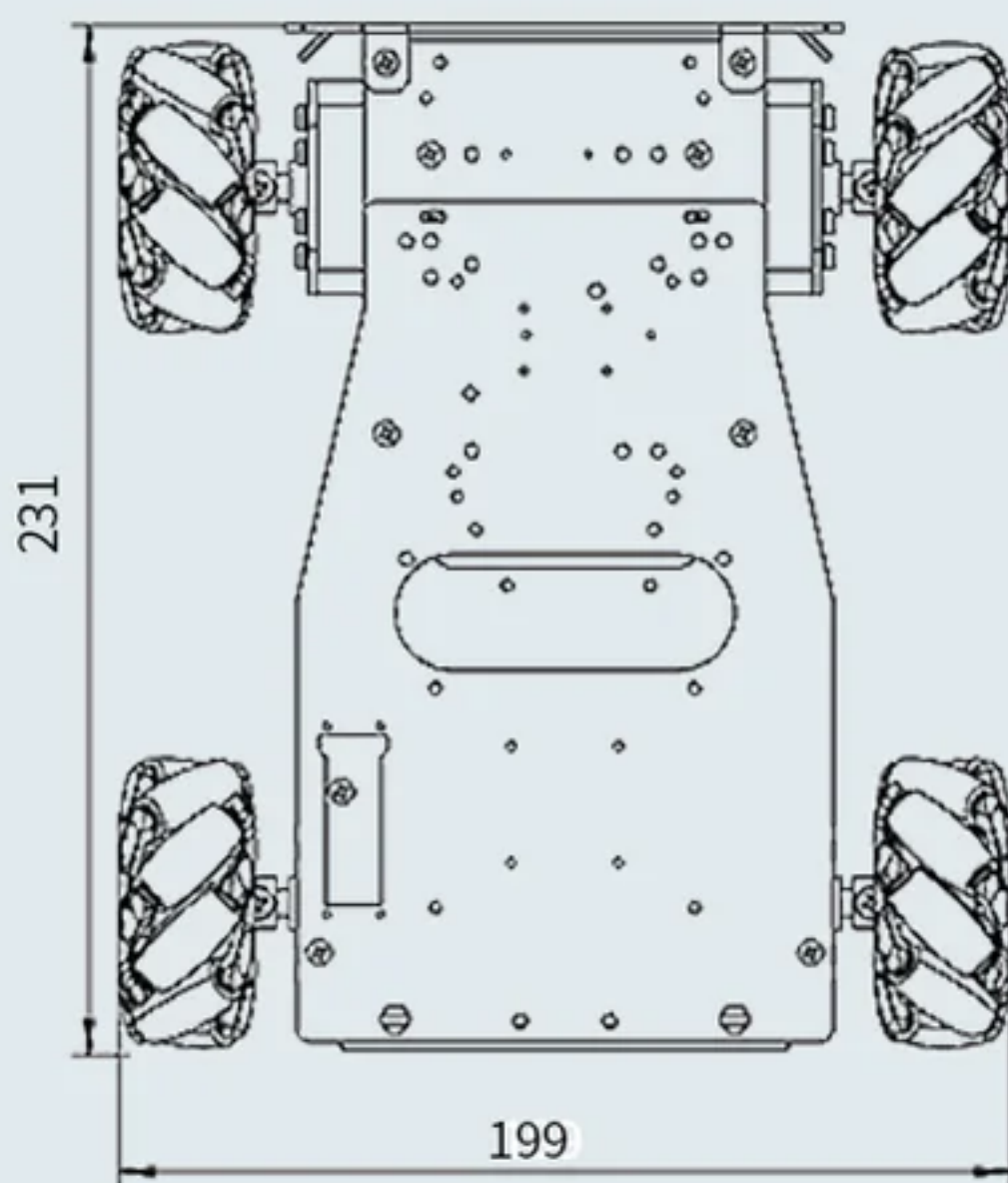


1 Chassis dimension picture Unit: mm

Pendulous suspension
4WD chassis (medium)

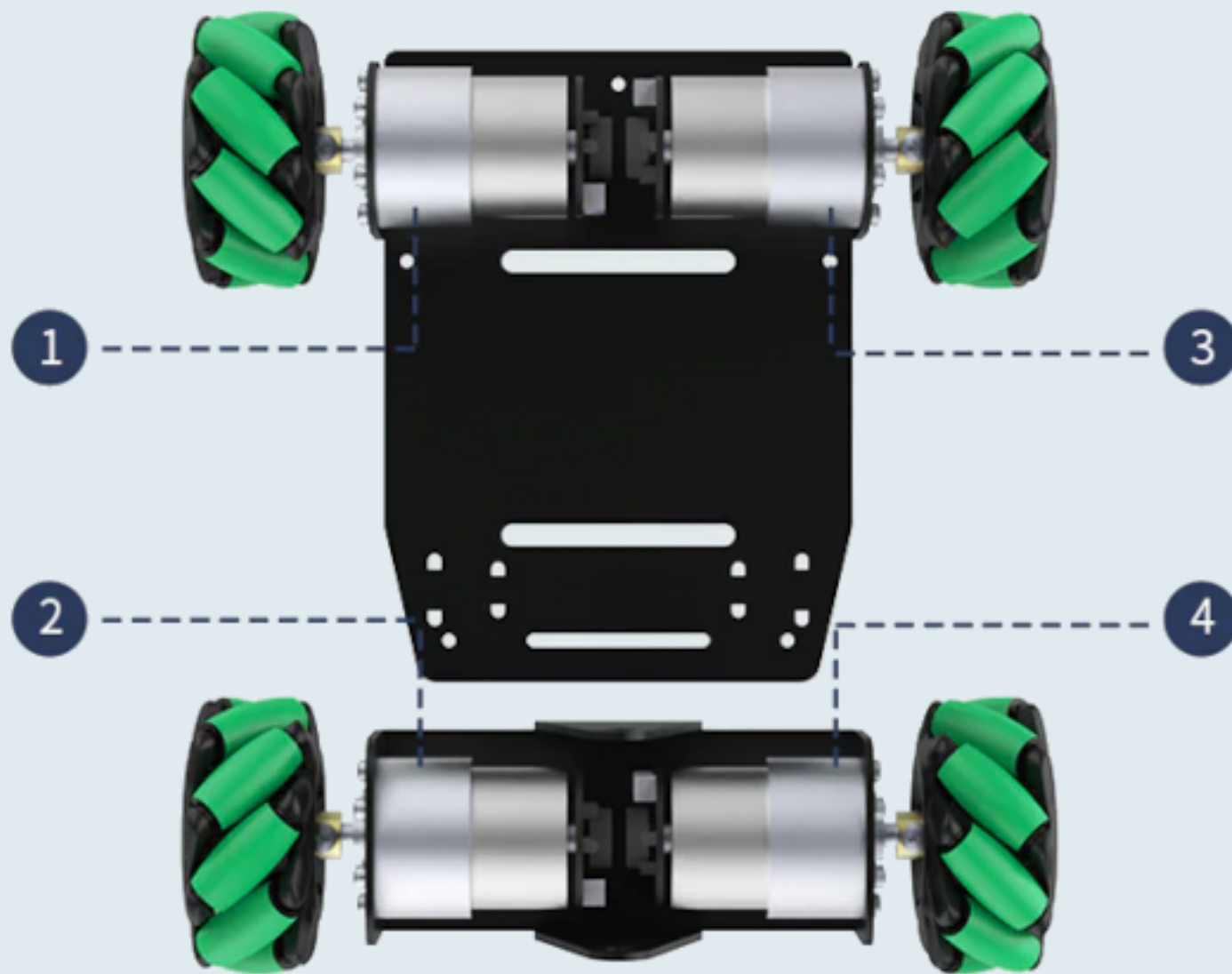


Pendulous suspension
Mecanum wheel chassis (medium)



2 Equipped with four 520 motors with encoder

4WD chassis with suspension and Mecanum wheel chassis with suspension are equipped with four DC motors with a reduction ratio of 1:30. The speed and torque of the motor can meet most use scenarios.



3 Pendulum suspension structure features

When the robot travels on uneven roads, it can automatically adapt to the uneven ground to ensure that all four wheels touch the ground at the same time, so as to prevent wheel slip from affecting motor encoder recognition.



4 Large friction rubber wheel and Mecanum wheel for choice



65mm high friction rubber tire
With 4WD chassis with pendulum suspension

The tires have small deformation and dense tread patterns, which are suitable for 4WD cars and can bear a certain weight.



65mm Mecanum wheel chassis
With Mecanum wheel chassis with pendulum suspension

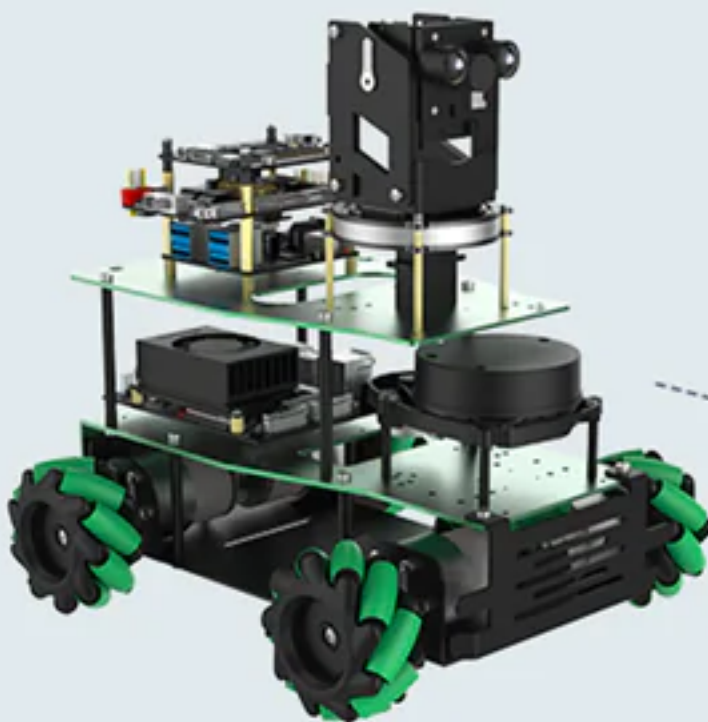
Mecanum wheel has compact structure and better flexibility, which can enable the car to realize flexible omni-directional lateral movement.

5 Use Cases

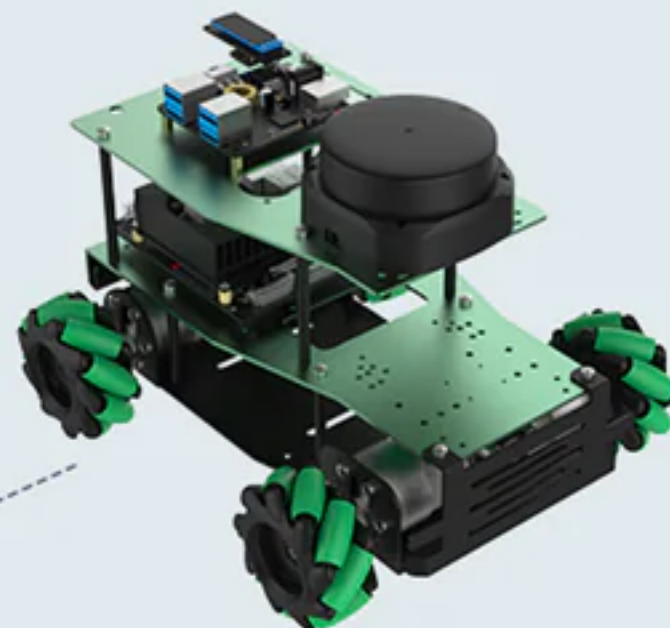
Pendulous suspension 4WD chassis (medium)
+ Astra Pro depth camera + S2 lidar



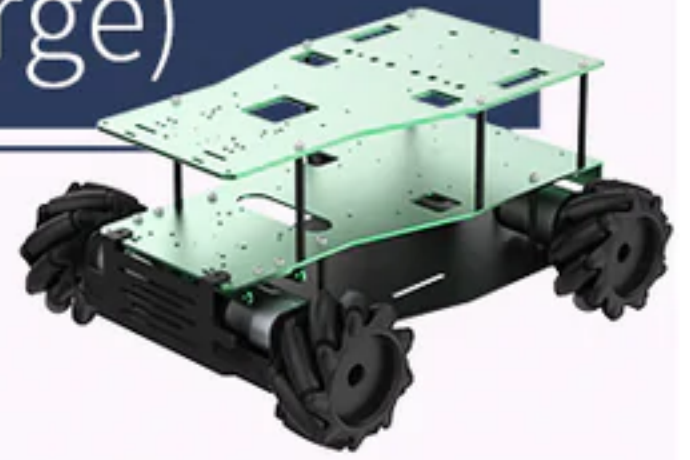
Pendulous suspension 4WD chassis (medium)
+ HD camera PTZ + X3 lidar



Pendulous suspension Mecanum
wheel chassis (medium) + S2 lidar



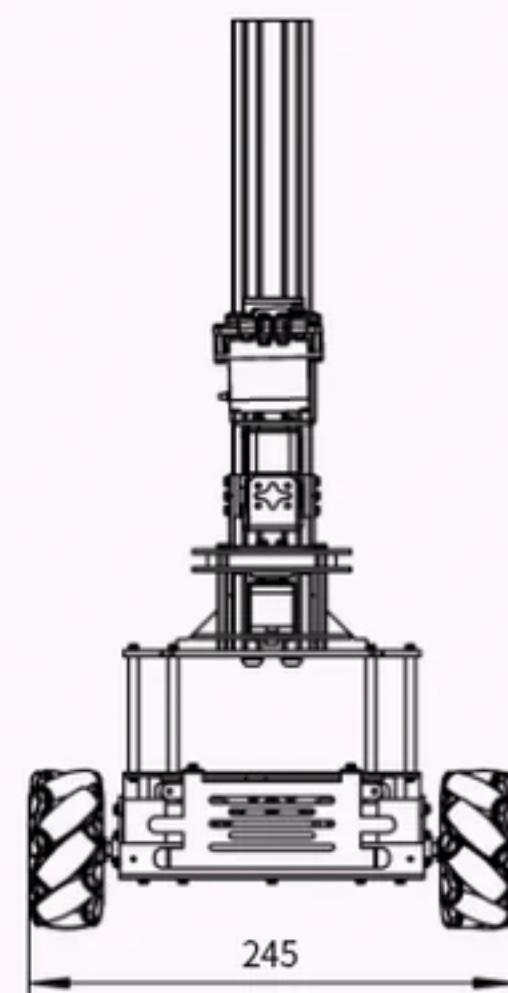
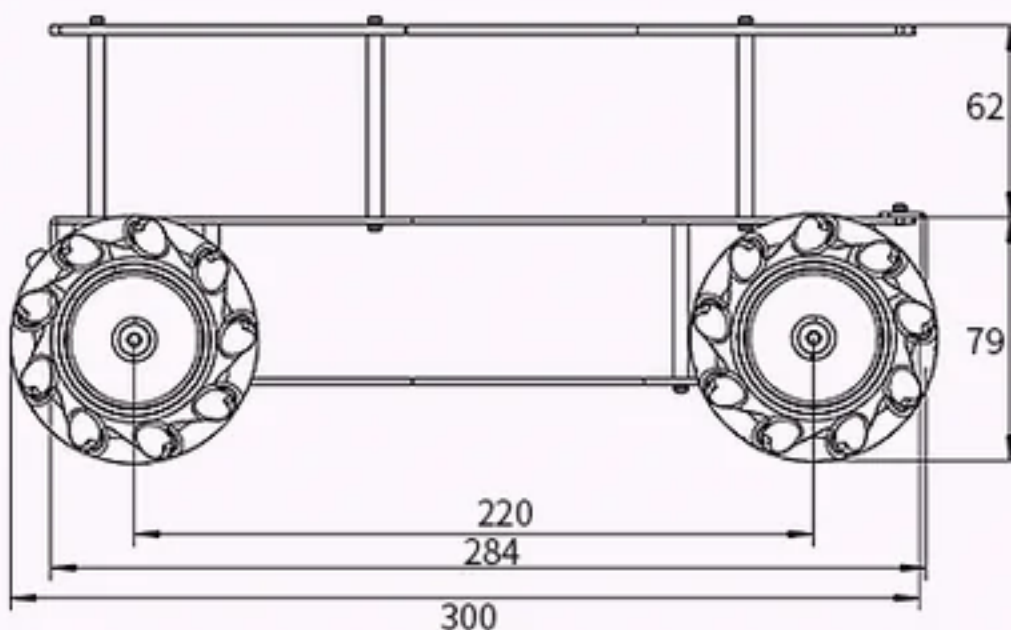
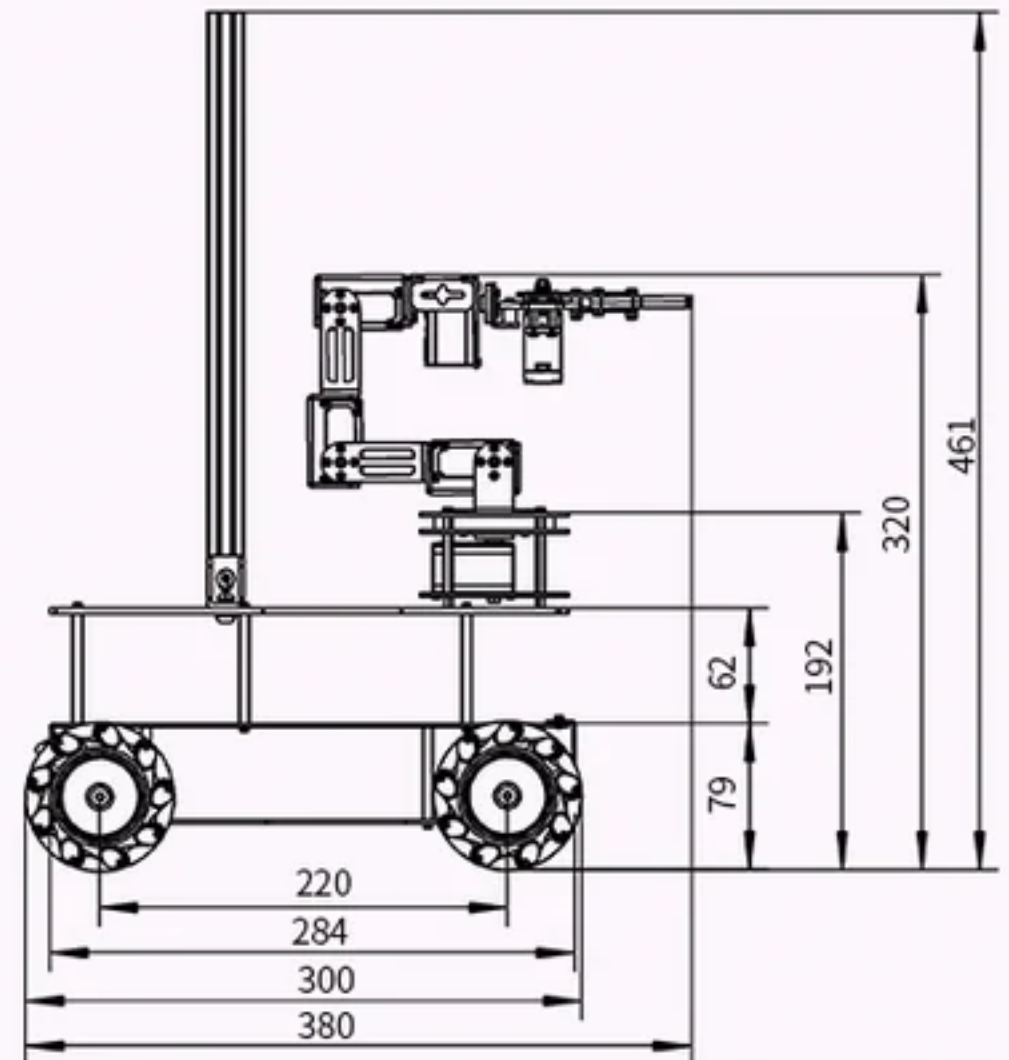
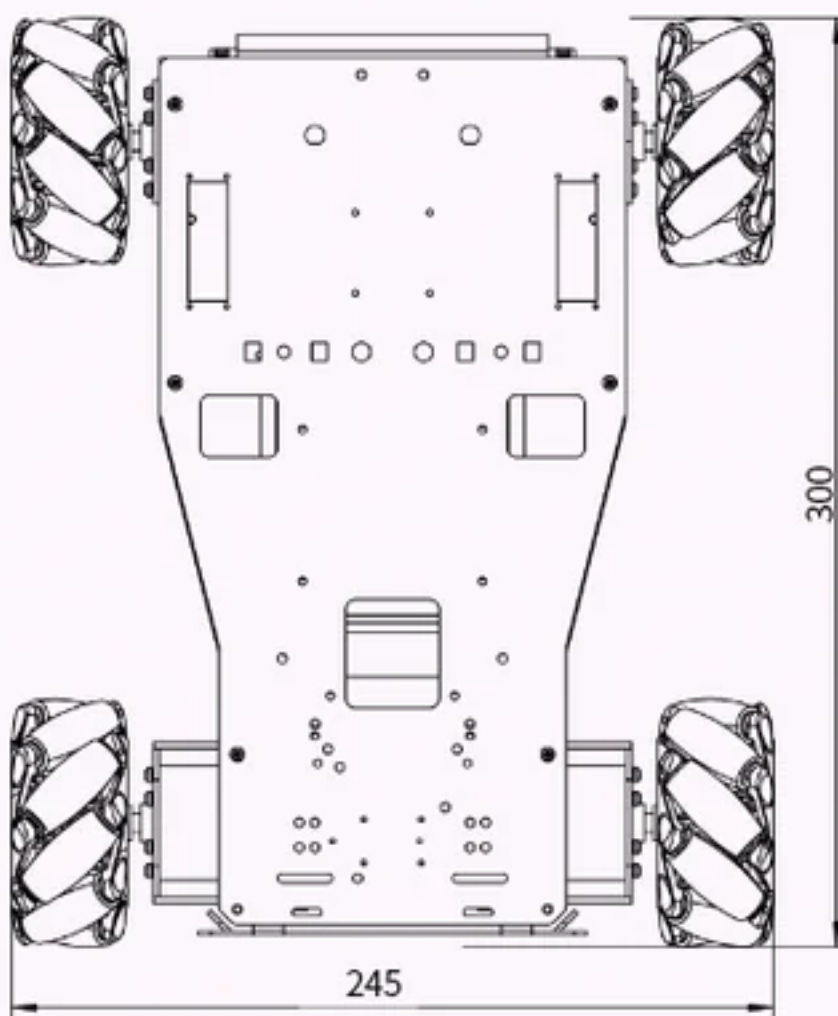
Pendulum suspension mecanum wheel chassis (large)



1 Chassis dimensions picture Unit: mm

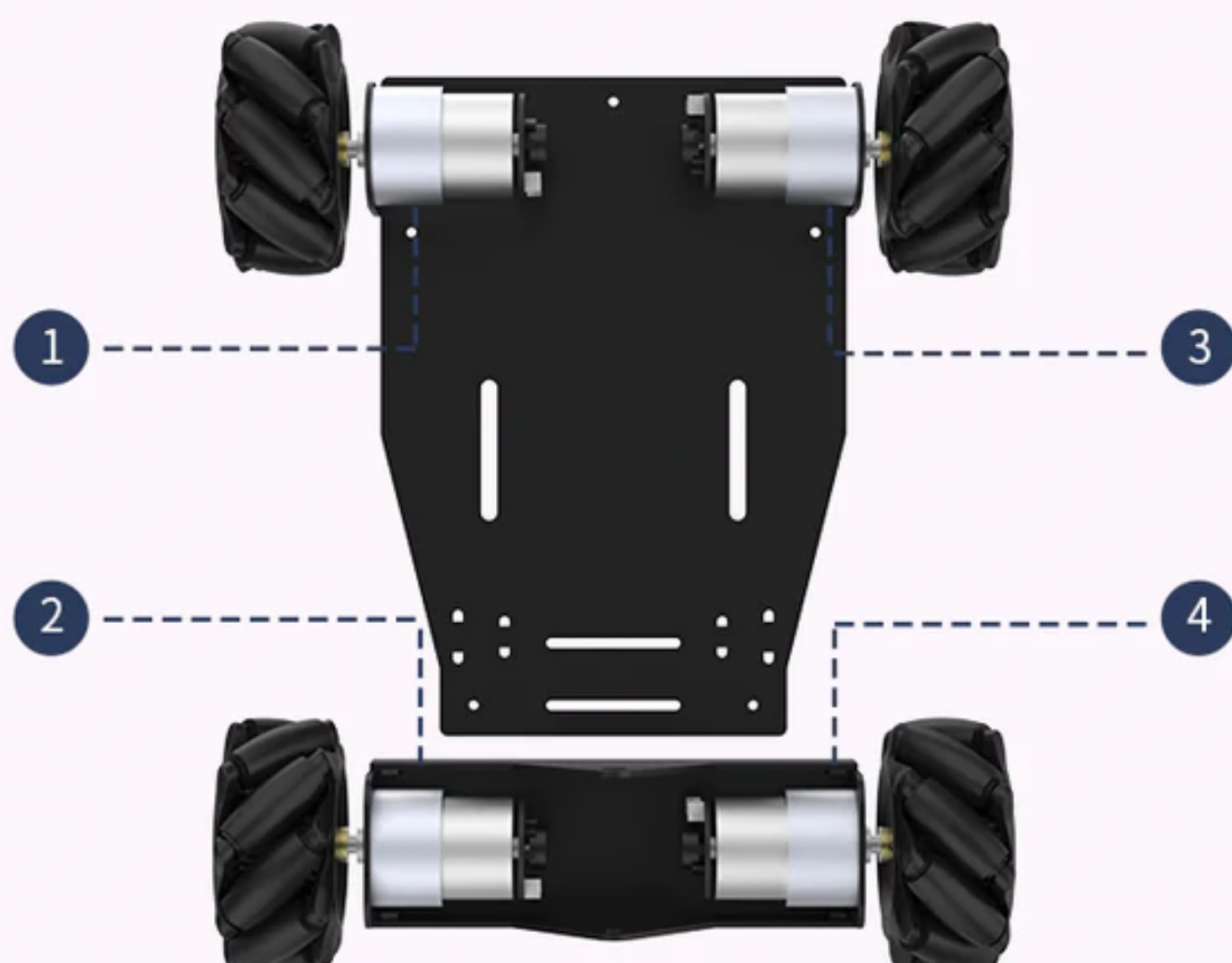
Pendulum suspension mecanum wheel chassis (large)

Pendulum suspension mecanum wheel chassis (large) + 6DOF robotic arm + depth camera bracket



2 Equipped with 4PCS 520 motors with encoder

The pendulum suspension wheat wheel chassis is equipped with 4PCS DC geared motors with a reduction ratio of 1:56. It has large torque, strong horsepower and excellent performance. It is suitable for large and high-load omni-directional mobile car.



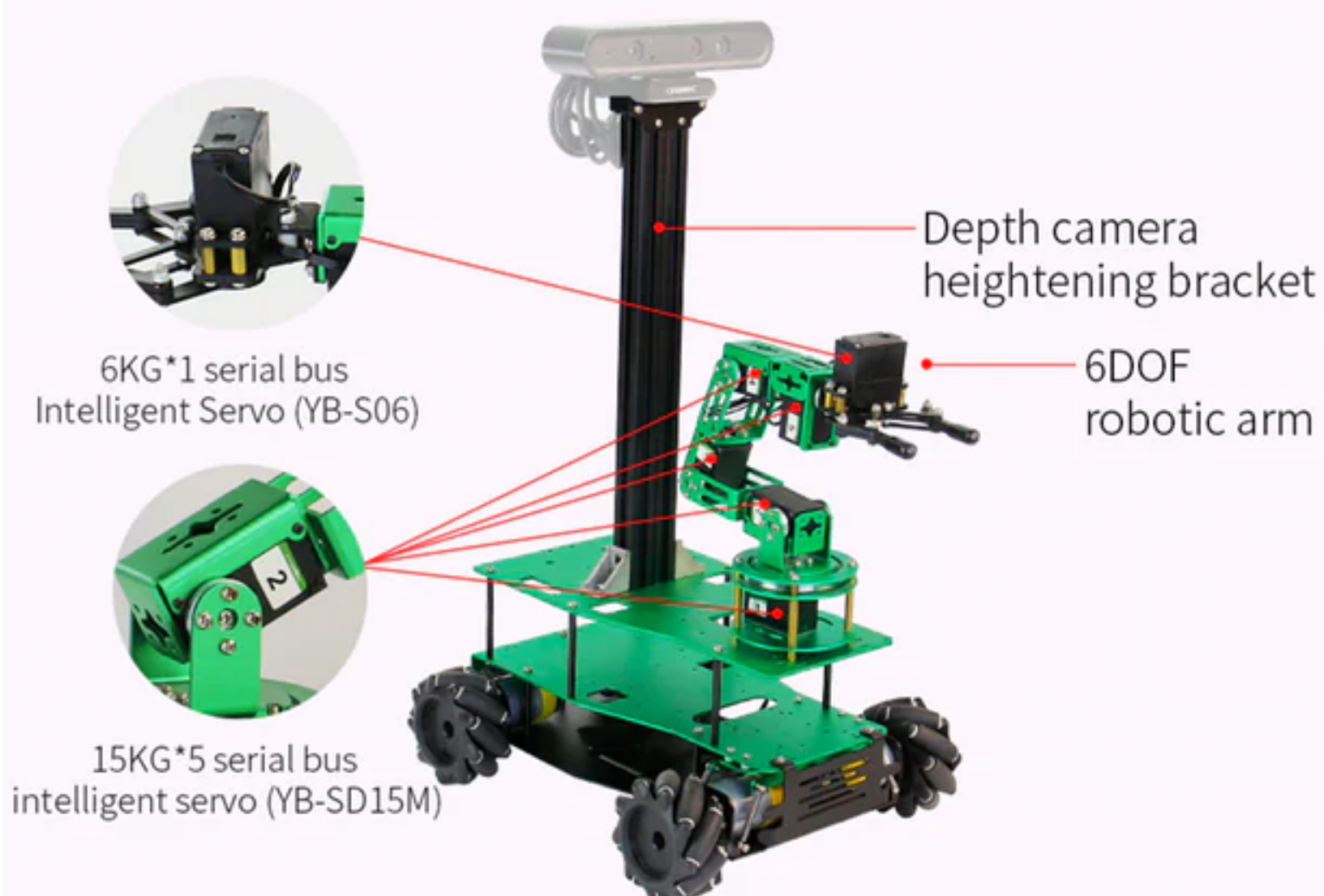
3 Large size 80mm mecanum wheel

Mecanum wheel has compact structure and flexible movement. Using 4PCS wheels to assemble the car can make the car realize all-round lateral movement more flexibly and conveniently.

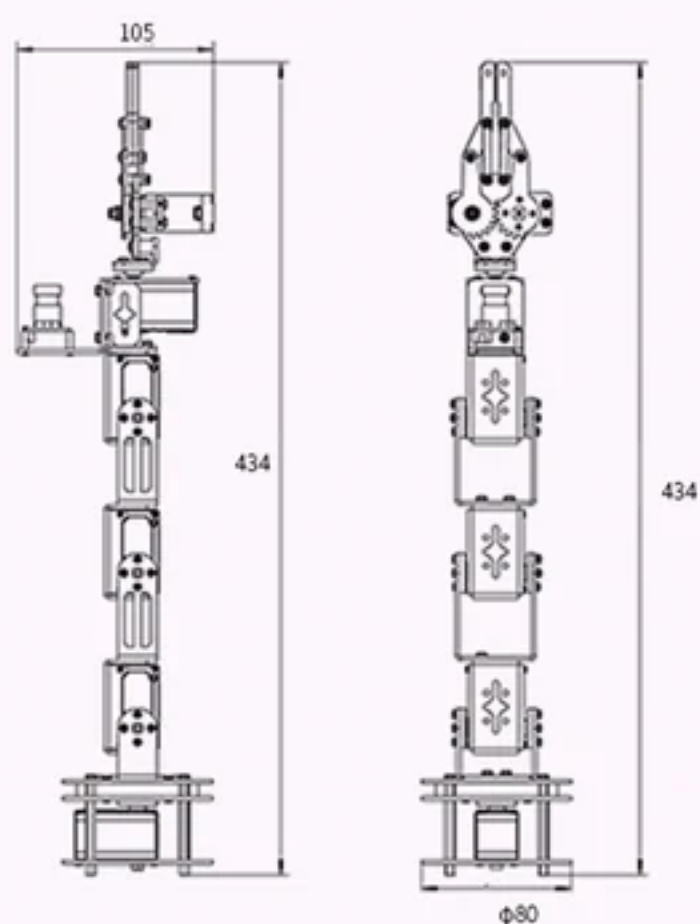


Name	80mm mecanum wheel
Diameter	80mm
Width	37.4mm
Wheel material	PA66 engineering plastic
Liner	No
Tire	TPU wear-resistant rubber
Weight	118.5g

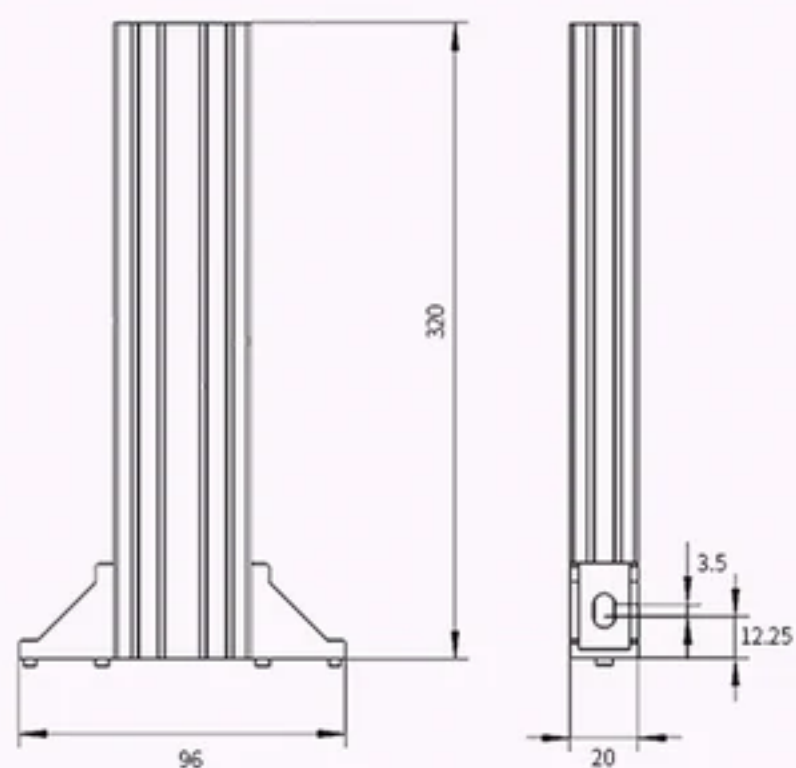
4 6DOF robotic arm + depth camera bracket(Optional)



Robotic arm size

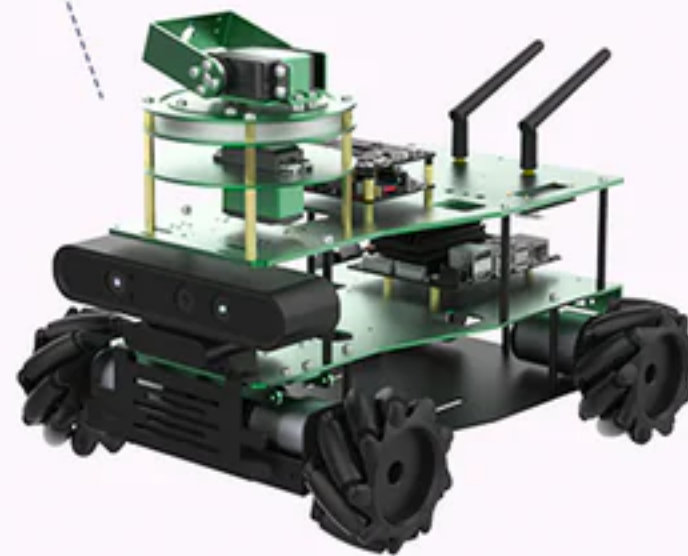
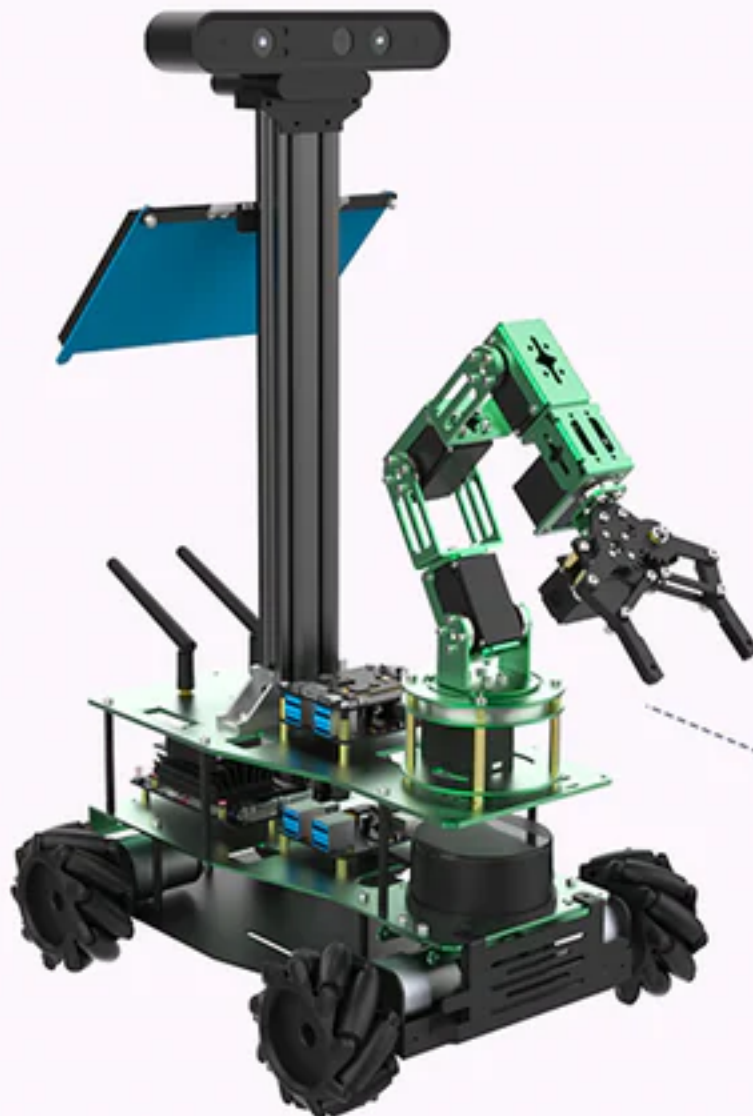


Depth camera size

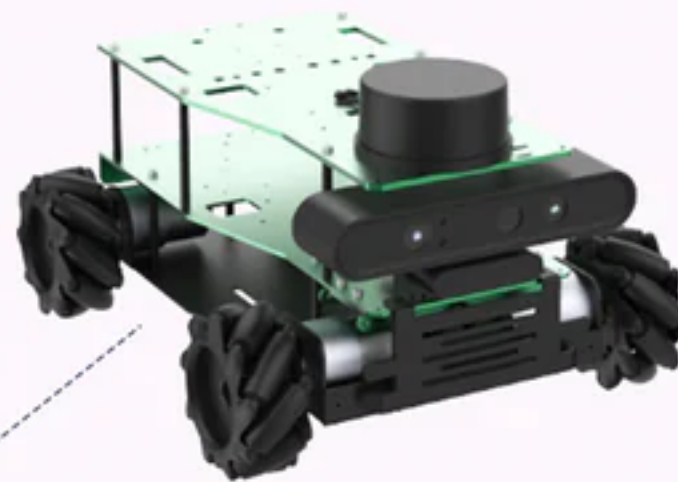


5 Case Presentation

Pendulum suspension mecanum wheel chassis (large) + Astra Pro depth camera + 2D electric PTZ



Pendulum suspension mecanum wheel chassis (large) + 6DOF Robotic arm + Astra Pro camera + 4ROS lidar



Pendulum suspension mecanum wheel chassis (large) + Astra Pro depth camera + 4ROS lidar

Shipping List

Pendulum suspension mecanum wheel chassis (medium)

- | | |
|---------------------------|-----------------------------|
| 1.Aluminum alloy parts*6 | 2.520 geared motor *1 |
| 3.520 geared motor*4 | 4.520 motor bracket*4 |
| 5.Hexagonal coupling*4 | 6.65mm mecanum wheel*4 |
| 7.Screwdriver | 8.Copper post screw package |
| 9.2-Types of motor cables | |

Pendulum suspension chassis (Large)

- | | |
|--|---------------------------|
| 1.Aluminum alloy bottom plate*4 | |
| 2.Pendulum suspension group (two motors have been installed) | |
| 3.520 geared motor *4 | 4.80mm mecanum wheel *4 |
| 5.Hexagonal coupling *4 | 6.Screwdriver |
| 7.Copper post screw package | 8.2-Types of motor cables |