LIMO COBOT

Multi–modal ROS Mobile Manipulator Robot

Introduction

LIMO Cobot is AgileX Robotics' latest desktop mobile manipulator robot based on LIMO PRO. It features the Mycobot 280 and Nvidia Orin Nano, enabling autonomous navigation, obstacle avoidance, mapping, mobile grasping, and visual recognition. It provides open interfaces and a variety of ROS tutorials, including navigation, mapping, localization, and MoveIt motion planning software. It is suited for education, competitions, training, and more.

LIMO PRO Specifications:

Vehicle Dimensions	Vehicle Weight	Load Capacity	Ground Clearance
322 x 220 x 550mm	4.8kg	4kg	24mm

Steering Structure	Screen	Computer	Depth Camera
40N·m	7 inches	Orin Nano	Orbbec Dabai

LiDAR	Battery	Operating Time	Standby Time
EAI T–mini Pro	10Ah 12V	2.5hours	4hours

System	Speed	ROS Version	
Ubuntu 20.04	1m/s	ROS1 Noetic / ROS2 Foxy	

Control Distance	Control Method		
10m	Mobile App / Command		

LIMO COBOT Specifications:

Total Weight	Dimensions	Arm Weight	Arm
5.6kg	322 x 220 x 550mm	0.8 kg	6–DOF + Gripper

Arm Working Accuracy	Arm Working Radius	Navigation Method	Parking Accuracy
±0.5mm	280mm	LiDAR SLAM, Visual SLAM	1–2cm

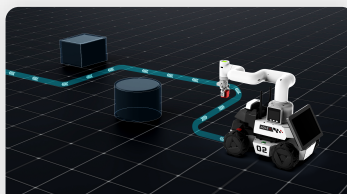| Working Load	Communication		
LIMO – 4 kg, Arm – 250g	LIMO – USB, Arm – Type–C		
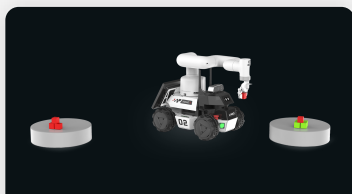
Mobile Grasping:

LIMO Cobot has a versatile six–axis robotic arm for precise mobile grasping, adapting to different task needs.
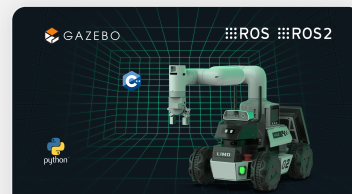

Autonomous Mapping:

LIMO Cobot autonomously creates accurate environmental maps, aiding navigation in complex spaces.

Obstacle Avoidance:

LIMO Cobot intelligently senses its surroundings, navigating around obstacles for safe task execution.

Open–Source Support:

LIMO Cobot supports ROS, Gazebo, Python and C++, making development flexible and accessible.