




DT Series Two-Wheel Differential Mobile Robot

Updated on Oct 2025

DT Series General Mobile Robot Platform

The DT series two-wheeled differential-speed mobile robots offer high flexibility, strong load capacity, automated operation, safety, reliability, and cost-effectiveness. They can be equipped with various tools and equipment as needed and are widely used in indoor factory, shopping mall, and hospital environments.

Movement Mode	Two-wheel drive with differential steering, capable of in-place rotation.		
Models	DT-01	DT-01 Pro	DT-02 Pro
Image			
Dimensions(L*W*H)	500*420*310 mm	730*460*260 mm	980*670*268 mm
Speed	1.3m/s	1.5m/s	1.2m/s
Load Capacity	50KG	120KG	300KG
Battery Life	3H	>4H	>3H
Battery Capacity	24V 12AH	24V 20AH	48V 20AH
Applicable Terrain	Suitable for indoor flat and moderately rough hard surfaces, such as those found in factories, shopping malls, and courtyards		

Features :

1	Supports control via standard 232 serial communication protocol.
2	Allows for the reading of chassis-related data and statuses via serial communication.
3	Compatible with ROS development, with available ROS driver package support.
4	Supports automatic recharging within a specified range via remote control.
5	Equipped with an external power supply module for additional equipment.
6	Customizable appearance.
7	Supports structural modifications for mounting additional equipment



DT Series Intelligent Mobile Navigation Robots

DT-01 SLAM Intelligent Navigation Robot Platform

The DT-01 SLAM intelligent navigation robot is equipped with a single-line laser navigation module and is suitable for small payload operations under 50kg. It features laser mapping, laser positioning, path planning, perception and obstacle avoidance, collaboration, and interaction. It is primarily used in small industrial scenarios, service industries, and education.

Category	Parameters	
Function Support	Laser Mapping	The DT-01 SLAM series intelligent navigation robot uses built-in positioning and mapping algorithms to build high-precision laser maps based on environmental information scanned by LiDAR. The laser mapping area can exceed 10,000 square meters.
	Intelligent Path Planning	Utilizing lidar measurement data and path planning algorithms, the intelligent navigation robot mobile platform can achieve precise positioning and path planning, enabling point-to-point driving. In path planning, it can implement free navigation and trajectory mode, allowing the chassis to travel the trajectory. Conventional positioning accuracy can reach $\pm 50\text{mm}$, and end-assisted positioning can reach $\pm 10\text{mm}$.
	Dynamic Obstacle Detection and Avoidance	LiDAR can scan the environment in real time, detecting the location and movement of dynamic obstacles (such as people and other moving objects). Based on this information, the intelligent navigation robot mobile platform can perform dynamic obstacle avoidance to
	Open Protocol for Secondary Development	The intelligent navigation mobile robot also supports data openness. Through the MQTT protocol/ModbusTCP protocol/TCP protocol, it can control the mobile robot's data status, target instruction execution and robot status information, facilitating user secondary development and rapid use.
	Customizable Operations	The intelligent navigation robot mobile platform supports customized operations and can be customized according to user needs and scenarios. For example, it can set restricted areas in specific areas, prioritize avoiding specific obstacles, and automatically recharge when the battery is low.
	Usage Scenarios	It supports use in scenes with feature points, such as offices, factories or office buildings with fixed objects, such as tables, chairs or shelves, etc. If the scene is completely empty and no feature map can be formed, a map cannot be established and laser navigation is not suitable.

DT-01 Pro Slam Intelligent Navigation Robot Platform

The DT-01 Pro SLAM intelligent navigation robot is equipped with a single-line laser navigation module, designed for applications requiring a load capacity of up to 100 kg. It includes features such as laser mapping, laser positioning, path planning, perception and obstacle avoidance, and collaborative interaction. This platform is primarily used in medium-sized industrial environments, service industries, and educational settings.

Category	Parameters	
Function Support	Laser Mapping	The DT-01 Pro SLAM series intelligent navigation robot uses built positioning and mapping algorithms to build high-precision laser maps based on environmental information scanned by LiDAR. The laser mapping area can exceed 50,000 square meters.
	Intelligent Path Planning	Utilizing LiDAR measurement data and path planning algorithms, the intelligent navigation robot mobile platform can achieve precise positioning and path planning, enabling point-to-point travel. In terms of path planning, it can achieve free navigation and trajectory mode (allowing the chassis to travel along a trajectory). Regular positioning accuracy can reach ± 30 mm, and end-point auxiliary positioning can reach ± 10 mm.
	Dynamic Obstacle Detection and Avoidance	LiDAR can scan the environment in real time, detecting the location and movement of dynamic obstacles (such as people and other objects). Based on this information, the intelligent navigation mobile platform can perform dynamic obstacle avoidance to prevent collisions.
	Open Protocol for Secondary Development	The intelligent navigation mobile robot also supports data open. Through the MQTT protocol/ModbusTCP protocol/TCP protocol, it can control the mobile robot's data status, target instruction execution and robot status information, facilitating user secondary development and rapid use.
	Customizable Operations	The intelligent navigation robot mobile platform supports customized operations and can be customized according to user needs scenarios. For example, it can set restricted areas in specific areas, prioritize avoiding specific obstacles, and automatically recharge when the battery is low.
	Usage Scenarios	It supports use in scenes with feature points, such as offices, factories or office buildings with fixed objects, such as tables, chairs or shelves, etc. If the scene is completely empty and no feature map can be formed, a map cannot be established and laser navigation is not suitable.



DT-02 Pro Slam Intelligent Navigation Robot Platform

The DT-02 Pro SLAM intelligent navigation robot is designed for scenarios requiring a load capacity exceeding 100 kg. This platform offers precise positioning, path planning, perception and obstacle avoidance, collaboration, and interaction, providing efficient and safe mobile solutions across various industries.

Category	Parameters	
Function Support	Laser Mapping	The DT-02 Pro SLAM series intelligent navigation robot uses built-in positioning and mapping algorithms to build high-precision laser maps based on environmental information scanned by LiDAR. The laser mapping area can exceed 50,000 square meters.
	Intelligent Path Planning	Utilizing lidar measurement data and path planning algorithms, the intelligent navigation robot mobile platform can achieve precise positioning and path planning, enabling point-to-point driving. In path planning, it can implement free navigation and trajectory mode, allowing the chassis to travel the trajectory. Conventional positioning accuracy can reach $\pm 30\text{mm}$, and end-assisted positioning can reach $\pm 10\text{mm}$.
	Dynamic Obstacle Detection and Avoidance	LiDAR can scan the environment in real time, detecting the location and movement of dynamic obstacles (such as people and other moving objects). Based on this information, the intelligent navigation robot mobile platform can perform dynamic obstacle avoidance to prevent collisions.
	Open Protocol for Secondary Development	The intelligent navigation mobile robot also supports data openness. Through the MQTT protocol/ModbusTCP protocol/TCP protocol, it can control the mobile robot's data status, target instruction execution and robot status information, facilitating user secondary development and rapid use.
	Customizable Operations	The intelligent navigation robot mobile platform supports customized operations and can be customized according to user needs and scenarios. For example, it can set restricted areas in specific areas, prioritize avoiding specific obstacles, and automatically recharge when the battery is low.
	Usage Scenarios	It supports use in scenes with feature points, such as offices, factories or office buildings with fixed objects, such as tables, chairs or shelves, etc. If the scene is completely empty and no feature map can be formed, a map cannot be established and laser navigation is not suitable.

