METAL PRODUCTION

Product Data Sheet

Assistive Robotic Guide Dog

Assistive mobility version for visually impaired and blind users

Product overview

A compact quadruped mobility-assistance robot designed to support safer, more independent navigation through precise perception, autonomous path planning, voice interaction and emergency assistance.

Centimeter	Static + dynamic	Voice	Emergency
positioning	obstacle avoidance	commands	assistance

Core technical specifications

Operating time	>= 1.5 h
Charging time	<= 1 h
Protection rating	IP54
Dimensions standing	730 x 370 x 525 mm
Weight	11.5 kg
Battery capacity	4.6 Ah / 98.72 Wh
Auto charging	Supported
Guided motion speed	Up to 0.5 m/s in assistive navigation mode
Max slope angle	>= 30 deg
Stair climbing height	>= 16 cm
Communication	4G / Wi-Fi
Audio module	Speaker, wireless Bluetooth earphones and wireless microphone

Navigation, safety and interaction

Positioning accuracy	Centimeter-level
Perception sensors	3D LiDAR, depth camera, ultrasonic sensors, RGB camera and force sensors
Obstacle detection	Static and dynamic obstacle detection with avoidance, warning and stop behavior
Environmental mapping	Community maps with safe routes and key waypoints
Path planning	Preloaded maps plus real-time perception for route planning and autonomous guidance
Traffic light recognition	Supported
Voice command control	Semantic voice interaction and command execution
Guide cane	Adjustable height, vibration feedback and one-touch alarm
Terrain adaptability	Paved roads, stairs, grass, cobblestone paths, tactile paving and marble
Emergency alert	Uploads status and location to backend, sends alerts and triggers audio-visual warnings

Deployment note

Final configuration, route mapping, user training, safety validation and local accessibility requirements should be confirmed before public deployment.

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