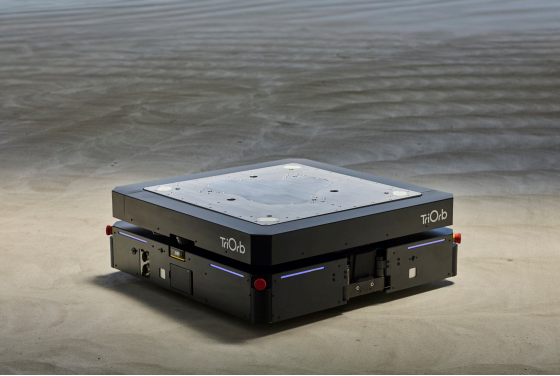


TriOrb BASE — Heavy-Payload Model



Industrial Autonomous Mobile Robot (AMR) — Product Specifications

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1. Dimensions & Weight

Overall Length × Width	999 mm × 1016 mm
Overall Height	350 mm
Unit Weight (incl. battery)	295 kg

2. Performance

Rated Payload	1000 kg
Max. Speed (Translation)	0.54 m/s
Max. Speed (Rotation)	0.6 rad/s
Stopping Accuracy (Repeatability)	±5 mm
Min. Aisle Width	1200 mm
Turning Diameter	ø1455 mm
Gradeability	Under measurement
Gap-Crossing Capability	60 mm (theoretical)
Step-Climbing Capability	14 mm (theoretical)

3. Drive System

Drive Method	Ball-drive (spherical drive)
Drive-Ball Diameter	ø140 mm
Drive-Ball Material	Polyurethane
Motors	Brushless DC with electromagnetic brake, 400 W × 3 axes

4. Power & Battery

Battery Type	Lithium-ion
Voltage	48 V
Continuous Operating Time	5 h (at 0.3 m/s, concrete, unloaded)
Charging Time	1.5 hours
Charging Method	Connector charging / wireless charging

5. Navigation & Sensors

Navigation Method	Visual SLAM
Cameras	4 units
Obstacle-Detection Sensor	2D LiDAR
Marker Installation	Not required

6. Communication & Interfaces

Motion-Control UI	Handheld remote / Web GUI / ROS communication
External Interface	Wired LAN / Wireless LAN (recommended environment)
Wireless LAN Standard	Wi-Fi 5(IEEE 802.11ac)
API	ROS2/MQTT/WebAPI
Host-System Integration	Integration available via API

7. Safety Functions

Emergency-Stop Button	Located on the unit side + remote emergency-stop assist system
Response on Obstacle Detection	Automatic deceleration & stop
Warning Indicators	LED indicator / buzzer

8. Operating Environment

Operating Location	Indoor
Operating Temperature Range	0–40 °C
Humidity	Non-condensing
Floor-Surface Conditions	No water/oil wetting permitted
Proven Floor Surfaces	Concrete / checker plate / grating / rail grooves, etc.

9. Certifications & Standards

Certifications Obtained	Not yet certified
Compliant Standards	Not yet compliant

10. Equipment Options

Equipment / Specification	Overview
Lifting Function	Center lifter (100 mm stroke)
Cooperative Transport	Cooperative-transport software included as standard
Wireless Charging Station	Supports wireless charging and automatic charging via host command
Remote Controller	Industrial remote controller (option)

* Specifications are subject to change without notice. * Please contact us regarding customization.