

MiR100 specifications

General information

Designated use	For small- and medium-sized transport tasks within industry logistics and healthcare
Type	Autonomous Mobile Robot (AMR)
Color	ABS 542D / ATHLONE White (RAL9003)
Cover material	ABS sheet structure comprising of a semi-matt capping onto a High Impact ABS base
Product design life	5 years or 20 000 hours, whichever comes first
Disclaimer	Specifications may vary based on local conditions and application setup

Dimensions

Length	890 mm 35 in
Width	580 mm 22.8 in
Height	352 mm 13.9 in
Ground clearance	50 mm 2 in
Weight (without battery or payload)	70 kg 154.3 lbs
Wheel diameter (drive wheel)	125 mm 4.9 in
Wheel diameter (caster wheel)	125 mm 4.9 in

Payload

Maximum payload	100 kg 220 lbs (maximum 5% incline)
Footprint of payload	Equal to robot footprint. Contact MiR if a bigger payload footprint is required.
Payload placement	Place center of mass according to directions in the user guide

Speed and performance

Maximum speed	Forwards: 1.5 m/s (5.4 km/h) 4.9 ft/s (3.6 mph) Backwards: 0.3 m/s (1 km/h) 1.0 ft/s (0.7 mph)
Operational corridor width	With default footprint: 1 000 mm 39.4 in With 820 mm × 600 mm 32.3 in × 23.6 in footprint and muted protective fields and a Critical zone: 850 mm 33.5 in
Operational corridor width for a 180° turn	With default footprint and SICK safety configuration and no payload: 1 300 mm 52 in With default footprint and SICK safety configuration and maximum payload: 1 300 mm 52 in With minimized footprint and SICK safety configuration and no payload: 1 100 mm 43.3 in With minimized footprint and SICK safety configuration and maximum payload: 1 200 mm 44 in
Minimum distance between chargers	100 mm 3.94 in, if the robot can approach the charger in an angle of 80–100° to the wall

Power

Battery type	Lithium ion
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Charging time with MiR Charge 24V	10 h 10 min
External charger	Input: 100-230 V ac, 50-60 Hz / Output: 24 V, max 15 A
Charging options	MiR Charge 24V, Cable Charger
Battery weight	6.3 kg 13.9 lbs
Battery dimensions	308 mm × 215 mm × 80 mm 12.1 in × 8.5 in × 3.1 in
Battery voltage	24 V nominal

Environment

Environment	For indoor use only
Noise level	60–64 dBA (depending on surface)
Ambient temperature range, operation	5°C–40°C 41°F–104°F according to ISO3691-4 section 4.1.2
Humidity	10-95% non-condensing
IP Class	IP20
Floor conditions	No water, no oil, no dirt

Compliance

EMC	EN61000-6-2 and EN61000-6-4
Cleanroom	Class 4 (ISO 14644-1)
Safety standards for industrial vehicles	CE, EN1525, ANSI B56.5, RIA15.08, ISO13849-1

Safety

Personnel detection safety function	Triggered when obstacles or people are detected too close to the robot
Emergency stop	Triggered by pressing the Emergency stop button

Communication

WiFi (router)	Dual-band wireless AC/G/N/B
WiFi (internal PC)	Dual-band wireless A/B/G/N/AC
Bluetooth	4.0 LE, range: 10-20 m / / 32.8-65.6 ft
I/O connections	USB and Ethernet

Sensors

SICK safety laser scanners	2 pcs S300 (front and rear) 360° visual protection around robot
3D cameras	2 pcs 3D camera Intel RealSense™. FoV height: 50 mm–1 800 mm 2 in–70.9 in
Ultrasound sensors	4 pcs

Top module

Maximum height from floor to top	1 800 mm 70 in
Center of gravity	< 900 mm 35 in above the floor