

# MiR100



The MiR100 is a safe, cost-effective mobile robot that quickly automates your internal transportation and logistics. The robot optimizes workflows, freeing staff resources so you can increase productivity and reduce costs.

## Designated use

<b>Autonomous Mobile Robot (AMR)</b>	For small- and medium-sized transport tasks within industry logistics and healthcare
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## Dimensions

<b>Length</b>	890 mm / 35 in
<b>Width</b>	580 mm / 22.8 in
<b>Height</b>	352 mm / 13.9 in
<b>Weight (without load)</b>	70 kg / 143 lbs
<b>Ground clearance</b>	50 mm / 2 in

<b>Cover material</b>	Co-extruded plastics containing PS (Polystyren) and a semi-conductive layer (due to ESD performance)
<b>Wheel diameter (drive wheel)</b>	125 mm / 4.9 in
<b>Wheel diameter (caster wheel)</b>	125 mm / 4.9 in

## Color

<b>RAL color</b>	RAL 9010 / Pure White
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## Payload

<b>Maximum payload</b>	100 kg / 220 lbs (maximum 5% incline)
<b>Towing capacity</b>	300 kg / 660 lbs (see MiR100 Hook specifications)
<b>Footprint of payload</b>	Contact MiR if a bigger footprint is required.

## Speed and performance

<b>Maximum speed (with maximum payload on a flat surface)</b>	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)
<b>Minimum corridor width for a U-turn</b>	520 mm / 20 in (around center of robot)
<b>Positioning accuracy</b>	+/- 50 mm / 2 in to position, +/- 10 mm / 0.4 in to docking marker
<b>Traversable gap and sill tolerance</b>	20 mm / 0.8 in
<b>Minimum corridor width</b>	1.0 m (default footprint)
<b>Turning diameter around obstacle/wall</b>	No load: 1.3 m, full load: 1.3 m (default footprint). No load: 1.2 m, full load: 1.1 m (minimized footprint)
<b>Product design life</b>	Five years or 20.000 hours, whichever comes first
<b>Minimum distance between chargers</b>	100 mm

## Power

<b>Battery type</b>	Li-NMC
<b>Charging time</b>	With cable: up to 4.5 hours (0-80%: 3 hours) With charging station: up to 3 hours (0-80%: 2 hours)
<b>External charger</b>	Input: 100-230 V ac, 50-60 Hz Output: 24 V, max 15 A
<b>Charging options</b>	MiRCharge 24V, Cable Charger
<b>Active operation time with maximum payload</b>	10 hours

## Environment

<b>Ambient temperature range</b>	+5°C to 40°C
<b>IP class</b>	IP 20
<b>Compliance</b>	CE, EN1525, ANSI B56.5, ISO13849-1, EN61000-6-2 & EN61.000-6-4, Clean Room Certified (ISO Class 4)
<b>Environment</b>	For indoor use only
<b>Noise level</b>	60-64 dBA (depending on surface)
<b>Humidity</b>	10-95% non-condensing
<b>Floor conditions</b>	No water, no oil, no dirt

## Safety

<b>Personnel detection safety function</b>	Triggered by a human or other obstacle in the path of travel.
<b>Emergency stop</b>	Triggered by pressing the Emergency stop button.

## Communication

<b>WiFi router</b>	Dual-band a/b/g/n/ac
<b>WiFi (internal PC)</b>	Dual-band a/b/g/n/ac
<b>I/O connections</b>	USB and Ethernet
<b>Communication protocol</b>	REST, Modbus

## Sensors

<b>SICK safety laser scanners (two pcs.)</b>	S300 (front and back) 360° visual protection around robot
<b>3D camera (two pcs.)</b>	3D camera Intel RealSense™ Detection of objects ahead 50-1800 mm above floor
<b>Ultrasound sensors</b>	Four pcs.

## Top module

<b>Maximum height from floor to top</b>	1800 mm / 70 in
<b>Center of gravity</b>	< 900 mm / 35 in above the floor