



ALPHAROBOTICS SOLUTIONS
SMART TECH. HUMAN TOUCH

AlphaRobotics S100-N

Autonomous Outdoor Sweeping Robot

Leading the New Era of Cleaning Robotics

39.4 in | 1,000 mm
Sweeping width

32,292 ft²/h | 3,000 m²/h
Max cleaning efficiency



Parks &
Squares

Business
Districts

Industrial
Parks

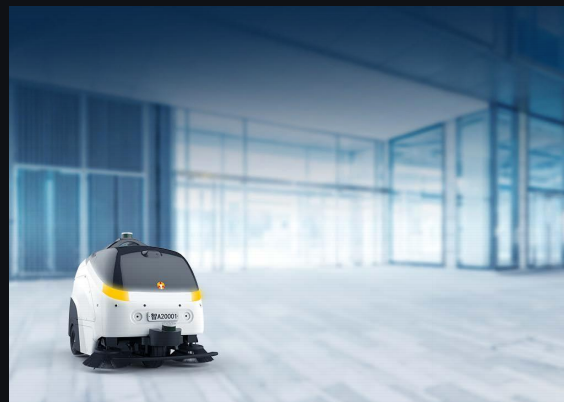
Campuses

Sweeping, spraying and garbage collecting in one — purpose-built for outdoor public spaces.



Operational Overview & Applications

The AlphaRobotics S100-N is an autonomous outdoor sweeper that combines sweeping, spraying and garbage collecting in a single pass. A 360° fusion positioning system with LiDAR, depth camera and ultrasonic radar delivers precise, blind-spot-free navigation, while a 6-hour runtime and 18.6–24.9 mi range keep large outdoor areas clean all day.



**18.6–24.9 mi |
30–40 km**
Operating range

6 h
Runtime per charge

15.9 gal | 60 L
Trash can capacity

Ideal Environments

Parks & Squares

Business
Districts

Industrial Parks

Campuses

Core Operating Value

All-weather outdoor cleaning

Rated for 5°F–104°F operation across cement, bitumen, rubble, terrazzo, marble and small square tile.

Sweep · spray · collect

Dust-suppression spraying, a 39.4 in sweeping path and a 15.9 gal trash can finish the job in one pass.

Cloud-managed operation

Combined, scheduled and remote task modes with periodic cloud cleaning reports and mobile reminders.



Key Technology Features

360° fusion positioning, vehicle-grade computing and cloud-based fleet management.

360° Fusion Positioning

Leading fusion positioning and perception technology provides 360° coverage with no blind spots for safe driving.

Multi-Mode Obstacle Avoidance

Flexible narrow-lane traffic, narrow-lane U-turns and intelligent path planning handle complex scenarios with ease.

Vehicle-Grade Computing

A fully self-developed vehicle-grade embedded computing platform guarantees hardware and algorithm performance.

Triple Cleaning Function

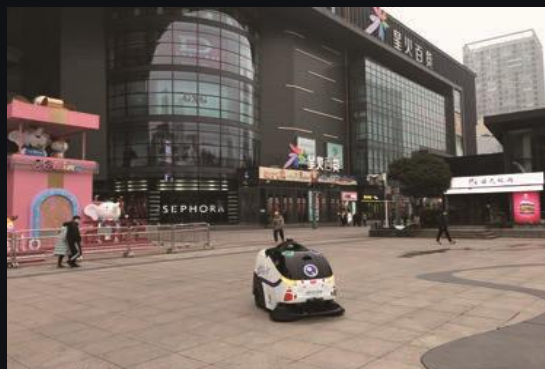
Sweeping, spraying and garbage collecting with three cleaning modes, plus HD fast mapping for quick deployment.

Cloud Platform & Reports

Cloud-based periodic cleaning reports, mobile service reminders and business statistics simplify management.

Multiple Task Modes

Combined tasks, scheduled tasks and remote tasks make daily operations easy and convenient.





Safety Systems & Maintenance

Dual protection of hardware and software — vehicles are safe and people are safer.

Multi-Layer Safety

Electromagnetic brake, safe parking, anti-collision, anti-fall and anti-skidding protections make operation safer.

Outdoor-Rated Reliability

Stable operation from 5°F to 104°F, slopes up to 10° and a controlled 3.1 mph top speed in public spaces.

Always-On Service

One-to-one manager, 7×24 service and a 30-minute quick response keep downtime to a minimum.

Remote Recovery & OTA

Remote fault handling, silent OTA upgrades and a 2-hour emergency rescue commitment protect your schedule.





Complete Specification Matrix

Manufacturer specifications preserved in dual units — imperial and metric.

PARAMETER	TECHNICAL VALUE
CLEANING	
Sweeping Width	39.4 in 1,000 mm
Max Cleaning Efficiency	32,292 ft ² /h 3,000 m ² /h
Trash Can Capacity	15.9 gal 60 L
Water Tank Capacity	15.9 gal 60 L
Cleaning Functions	Sweeping, spraying, garbage collecting
POWER & RUNTIME	
Battery	24V / 200Ah
Runtime per Charge	6 hours
Charging Time	4–5 hours
Operating Range	18.6–24.9 mi 30–40 km
DIMENSIONS & WEIGHT	
Dimensions (L×W×H)	67.2 × 36.5 × 47.2 in 1,706 × 927 × 1,199 mm
Net Weight	871 lbs 395 kg
Minimum Turning Radius	59.1 in 1,500 mm
Max Slope	≤ 10°
Max Travel Speed	3.1 mph 5 km/h
ENVIRONMENT & SENSORS	
Operating Temperature	5°F–104°F –15°C–40°C
Sensor Configuration	LiDAR, depth camera, ultrasonic radar
Suitable Floors	Cement, bitumen, rubble, terrazzo, marble, small square tile

Note: Specification values reproduced from the manufacturer source brochure; actual performance may vary in specific applications.



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The Reliable, Hassle-free Robots You Can Trust



Leading the New Era of Cleaning Robotics

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Smart Tech. Human Touch.