MICRONVIEW

EMC Robot Series
Environmental Monitoring &
Control Robot Series

APC ROBOT

Airborne Particle Counter Robot

* EMC Robots are shown with APC and Remote APC modules
* Base is compatible with BAMS and VHP modules

CAPABILITY & FEATURE

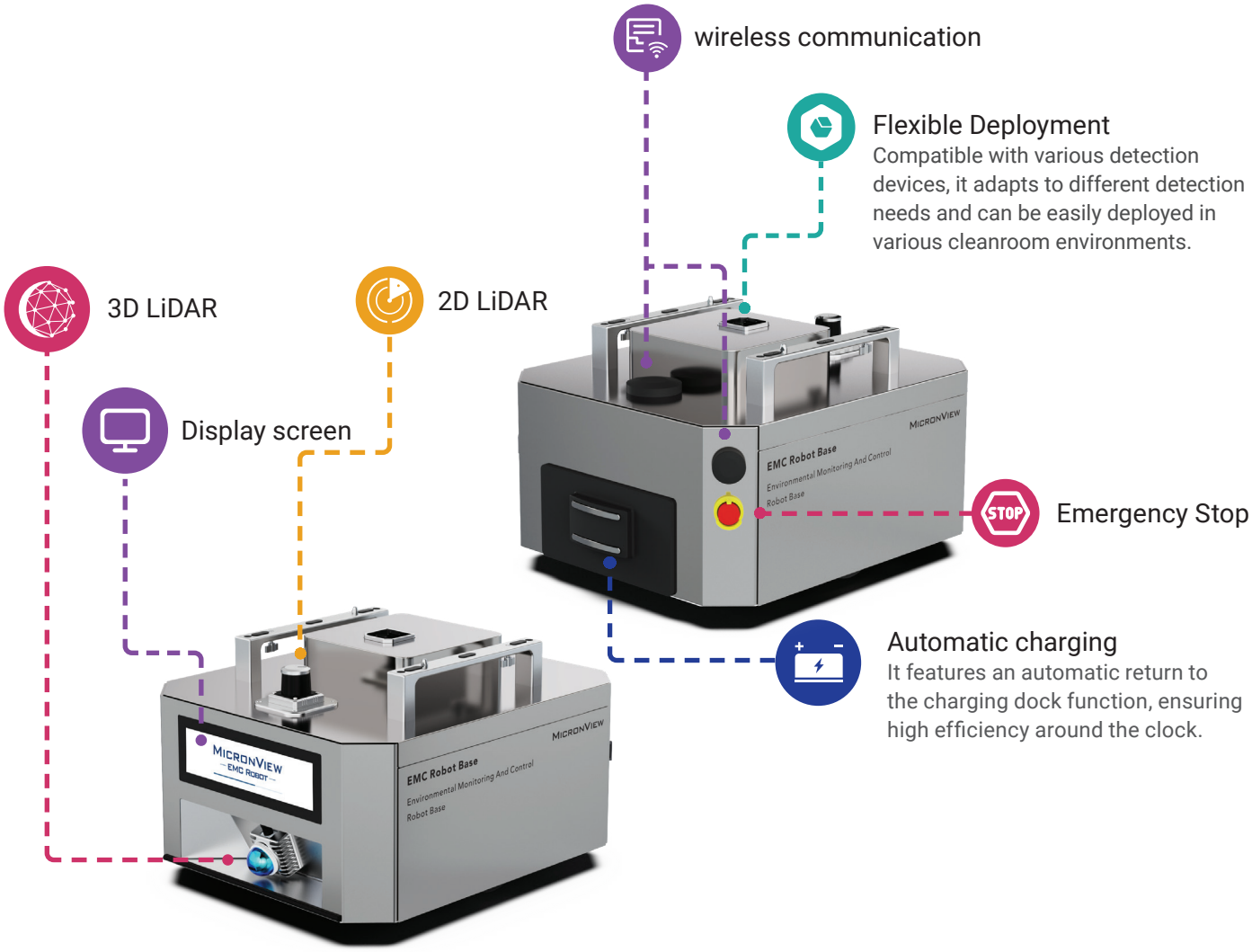
- Autonomous Navigation - Fully automated environmental sampling
- Intelligent Charging System - Wireless charging station
- Multi-task Scheduling - Unattended operation
- Environmental Monitoring - Interface with different sampling modules

PRODUCT INTRODUCTION

The Airborne Particle Counter Robot (APC Robot) enables automated particle sampling in cleanroom environments. The robot uses a SLAM* algorithm and LiDAR to ensure accurate site arrival and object avoidance. The unit can traverse designated areas, automatically open and close doors, autonomously ride elevators, and automatically return to the home base for charging. Through automated sampling, the environmental impact of operators and potential for human error can be minimized.

The APC Robot can conduct remote sampling control and central data management, ensuring continuous real-time monitoring and data storage in dynamic and challenging manufacturing environments. All detection data is stored on the robot' s monitoring management system, and data can be uploaded to the specified server or cloud via WIFI/LTE network according to customer requirements.

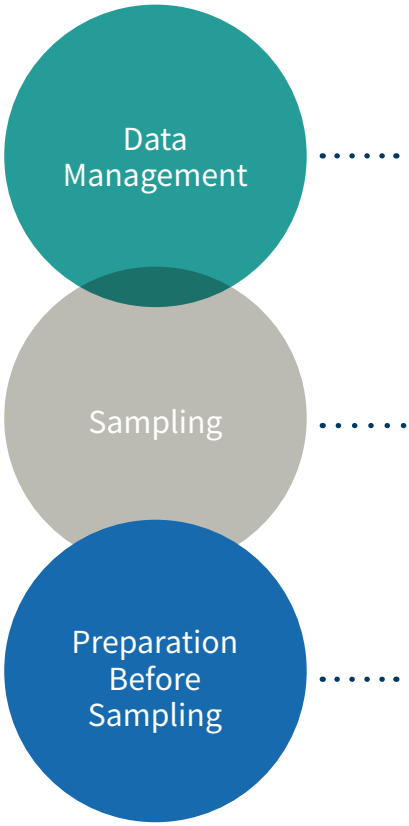
PRODUCT FEATURE



PRODUCT APPLICATION

The APC Robot is compatible with the portable Airborne Particle Counter-mini (mini APC) and Remote Airborne Particle Counter (Remote APC) modules. With the particle counting module attached, the robot will automatically arrive at user defined locations and complete sampling according to pre-set sampling scheme.

The APC Robot' s automated navigation and sampling lower the risk of contamination by reducing human presence in critical areas, and reduce the potential for error in sampling location and time. Resource allocation can also be optimized by automating routine functions and assigning personnel to other critical tasks. The EMC Robot can also be equipped with temperature and humidity sensors to collect and store ambient temperature and humidity information.temperature and humidity sensor to collect and store ambient temperature and humidity information.



FULL SAMPLE-TO-RESULT
Automated barcode identification to enhance plate traceability

VALUE ADDED
Additional environmental information gathered with on board temperature and humidity sensors

MINIMIZE HUMAN ERROR
Automated data transfer removes risk of human error in documentation

RISK AVERSION
Reduces risk of human error, additional presence of personnel in controlled environments. Also potential issues with sampling ergonomics

LABOR SAVINGS
Robot will automatically determine battery life and status of the instrument

REDUCES HUMAN PRESENCE
Human presence in production streams and investigations can be greatly reduced

EFFICIENCY
Accurately conducts the designating sampling task for each sample location

SAFE AND RELIABLE
Robot is not restricted by typical operation shifts or human interaction

SPECIFICATION SHEET

Specification		Environmental Monitoring and Control Robot Base | EMC Robot Base
Dimensions & Weight	Dimensions （H×W×D）	350×484×603mm/13.78×19.06×23.74in
	Net Weight	50kg (Incl. battery weight 14kg)
	Maximum Load Capacity	40kg
Material	Chassis	316L stainless steel
	Wheel	Polyurethane
Battery Performance	Battery Capacity	960Wh (24V)
	Working Power	50W
	Charging Time	5 h
	Battery Life	⩾1,000 times
Cleaning		Sealed chassis, resists corrosivity of disinfectant wiping
Maximum Map Area		300,000 ㎡
Ground Resolution		2cm x 2cm
Vehicle Performance	Cruising Speed	up to 0.7 m/s
	Passable Width	800 mm
Warranty		24 months (calculated from the date of product activation or six months after the date of manufacture, whichever comes first).

Specification	Functional Module Parameters	
	Portable Airborne Particle Counter-mini	Remote Particle Sensor
Flow rate	100 LPM±5%, 50 LPM±5%, 28.3 LPM±5%	100 LPM±5%, 28.3 LPM±5%
Power	AC 80 W, AC 36 W, AC 34 W	40W
Sample quantity	Not restricted(In liters)	N/A

ORDERING INFORMATION

Name	Model	Order No.
Environmental Monitoring and Control Robot Base | EMC Robot Base	S110	MACHS110
Airborne Particle Counter Robot 100LPM | APC Robot 100LPM	SA210	MACHSA210
Airborne Particle Counter Robot 50LPM | APC Robot 50LPM	SA220	MACHSA220
Airborne Particle Counter Robot 28.3LPM | APC Robot 28.3LPM	SA230	MACHSA230
Airborne Particle Counter Robot 28.3LPM | APC Robot 28.3LPM	SA530B	MACHSA530B

Note: The functional module equipped on SA210/SA220/SA230 is a portable Airborne Particle Counter, and the functional module equipped on SA530B is a remote Airborne Particle Counter.