MicronView

EMC Robot Series

Environmental Monitor
& Control Robot Series

BAMS Robot

BioAerosol Monitoring System Robot

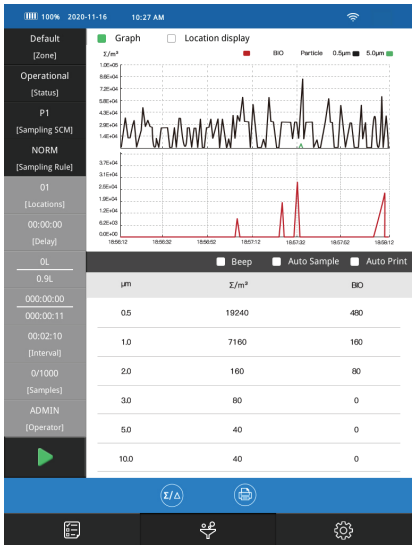
CAPABILITY & FEATURE

- Evaluates particle size and biologic status simultaneously using one 405nm laser to measure both scattered and fluorescent light.
- Flexible and adaptable robot platform accomplishes multiple tasks, making it well suited for a variety of user requirements.
- Continuous monitoring compatible with Annex 1 requirements.

PRODUCT INTRODUCTION

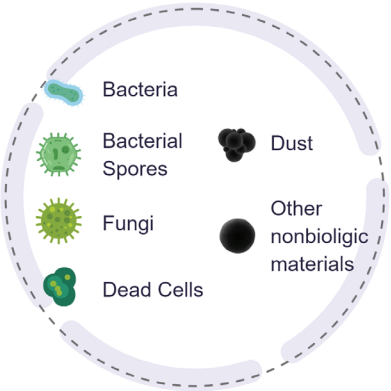
The BioAerosol Monitoring System Robot (BAMS Robot) enables continuous and automated monitoring of biologic and inert airborne particles. The results are shown in real-time without the need for reagents or extensive hands-on time. The BAMS Robot identifies microorganisms by measuring the fluorescence emitted by cellular metabolites, such as NADPH and Riboflavin, when excited by the 405nm laser. Total particle and biologic counts are instantly enumerated in a range of size bins between 0.5um and 10um.

A SLAM algorithm and LiDAR are used by the robot to ensure accurate site arrival and object avoidance. Sample locations and predefined motion paths in the facility are well evaluated whether a fully autonomous mode is required. The unit can traverse designated areas, automatically open and close doors, autonomously ride elevators, and return to home base for charging at a low battery level.



PRODUCT FEATURES

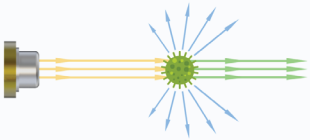
- Cleanroom air can contain both **biologic** and **inert** particles



BAMS can be used to detect these particles in real-time.

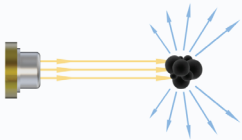
- Particles are pulled into the BAMS and scanned individually with a 405nm laser.
- Biologic particles emit fluorescence, allowing the BAMS to differentiate them from inert particles instantly.

Biologic particles emit fluorescence in addition to scattered light.



This signal is detected via photomultipler tube.

Inert particles scatter light, most do not emit fluorescence.



This signal is detected via photodiode.

PRODUCT APPLICATION

The BAMS robot is equipped with a portable bioaerosol monitoring system and Micronview EMC Robot control software which allows for simple configuration and use. The EMC Robot control software is available on tablets, smartphones and PCs. Through a wireless connection, the software is used to communicate with the BAMS robot, allowing for scheduling tasks and assigning work plans for the automated active air sampling of your controlled environments.

- **Real-time Monitoring**

Sample results, task execution state and alarm information can be viewed in real-time

- **Zone**

Object definition, sample area map, locations selection, and setting up charging pile

- **Task**

Manage and track ongoing, pending, completed, and template task lists

- **Data**

View, search, filter, analyze, export, and print data files in the database

- **Audit Trail**

Multi-level authority management, featured with audit trail

REGULATORY COMPLIANCE

- ISO 21501-4 compliant
- Upcoming USP 1223 validation testing
- Continuous monitoring compatible with Annex 1
- IP65-rated chassis, compliant with the CE marking

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	960 Wh (24V)
	Working Power	50W
	Charging Time	5h
	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 0.7m/s
	Passable Width	800mm
Warranty		24 months (calculated from the date of product activation or six months after the date of manufacture, whichever comes first).

Specification	BioAerosol Monitoring System I BAMS
FLow rate	2.83LPM±3%
Size channels	0.5μm 1.0μm 2.0μm 3.0μm 5.0μm 10.0μm
Power	AC 100-240V, 50 Hz/ 60 Hz

ORDERING INFORMATION

Name	Model	Order No.
Environmental Monitor & Control Robot Base I EMC Robot Base	S110	MACHS110
BioAerosol Monitoring System Robot I BAMS Robot	SM120	MACHSM120

MICRONVIEW

Address: 2300 Highway 365 Suite 110, Nederland TX 77627, USA
Website: www.micronview.com
Email: mv@micronview.com
Tel: 1-520-528-1882

LinkedIn