



The **Rapid Agent Aerosol Detector (RAAD)** is an advanced bioaerosol trigger designed to rapidly detect airborne biological aerosols. The RAAD delivers fast, reliable alerts to enable early response and activate confirmatory sampling or mitigation systems. Multiple detection channels minimize false alarms while maximizing detection confidence and operational uptime.

The **Industrial Rapid Agent Aerosol Detector (I-RAAD)** maintains the detection performance of the RAAD, but is packaged for stand-alone, stationary operation. This configuration is tailored for facility monitoring applications and simplified maintenance activities.

KEY CAPABILITIES

- **Real-Time Bioaerosol Detection:** Immediate detection and alerting of potential biological threats
- **Discrimination Algorithms:** Differentiates threatening biological materials from benign background particles
- **Automated Sampling Trigger:** Interfaces with sample collectors or downstream identification systems
- **Rugged Design:** MIL-STD-compliant for extreme environmental conditions

DEPLOYMENT SCENARIOS

- CBRN Reconnaissance Vehicles
- Forward Operating Bases
- Critical Infrastructure Protection
- Mobile Medical and Decontamination Units
- Unattended Remote Monitoring Stations
- Urban or Battlefield Air Monitoring

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Specifications

Threat Classes Detected	<ul style="list-style-type: none"> • Bacteria • Viruses • Toxins
Detection Principles	<ul style="list-style-type: none"> • Laser Induced Fluorescence • Spark Induced Breakdown Spectroscopy
Excitation Wavelength	• 266 nm
Bioaerosol Size Range	• 1-10 µm
Mean Time Between False Alarms	• >200 hours
Limits of Detection	• <<100 ppl
Detection Time	• ~1 minute
Size (I-RAAD)	• 24" x 34" x 16" (W x H x D)
Weight (I-RAAD)	• 94 lbs
Connectivity (I-RAAD)	• Ethernet
Mean Time Between Failure	• >1000 Hours
Environmental Ruggedization	<ul style="list-style-type: none"> • Mil-Std 810H, Test Method 514.8 • Mil-Std-167-1A, Type I Environmental Vibration • Mil-S-901D, Ship Shock • DOD-Std-1399 Section 301A, Ship Motion • Mil-Std-464C, Mil-Std-461G, TOP 1-2-511A EMI

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Version: 04/11/2025