



ATHINA® Detector Collector 200 (DC200) is the tactical bioaerosol particle detection and collection system selected for the Joint Biological Tactical Detection System (JBTDS). The DC200 provides early warning of biological threats in military, public health, and homeland security applications by continuously monitoring for bioaerosols and automatically collecting samples for confirmatory analysis upon a detection event.

The detector is based on the TACBIO®2 detection technology that uses a deep ultraviolet light-emitting diode (UVLED) for class-leading detection of airborne biological particles (bacteria, viruses, and toxins), without false alarms. The TACBIO®2 technology was originally developed by the DEVCOM Chemical Biological Center and deemed best-in-class in government sponsored testing of similar bioaerosol detectors.

Bioaerosol samples are collected on a dry electret filter that is specially designed to minimize operator contact with any collected sample material. After collection, samples are removed from the ATHINA® DC200. Samples are then eluted for analysis via molecular (e.g. PCR), affinity (e.g. LFIA), or Next Generation Sequencing based analysis.

The ATHINA® DC200 can be operated both indoors and outdoors and in either a standalone or networked configuration. The networked user interface supports real-time geospatial awareness of biological threats for rapid awareness and response. The DC200 has an LCD interface, M42, Ethernet, and USB connections. It can be operated from vehicle, infrastructure, or battery power.

As the core detection and collection system of the JBTDS, the ATHINA® DC200 has successfully entered production after completing 1000's of hours of live-agent, false-alarm, mil-standard and operational testing.

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Characteristics

Threat Detection	Aerosolized bacteria, bacterial spores, viruses, and toxins
Low False Alarm Rate	Robust operation in the presence of: fog, oil, JP8, Gas/diesel mixture, road dust, etc.

Specifications

Detection Sensitivity	Less than 200 ppl
False Alarm Rate	Less than one false alarm every 168 hours
Time to Alarm	60 seconds
Particle Size	1-10 microns
Detector Flow Rate	1 Liter per minute (LPM)
Collection Media	Electret Filter
Collection Flow Rate	200 LPM
Confirmatory Sample	6 ml in standard buffer
Local User Interface	LCD with membrane keypad
Remote User Interface	Command and Control, mapping, and detection via TAK
Data Interface/Storage	Ethernet, USB, Internal Flash
Size/Weight	1.5 ft ³ / 32 pounds
Power	110VAC - 240VAC (50-60Hz) and 10-30 VDC
Battery Life	12+ hours
Set-up Time	2 minutes

Environmental

Operating Temp.	-10°C to 50°C
Storage Temp.	-40°C to 70°C
Vibration	MIL-STD-810
Drop Test	MIL-STD-810
Enclosure Rating	IP66

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 2025