

FLIR IBAC™ 1

Instantaneous Biological Analyzer and Collector



The FLIR IBAC 1 is a fully automated biological agent detector that alarms in less than 60 seconds when an airborne bio-threat is present. It uses UV-Laser induced fluorescence to discriminate biological organisms from background particles, reliably detecting all four classes of bio-agents at concentrations below 100 ACPLA with low false alarm rates. The IBAC 1 can operate integrated into a UAV or robotic system, or as part of a network configuration to form the “first tier” of a building/critical infrastructure protection system. Its four stages work together continually to monitor the environment for the presence of bio-threats, alarm upon detection, collect and preserve samples for confirmatory analysis, and transmit data to command and control centers. The IBAC 1 offers a flexible, field-ready solution for bio-aerosol monitoring.



FULLY AUTOMATED, REAL-TIME BIO-AEROSOL THREAT DETECTION

Detects spores, bacteria, virus, and toxins

- Sensitivity below 100 ACPLA with high confidence and low false alarm rates
- Autonomous 24/7 operation with no consumables
- Alarm automatically triggers sample collection
- Detection algorithms for indoor and outdoor use



COMPACT, LIGHTWEIGHT, AND RUGGED

Operates integrated into UAV or robotic system, or as part of a network configuration for infrastructure protection

- Mission-ready for mass transit security, building protection, and mobile labs
- Integrated CBRNE systems and Force protection
- Easy integration into HVAC, robotic, and stealth applications



TRUSTED, RELIABLE DETECTION

Most mature and widely deployed bio-trigger device

- More than 1,000 units deployed world wide
- Operated for >7 million hours in relevant environments
- US Government validated
- Low sustainment cost and high Mean Time Between Failure (MTBF) rates

FLIR IBAC™ 1

SPECIFICATIONS

General	
Technology	IBAC 1 UV Laser Induced Fluorescence (LIF)
Sampling & Analysis	
Sample Introduction	Airborne particles; triggered aerosol sample collector
Sample Phase	Aerosol; flow rate 4.0 L/min (0.14 ft ³ /min)
Threats	Spores, vegetative bacteria, viruses, and toxins; particle size: 0.7 – 10 microns
Sensitivity	<100 particles/L of air
Sampling & Analysis	Continuous sampling 24/7/365; indoor/outdoor alarm settings; analysis time configurable down to 1 second
Sample Collection	Integrated sample collector at 30L/minute
System Interface	
Interface	RS-232
Outputs	Service and alarm
Power	
Input Voltage	12.0 VDC + 0.70; - 0.10 VDC
Power Consumption	≤ 11 watts
Environmental	
Operating Temp (ambient)	-14 to 122 °F (-10 to 50 °C)
Operating Humidity	5% to 95%, non-condensing
Storage Temp	-40 to 160 °F (-40 to 70 °C)
Physical Features	
Dimensions (L x W x H)	6.0 x 4.0 x 5.0 in (15.3 x 10.2 x 12.8 cm)
Weight	5 lbs (2.7 kg)
Enclosure & Protection	Aluminum housing with IP66 weatherproof inlet and collector
Mounting	Mounted within secondary enclosure or with HVAC Systems



Network Command Center

