

Product Datasheet

IBAC 2

Bio-Threat Detection and Collection

The FLIR IBAC 2 is a continuous, real-time air monitor 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 biological agents at concentrations below 100 ACPLA with low false alarm rates and no consumables.

The IBAC 2 system can operate independently, as part of a network configuration to form the 'first tier' of a building protection system, or via battery power module for mobile detection capability. The system automatically alarms upon detection, collects and preserves samples for confirmatory analysis, and transmits data to command and control centers. From long term, fixed installations to short, mission-based tactical applications, the IBAC 2 is the most mature and widely deployed biological trigger on the market today.



Custom Applications

- Building protection.
- Special event monitoring.
- Mission-based incident response.
- Force protection.
- Mass transit security.

Features and Benefits

- Affordable, real-time warning capability for bio-aerosol threats.
- Detects spores, bacteria, virus, and toxins.
- Autonomous 24/7 operation with no consumables.
- Alarm automatically triggers sample collection.
- Detection algorithms for indoor and outdoor use.
- Compact, lightweight, and rugged.
- Integrates with facility monitoring and control systems.
- US Government validated.

Specifications

Technology	
Technology	UV Laser Induced Fluorescence (LIF).

Sampling and 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 and Analysis	Continuous sampling 24/7/365; indoor/outdoor alarm settings; analysis time configurable down to 1 second.

Sensitivity	Integrated with DFU or C100 sample collector (see below).
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System Interface	
Display and Alerts	On-board LED for visual indication; full display via software on external computer.
Communication	Ethernet, RS-232; optional embedded wireless (900MHz or 2.4GHz).
Outputs	Particle data, sensor diagnostics, bio-alarm, and fault.
Data Storage	Internal 2 GB MicroSD memory card; stores over 1 yr of data.
Training Requirements	On-device report generation; export to mass storage.
User Levels	<2 hrs.

Power	
Input Voltage	100-240 VAC (adapter supplied); 18-36 VDC.
Power Consumption	20 watts (normal detector operation) 75 watts (with collector running).
Battery Specifications	Li-ion BB 2590 military battery; up to 14 hrs runtime; charge <4 hrs.
Cold Start Time	<5 mins.

Environmental	
Operating Temperature	-20 to 50 °C (5 to 125 °F)
Operating Humidity	5 to 95% condensing.
Storage Temperature	-40 to 70 °C (40 to 160 °F)

Physical Features	
Dimensions (L x W x H)	24.0 x 16.5 x 22.9 cm – without battery.
Weight	3.4 kg
Enclosure and Protection	Aluminum, IP66 weatherproof.

Integrated Sample Collector Specifications		
	DFU Collector	C100 Collector
Sampling Method	Dry collection	Wet or dry collection
Power Consumption	60 watts	60 watts
Dimensions (H x Dia.)	8.9 x 7.6 cm	11.4 x 14 cm
Weight	0.6 kg	1.4 kg
Max Flow Rate	100 L/min.	200 L/min.
Particle Size	1 to 10 microns	1 to 10 microns
Collection Media	Dry sampling – polyester felt filters (47 mm diameter, 1 micron)	Wet sampling – buffer rinse fluid provided in pre-measured vials
Sample Recovery	Particle extraction from filter performed in vial with liquid buffer	Manual liquid rinse performed at collector, yields 6 mL of liquid

Specifications are subject to change without notice.
For the most up-to-date specifications, please visit www.flir.com

Southern Scientific Limited
Scientific House, The Henfield Business Park
Shoreham Road, Henfield, BN5 9SL, UK
E-mail: info@southernscientific.co.uk
Tel: +44 (0)1273 497600
www.southernscientific.co.uk

