

FLIR 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 biothreat 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.



AFFORDABLE, REAL-TIME WARNING CAPABILITY FOR BIO- AEROSOL THREATS

Detects spores, bacteria, virus, and toxins

- Sensitivity below 100 ACPLA with high confidence and low false alarm rates
- Autonomous 24/7/365 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

- Mass transit security
- Building protection and Critical
- Infrastructure Protection
- Mobile labs
- Integrated CBRNE systems and Force protection



RELIABLE

Most mature and widely deployed bio-trigger device

- More than 1,000 units deployed world wide
- US Government validated
- Low sustainment cost and high Mean Time Between Failure (MTBF) rates
- Has been operated for >5,000,000 hours in relevant environments

FLIR IBAC™2

SPECIFICATIONS

General	IBAC 2 Stationary/Portable
Technology	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 ft3/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 with DFU (see below)
System Interface	
Display & Alerts	On-board LED for visual indication; full display via software on external computer
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	<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)
Cold Start Time	<5 mins
Environmental	
Operating Temp (ambient)	-5 to 125 °F (-20 to 50 °C)
Operating Humidity	5% to 95%, non-condensing
Storage Temp	-40 to 160 °F (-40 to 70 °C)
Integrated Sample Collector Specifications (DFU Collector)	
Sampling Method	Dry collection
Power Consumption	60 watts
Max Flow Rate	100 L/min
Particle Size	1 to 10 microns
Collection Media	Dry sampling - polyester felt filters (47mm diameter, 1 micron)
Sample Recovery	Particle extraction from filter performed in vial with liquid buffer

General	IBAC 2 Stationary
Communication	Ethernet, RS-232
Physical Features	
Dimensions (L x W x H)	9.5 x 6.5 x 9.0 in (24.0 x 16.5 x 22.9 cm)
Weight	7.5 lbs (3.4 kg)
Enclosure & Protection	Aluminum, IP66 weatherproof
General	
IBAC 2 Portable	
Location	GPS
Communication	Ethernet, RS-232, Embedded wireless Wifi or 2.4GHz secure radio
Battery	Li-ion UBBL13 military battery; up to 18 hrs runtime; charge <4 hrs
Physical Features	
Dimensions (L x W x H)	9.5 x 6.5 x 11.75 in (24.0 x 16.5 x 29.9 cm)
Weight	12.2 lbs (5.5 kg)
Enclosure & Protection	Aluminum, IP66 weatherproof



Network Command Center

