



APPLICATION STORY

Networked Bio-Detection & Sampling

FLIR offers a tactical array of bio-sensors wirelessly linked together for rapid-response deployments.

For most large area biological threat monitoring applications, one or two point sensors are not adequate. Multiple point sensors deployed around an area of interest provide wide-scale coverage and maximum exposure. A networked array of sensors can track and report a plume of airborne biological particles in real-time as it drifts downwind from the dissemination point. A network of bio-detectors provides early warning and situational awareness.

The FLIR IBAC 2 is the most mature and widely used biological detector and collector available. Over 1,000 sensors are deployed globally in active biological monitoring operations. The sensors are used to support a variety of applications, from tactical missions such as special event monitoring and emergency response to longer-term, fixed installation facility protection.



*FLIR IBAC 2
Tactical Deployment*

FEATURES & BENEFITS

- Real-time Biological Aerosol Detection
- Fully Transportable with Battery Option
- Rapid Deployment and Automated Setup
- Continuous or Triggered Collection
- Sample Compatible with PCR, Immuno-Assay, and Laboratory Analysis
- GPS Mapping of Sensors
- Situational Awareness and Actionable Intelligence

DETECTION PACKAGE

The IBAC 2 bio-detection package is designed as a “fly away” kit that can be quickly setup and linked together for rapid response deployments. When wireless networking capability is desired, a base station laptop provides real-time data in addition to the onboard red light/green light indicators. This is a key feature for end-users that require more in-depth information.

The software can network up to ten sensors for remote monitoring in real-time from a single laptop or computer (Figure 1). It saves raw and processed data for subsequent analysis. The sensor icons automatically locate on a map displayed on the computer according to GPS coordinates (Figure 2). These icons can also be manually placed on a

background if GPS is unavailable during indoor use. A static map or building plan can be uploaded as a background.

The bio-detection kit includes a confidence checker, which aerosolizes a fluorescent tracer solution to simulate a biological particle release. This “bump test” is used to check sensor operation in the field by verifying the sensor can accurately detect the particles and trigger the alarm.

Maintenance is minimal and a tool kit is included to perform standard preventative maintenance actions. Maintenance includes replacing the inlet filter screen. The bio-detection kit is packaged in Pelican™ cases for easy packaging and transport.

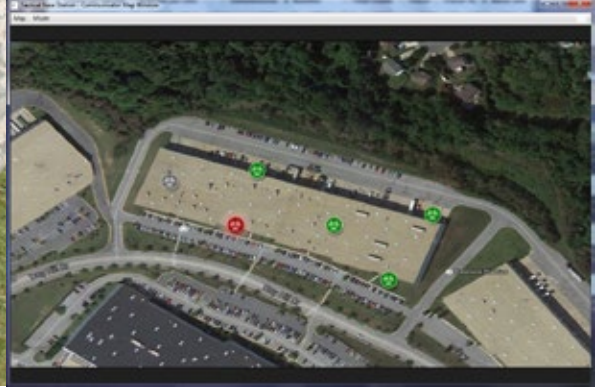


Figure 1. Central Command Station

Figure 2. Map View of Bio-Sensors

Item	Description
IBAC 2 Sensor (minimum of three)	Detector/Collector System with battery power and wireless/GPS connectivity
Toughbook Laptop	Pre-configured with sensor software and wireless network settings
Confidence Checker	Alarm trigger kit to test sensor operation and verify performance
Tool Kit	In-field preventative maintenance tools
Sample Collection Filters	Liquid sample used by bio-identifiers for confirmatory analysis
Transport Cases	1620 Pelican cases contain two sensors or one sensor + accessories

For more information about chemical, biological, radiological, and explosives detection solutions, or about this specific application, please visit:

www.flir.com/detection



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