INTERCEPTIR

Rapid gas identification for unmanned systems.

Warfighters and responders face myriad unknown and unseen threats that often require personnel to confront life-threatening situations. Remote chemical threat detection can be used for screening large areas before sending personnel in, gaining access to seemingly hard-to-reach areas, and establishing safety perimeters. The integration of the InterceptIR onto remote platforms now allows operators to sense, screen, and move safely into seemingly inaccessible environments. InterceptIR was designed for integration onto a variety of robotic platforms using the provided power and communication. This pairs the gas identification capability of the InterceptIR with the remote control features of the unmanned system, providing safer site characterization.

The InterceptIR has a low SWaP (Size Weight and Power) payload and the ability to identify over 5,600 gases and vapors autonomously, making it ideal for identifying threats in real-time without risking human life. With its widely used and accepted JavaScript Object Notation (JSON) messaging, the InterceptIR API can easily integrate into a variety of communication platforms.

Performance

- Automated atmospheric compensation
- 4 second response time
- ID up to 6 components simultaneously
- Expandable identification library
- Part-per-million sensitivity

Missions

- Environments posing a risk to human life
- Booby-trapped facilities
- Sniper covered areas
- Impassable terrain
- Aerial surveillance

Connectivity

- Hardwired (USB serial)
- Optional cloud-based TeamLeader app
- JSON protocol for robotics integration
- Integration with ATAK (in development)

Field Deployment

- Control from remote locations
- Autonomous operation
- Extreme weather conditions (IP-54)
- Shock and vibration resistance

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INTERCEPTIR

Specifications	
Technology	FTIR (Fourier Transform Infrared Spectroscopy)
Sample Type	Gases
Libraries	5,600+ Gases & Vapors TICs, CWAs, VOCs, WMDs Industrial Chemicals, Solvents, Hydrocarbons
Identification Time	4 second detection, < 60 second identification
Sample Mode	Continuous (Survey)
Limit of Identification	10 ppm to 50 ppm
Operating Temperature	0 to 50° C (32 to 122° F)
Humidity	0-95% non-condensing
Power	15–24V DC
Size	5.2" x 9.2" x 6.3"
Weight	~ 4 lbs. in standard enclosure
Gas Measurement	2.0 meters, multi-pass gas cell, 37ml volume
Spectral Range	4000 to 650 CM-1
Spectral Resolution	4 cm-1
Connections	USB, Wi-Fi
Sample Pump	Active, 1 l/min
Vibration Isolation	Isolated from 5 to 35 Hz (Characteristic of solid wheeled vehicles)
API Connectivity	JSON protocol for data integration
Ruggedness	Dust; Waterproof/Resistant; IP54
Decon	Spray or wipe-down with bleach or detergent
Warranty/Support	1 Year Warranty 24/7/365 Support Reachback with data analysis

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