InterceptIR

Standoff gas identification from unmanned platforms

Rapid gas identification for unmanned systems

InterceptIR™ is the only gas/vapor sensor designed for robotic applications to accurately detect and identify 5,600+ unknown chemical threats in seconds.

Warfighters and responders face a myriad of unknown and unseen threats that often require personnel to confront life-threatening situations. Remote chemical threat identification 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.

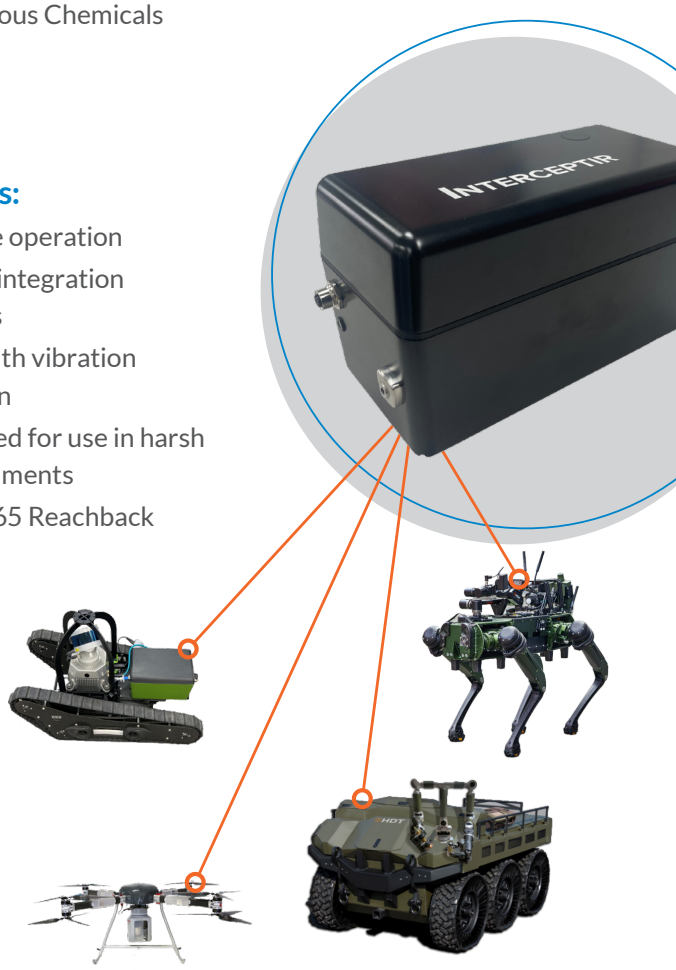
Use InterceptIR to continuously monitor and identify threats without endangering human life.

Continuously monitor 5,600+ gas/vapors:

- Chemical Warfare Agents
- Hazardous Chemicals
  - TICs
  - TIMs
  - VOCs

Features:

- Remote operation
- Simple integration process
- FTIR with vibration isolation
- Designed for use in harsh environments
- 24/7/365 Reachback



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); Point (Grab-sample)
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" × 9.2" × 6.3" (13.2cm × 23.37cm × 16cm)
Weight:	~ 4 lbs. (1.81 kgs) 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

Performance

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

Connectivity

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

Missions

- Explosive environments
- Environments posing a risk to human life
- Booby-trapped facilities
- Military operations
- Impassable terrain
- Aerial surveillance

Field Deployment

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

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