

Surface Acoustic Wave (SAW) Sensor Module



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VENDOR DESCRIPTION

Microsensor Systems Inc. (MSI) is the world leader in Surface Acoustic Wave (SAW)-based chemical detectors. Our proven SAW technology has been tested and deployed in hundreds of locations and applications for the detection of chemical warfare agents (CWAs), i.e., nerve and blister.

SAW sensors are piezoelectric crystals that detect the mass of chemical vapors absorbed into chemically selective coatings on the sensor surface. This absorption causes a change in the resonant frequency of the sensor. The internal microcomputer measures these changes and uses them to determine the presence and concentration of chemical agents. The SAW sensor coatings have unique physical properties which allow a reversible absorption of chemical vapors.

SAW OEM modules allow drop-in CWA detector capability to UAV platforms and other remotely operated vehicles. The units detect G and H agents and can be upgraded to include cyanide blood agents and phosgene choke agents. Special modifications for the detection of other toxic industrial gases (TICs) have been developed.



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Business Category: Small Business

CAD

Hardware	
Power: 1.25 watts, 6.5 -8.5 volts DC	Operating Altitude: 0 ft to 10,000 ft ASL
Weight: 125 g (4.5 oz)	Operating Speed: 55 mph
Dimensions: 2.00 x 3.75 x 1.50 inches	Operating Temp.: 0°C to 40°C
Internal Volume: N/A	Storage Temp.: -10°C to 60°C
On-board storage capacity to handle 8 hours on station	Interface: 9600 baud infrared data port, RS-232 with adapter cable
Sensor Type: Surface Acoustic Wave Microsensor Array	Bandwidth Required: N/A
Sensor Field of View: N/A	TCDL Compatibility: No
Internal Permanent Archive on Information: Yes	MTBOMF: > 5000 hrs
Concentration Level (Fast mode): 0.3 to 0.9mg/m ³ or 0.04 to 0.14ppm for nerve agents 1.4mg/m ³ or 0.2ppm for blister agents	MTTR: 0.5 hrs

Performance
Completes 98% of the Missions it states w/out experiencing a mission abort
Provides detection of nerve and blister agent vapors and aerosol (GA, GB, GD, GF, VX, HD, HN3) and potentially cyanide blood agents and phosgene choking agents