

MultiRAE Pro

Wireless Portable Multi-Threat Radiation & Chemical Detector



Key Features:

- All-in-one monitoring capabilities for radiation, VOCs, oxygen, toxic and combustible gases, up to 6 threat types at a time²
- Over 25 interchangeable sensor options, including parts-per-billion PID and gamma radiation
- Wireless access to real-time instrument readings and alarm status from any location
- Unmistakable five-way local and remote wireless notification of alarm conditions
- Intelligent sensors store calibration data, so they can be swapped in the field³
- Large graphical display with easy-to-use, icon-driven user interface

Applications

- Civil defense (search and rescue)
- Homeland security
- HazMat response
- Military (CBRNE detection, EOD)
- Semiconductor manufacturing
- Environmental

Wireless. Versatile. Proven.

The MultiRAE Pro is the industry's only portable wireless multi-threat monitor. The MultiRAE Pro's ability to simultaneously detect gamma radiation and toxic industrial chemicals (TICs/TIMs) enables responders to reduce the equipment footprint and achieve greater agility when operating downrange.

The MultiRAE Pro's optional wireless capability improves safety by providing commanders and safety officers real-time access to instrument readings and alarm status from any location¹ for better situational awareness and faster incident response.

Sensor Specification⁴

Radiation Sensor	Range	Sensor Type
Gamma	0 to 20,000 µRem/h (dose rate)	1cc CsI (TI) scintillator with photodiode
PID Sensors	Range	Resolution
VOC 10.6 eV (Ext. Range)	0 to 5,000 ppm	0.1 ppm
VOC 10.6 eV (ppb)	0 to 2,000 ppm	10 ppb
Combustible Sensors	Range	Resolution
Catalytic LEL	0 to 100% LEL	1% LEL
NDIR (0-100% LEL Methane)	0 to 100% LEL	1% LEL
NDIR (0-100% Vol. Methane)	0 to 100% Vol.	0.1% Vol.
Carbon Dioxide Sensor	Range	Resolution
Carbon Dioxide (CO ₂) NDIR	0 to 50,000 ppm	100 ppm
Electrochemical Sensors	Range	Resolution
Ammonia (NH ₃)	0 to 100 ppm	1 ppm
Carbon Monoxide (CO)	0 to 500 ppm	1 ppm
Carbon Monoxide (CO), Ext. Range	0 to 2,000 ppm	10 ppm
Carbon Monoxide (CO), H ₂ -comp	0 to 2,000 ppm	10 ppm
Carbon Monoxide (CO) + Hydrogen Sulfide (H ₂ S) Combo	0 to 500 ppm 0 to 200 ppm	1 ppm 0.1 ppm
Chlorine (Cl ₂)	0 to 50 ppm	0.1 ppm
Chlorine Dioxide (ClO ₂)	0 to 1 ppm	0.03 ppm
Ethylene Oxide (EtO-A)	0 to 100 ppm	0.5 ppm
Ethylene Oxide (EtO-B)	0 to 10 ppm	0.1 ppm
Formaldehyde (HCHO)	0 to 10 ppm	0.05 ppm
Hydrogen Cyanide (HCN)	0 to 50 ppm	0.5 ppm
Hydrogen Sulfide (H ₂ S)	0 to 100 ppm	0.1 ppm
Methyl Mercaptan (CH ₃ -SH)	0 to 10 ppm	0.1 ppm
Nitric Oxide (NO)	0 to 250 ppm	0.5 ppm
Nitrogen Dioxide (NO ₂)	0 to 20 ppm	0.1 ppm
Oxygen (O ₂)	0 to 30% Vol.	0.1% Vol.
Phosphine (PH ₃)	0 to 20 ppm	0.1 ppm
Sulfur Dioxide (SO ₂)	0 to 20 ppm	0.1 ppm

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Size	7.6" H x 3.8" W x 2.6" D (193 x 96.5 x 66 mm)
Weight	31 oz (880 g)
Sensors	Over 25 intelligent interchangeable field-replaceable sensors including gamma radiation, ppb and ppm PID sensors for VOCs, electrochemical sensors for toxic gases and oxygen, combustible LEL and NDIR sensors, and CO2 NDIR sensor
Battery Options, Runtime ⁵ & Recharge Time	<ul style="list-style-type: none"> - Rechargeable Li-ion (~12-hr. runtime, < 6-hr. recharge time) - Extended duration Li-ion (~18-hr. runtime, < 9-hr. recharge time) - Alkaline adapter with 4 x AA batteries (~6-hr. runtime)
Display	<ul style="list-style-type: none"> - Monochrome graphical LCD display (128 x 160) with backlighting - Automatic screen "flip" feature
Display Readout	<ul style="list-style-type: none"> - Real-time reading of gas concentrations; PID measurement gas and correction factor; Man Down Alarm on/off; visual compliance indicator; battery status; datalogging on/off; wireless on/off and reception quality. - STEL, TWA, peak, and minimum values
Keypad Buttons	3 operation and programming keys (Mode, Y/+, and N/-)
Sampling	Built-in pump. Average flow rate: 250 cc/min. Auto shutoff in low-flow conditions
Calibration	Automatic with AutoRAE 2 Test and Calibration System or manual
Alarms	<ul style="list-style-type: none"> - Wireless remote alarm notification; multi-tone audible (95 dB @ 30 cm), vibration, visible (flashing bright red LEDs), and on-screen indication of alarm conditions - Man Down Alarm with pre-alarm and real-time remote wireless notification
Datalogging	<ul style="list-style-type: none"> - Continuous datalogging (6 months for 5 sensors at 1-minute intervals, 24/7) - User-configurable datalogging intervals (from 1 to 3,600 seconds)
Communication and Data Download	<ul style="list-style-type: none"> - Data download and instrument set-up and upgrades on PC via desktop charging and PC comm. cradle, travel charger, or AutoRAE 2 Automatic Test and Calibration System - Wireless data and alarm status transmission via built-in RF modem (optional)
Wireless Network	ProRAE Guardian Real-Time Wireless Safety System or EchoView Host-based Closed-Loop System
Wireless Frequency	ISM license-free bands
Wireless Range (Typical)	MultiRAE Pro to RAELink3 [Z1] Mesh modem ~330 feet (100 meters) MultiRAE Pro to EchoView Host, RAEMesh Reader or RAEPeak ~660 feet (200 meters)
Operating Temperature	-4° to 122°F (-20° to 50°C)
Humidity	0% to 95% relative humidity (non-condensing)
Dust and Water Resistance	IP-65 ingress protection rating
Hazardous Location Approvals	CSA: Class I, Division 1, Groups A, B, C and D, T4. ATEX: 0575 II 2G Ex ia d IIC T4 b, 1G Ex ia IIC T4 Ga if IR Sensor is not installed, I M1 Ex ia I Ma. IECEx: Ex ia d IIC T4 Gb, Ex ia IIC T4 Ga if IR Sensor is not installed, I M1 Ex ia I Ma. IECEx/ANZEx: Ex ia d IIC T4 Gb, Ex ia IIC T4 Ga if IR Sensor is not installed, Ex ia I Ma
CE Compliance (European Conformity)	EMC directive: 2004/108/EC. R&TTE directive: 1999/5/EC. ATEX directive: 94/9/EC
EMI/RFI ⁵	No effect when exposed to 0.43mW/cm ² RF interference from a 5-watt transmitter at 12" (30cm)
Performance Tests	MIL-STD-810G and 461F compliant. LEL CSA C22.2 No. 152; ISA-12.13.01
Languages	Arabic, Chinese, Czech, Danish, Dutch, English, French, German, Indonesian, Italian, Japanese, Korean, Norwegian, Polish, Portuguese, Russian, Spanish, Swedish, and Turkish
Warranty	<ul style="list-style-type: none"> - 2 years on non-consumable components and catalytic LEL, CO, H₂S, and O₂ sensors - 1 year on all other sensors, pump, battery, and other consumable parts

1 Additional equipment and/or software licenses may be required to enable remote wireless monitoring and alarm transmission. 2 A two-gas combination sensor is required for a 6-gas configuration. 3 GasTech Australia recommends calibrating sensors on installation. 4 Specifications are subject to change. 5 Specification for non-wireless monitors.

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