

MULTIRAE Pro

Wireless Portable Multi-Threat Radiation & Chemical Detector



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.

Arguably the pinnacle of portable gas detection, the MultiRAE Pro offers incredible visibility on its largest-in-class graphical LCD display. It's multi-button interface is very easy to navigate, making it extremely user-friendly in the field.

The Extensive range of sensors offered by RAE Systems makes this instrument the most versatile in its class.

Multiple operating modes means the MultiRAE pro is the favoured unit for hygienists around the world in addition to chemical experts and HazMat responders.

Wireless connectivity solidifies this instrument at the top of it's class, offering complete remote visibility of instrument status when paired with ProRAE Guardian.

APPLICATIONS

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

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**

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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

SPECIFICATIONS

Specifications subject to change without notice

Size	7.6" H x 3.8" W x 2.6" D (193 x 96.5 x 66 mm)
Weight	31 oz (880g)
Sensors	25 intelligent interchangeable field-replaceable sensors including PID for VOCs, electrochemical sensors for toxic gases and oxygen, combustible LEL and NDIR sensors, and CO ₂ NDIR sensor
Battery options Runtime⁵ and 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/+, 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; 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 notification¹
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)

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SPECIFICATIONS CONTINUED Specifications subject to change without notice

<p>Communication and Data Download:</p> <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) 	<p>Hazardous Location Approvals:</p> <p>CSA: Class I, Division 1, Groups A, B, C and D, T4. ATEX: 0575 II 2G Ex ia d IIC T4 Gb, 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</p>
<p>Wireless Network:</p> <p>ProRAE Guardian Real-Time Wireless Safety System or EchoView Host-based Closed-Loop System</p>	<p>CE Compliance (European Conformity):</p> <p>EMC directive: 2004/108/EC. R&TTE directive: 1999/5/EC. ATEX directive: 94/9/EC</p>
<p>Wireless Frequency:</p> <p>ISM license-free bands</p>	<p>EMI/RFI5:</p> <p>No effect when exposed to 0.43mW/cm² RF interference from a 5-watt transmitter at 12" (30 cm)</p>
<p>Wireless Range (Typical):</p> <p>MultiRAE to RAELink3 [Z1] Mesh modem ~330 feet (100 meters) MultiRAE to EchoView Host, RAEMesh Reader or RAEPoint ~660 feet (200 meters)</p>	<p>Performance Tests:</p> <p>MIL-STD-810G and 461F compliant. LEL CSA C22.2 No. 152; ISA-12.13.01</p>
<p>Operating Temperature:</p> <p>-4° to 122°F (-20° to 50°C)</p>	<p>Languages:</p> <p>Arabic, Chinese, Czech, Danish, Dutch, English, French, German, Indonesian, Italian, Japanese, Korean, Norwegian, Polish, Portuguese, Russian, Spanish, Swedish, and Turkish</p>
<p>Humidity:</p> <p>0% to 95% relative humidity (non-condensing)</p>	<p>Warranty:</p> <p>Two years on non-consumable components and catalytic LEL, CO, H₂S, and O₂ sensors One year on all other sensors, pump, battery, and other consumable parts</p>
<p>Dust and Water Resistance:</p> <p>IP-65 ingress protection rating</p>	

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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