

MultiRAE Pro

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Wireless Portable Multi-Threat Radiation and Chemical Detector

The MultiRAE Pro is the industry's only portable wireless multithreat 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.

• Detector of choice for government agencies and top HazMat teams worldwide

MultiRAE

- Highly versatile and customizable
- Man Down Alarm with real-time remote wireless notification
- Compliant with MIL-STD-810G and 461F performance standards
- Fully automatic bump testing and calibration with AutoRAE2

KEY FEATURES

Wireless. Versatile. Proven.

- 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
- Semiconductor manufacturing
- Environmental



CBRN detection with the MultiRAE Pro



AutoRAE <mark>2</mark> Compatible





MultiRAE Pro

Wireless Portable Multi-Threat Radiation and Chemical Detector



Instrument Specifications⁴

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 ar oxygen, combustible LEL and NDIR sensors, and CO_2 NDIR sensor		
Battery Options, Runtime ⁵ and Recharge Time	 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	Monochrome graphical LCD display (128 x 160) with backlighting Automatic screen "flip" feature		
Display Readout	 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	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	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	 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 Range (Typical)	MultiRAE Pro to RAELink3 [Z1] Mesh modem ~330 feet (100 meters) MultiRAE Pro to EchoView Host, RAEMesh Reader or RAEPoint ~660 feet (200 meters)		
Operating Temperature	e -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		
Safety Certifications	CSA: Class I, Division 1, Groups A, B, C and D, T4 Class II, Division 1, Groups E, F, G T85°C ATEX: 0575 II 1G Ex ia IIC T4 Ga 2G Ex ia d IIC T4 Gb with IR Sensor installed I M1 Ex ia I Ma IECEX: Ex ia IIC T4 Ga Ex ia d IIC T4 Gb with IR Sensor installed I M1 Ex ia I Ma IECEX/ANZEX: Ex ia IIC T4 Ga Ex ia d IIC T4 Gb with IR Sensor installed Ex ia d IIC T4 Gb with IR Sensor installed Ex ia 1 Ma		
EMI/RFI ⁵	EMC directive: 2004/108/EC		
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	- Two years on non-consumable components and catalytic LEL, CO, H_2S , and O_2 sensors - One year on all other sensors, pump, battery, and other consumable parts		
Wireless Frequency	ISM license free band. IEEE 802.15.4 Sub 1GHz		
Wireless Approvals	FCC Part 15, CE R&TTE, Others ⁴		
Radio Module	Supports RM900A		

Sensor Specifications⁴

Radiation Sensor	Range	Sensor Type
Gamma	0 to 20,000 µRem/h (dose rate)	1cc Csl (TI) scintillator with photodiode
PID Sensors	Range	Resolution
VOC 10.6 eV (Ext. Range) VOC 10.6 eV (ppb)	0 to 5,000 ppm 0 to 2,000 ppm	0.1 ppm 10 ppb
Combustible Sensors	Range	Resolution
Catalytic LEL NDIR (0-100% LEL Methane) NDIR (0-100% Vol. Methane)	0 to 100% LEL 0 to 100% LEL 0 to 100% Vol.	1% LEL 1% LEL 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) Carbon Monoxide (CO), Ext. Range Carbon Monoxide (CO), H ₂ -comp.	0 to 500 ppm 0 to 2,000 ppm 0 to 2,000 ppm	1 ppm 10 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) Ethylene Oxide (EtO-B)	0 to 100 ppm 0 to 10 ppm	0.5 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

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 RAE Systems recommends calibrating sensors on installation.

4 Specifications are subject to change.

5 Specification for non-wireless monitors.

6 Please contact RAE Systems for specific wireless approvals

ORDERING INFORMATION (MODEL: PGM-6248)

- Wireless¹ and non-wireless configurations are available
- Refer to the Portables Pricing Guide for part numbers for monitors, accessories, sampling and calibration kits, gas, sensors, and replacement parts

CORPORATE HEADQUARTERS

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