



# MultiRAE

## Wireless Portable Six-Gas Monitor with Advanced VOC Detection Capability



The MultiRAE is the most advanced wireless portable chemical detector on the market. In addition to its cutting-edge PID sensor for volatile organic compounds (VOCs), the MultiRAE supports over 30 electrochemical, NDIR, and catalytic sensors to detect up to five additional threats, including toxic and combustible gases, oxygen deficiency/enrichment, and carbon dioxide.

The MultiRAE's wireless capability elevates worker protection to the next level by providing safety officers real-time access to instrument readings and alarm status from any location for better visibility and faster incident response.

- The most advanced wireless portable chemical detector on the market
- Highly versatile and customizable for different applications
- Man Down Alarm with real-time remote wireless notification
- Easy maintenance with replaceable sensors, pump, and plug-and-play battery
- Fully automated bump testing and calibration with AutoRAE2<sup>1</sup>

### KEY FEATURES

Wireless. Versatile. Proven.

- Wireless access to real-time instrument readings and alarm status from any location
- Unmistakable five-way local and remote wireless notification of alarm conditions
- Over 30 interchangeable sensor options, including 0.1 to 5,000 ppm PID
- Intelligent sensors store calibration data, so they can be swapped in the field<sup>2</sup>
- Extensive on-board gas libraries (190 VOCs and 55 combustible gases)
- Largest display in its class
- Continuous datalogging (6 months for 5 sensors, 24x7)

### APPLICATIONS

- Industrial hygiene, personal protection, and multi-gas leak detection in industries such as:
  - Oil and gas
  - Chemical
  - Aviation (wing tank entry)
  - Shipping / Marine
  - Environmental
  - Pharmaceutical
- HazMat response
- Clandestine drug labs






MultiRAE used for worker exposure monitoring at an oil refinery



### SPECIFICATIONS

#### Instrument Specifications<sup>5</sup>

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 30 intelligent interchangeable field-replaceable sensors including PID for VOCs, electrochemical sensors for toxic gases and oxygen, combustible LEL and NDIR sensors, and CO <sub>2</sub> NDIR sensor
Battery Options	- 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; battery status; datalogging on/off; wireless on/off and reception quality. - STEL, TWAA, 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 <sup>1</sup> 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 charging and PC comm. cradle, travel charger, or AutoRAE 2 Automated Test and Calibration System <sup>1</sup> - Wireless data and alarm status transmission via built-in RF modem (optional)
Wireless Network	RAE Systems Dedicated Wireless Network
Wireless Frequency	ISM license-free bands
Wireless Range (Typical)	656 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 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 Gb IECEx: Ex ia d IIC T4 Gb
CE Compliance (European Conformity)	EMC directive: 2004/108/EC. R&TTE directive: 1999/5/EC. ATEX directive: 94/9/EC
EMI/RFI	No effect when exposed to 0.43mW/cm <sup>2</sup> RF interference from a 5-watt transmitter at 12"
Performance Tests	MIL-STD-810F 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, and Swedish
Warranty	- Two years on non-consumable components and catalytic LEL, CO, H <sub>2</sub> S, and O <sub>2</sub> sensors - One year on all other sensors, pump, battery, and other consumable parts

1 Contact RAE Systems for availability.

2 RAE Systems recommends calibrating sensors on installation.

3 Additional equipment and/or software licenses may be required to enable remote wireless monitoring and alarm transmission.

4 The CO + H<sub>2</sub>S combo sensor is required for a 6-gas configuration.

5 Specifications are subject to change.

[www.raesystems.com](http://www.raesystems.com)

RAE Systems Inc.  
3775 North First Street  
San Jose, CA 95134 USA  
raesales@raesystems.com

USA/Canada 1-877-723-2878  
Europe +45 8652 5155  
Middle East +971 4 440 5949  
China +86 10 5885 8788  
Asia Pacific +852 2669 0828

DS-1070-01

#### Sensor Specifications<sup>5</sup>

PID Sensors	Range	Resolution
VOC 10.6 eV (HR)	0 to 5,000 ppm	0.1 ppm
VOC 9.8 eV <sup>1</sup>	0 to 1,000 ppm	0.1 ppm
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 <sub>2</sub> ) NDIR	0 to 50,000 ppm	100 ppm
Electrochemical Sensors	Range	Resolution
Ammonia (NH <sub>3</sub> )	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 <sub>2</sub> -comp.	0 to 2,000 ppm	10 ppm
Carbon Monoxide (CO) + Hydrogen Sulfide (H <sub>2</sub> S) Combo	0 to 500 ppm 0 to 200 ppm	1 ppm 0.1 ppm
Chlorine (Cl <sub>2</sub> )	0 to 50 ppm	0.1 ppm
Chlorine Dioxide (ClO <sub>2</sub> )	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
Ethylene Oxide (EtO-C), Ext. Range	0 to 500 ppm	10 ppm
Formaldehyde (HCHO)	0 to 10 ppm	0.01 ppm
Hydrogen (H <sub>2</sub> )	0 to 1,000 ppm	2 ppm
Hydrogen Chloride (HCl)	0 to 15 ppm	1 ppm
Hydrogen Cyanide (HCN)	0 to 50 ppm	0.5 ppm
Hydrogen Fluoride (HF)	0 to 10 ppm	0.1 ppm
Hydrogen Sulfide (H <sub>2</sub> S)	0 to 100 ppm	0.1 ppm
Hydrogen Sulfide (H <sub>2</sub> S), Ext. Range	0 to 1,000 ppm	1 ppm
Methyl Mercaptan (CH <sub>3</sub> -SH)	0 to 10 ppm	0.1 ppm
Nitric Oxide (NO)	0 to 250 ppm	0.5 ppm
Nitrogen Dioxide (NO <sub>2</sub> )	0 to 20 ppm	0.1 ppm
Oxygen (O <sub>2</sub> )	0 to 30% Vol.	0.1% Vol.
Phosgene (COCl <sub>2</sub> )	0 to 1 ppm	0.02 ppm
Phosphine (PH <sub>3</sub> )	0 to 20 ppm	0.1 ppm
Phosphine (PH <sub>3</sub> ), Ext. Range	0 to 1,000 ppm	1 ppm
Sulfur Dioxide (SO <sub>2</sub> )	0 to 20 ppm	0.1 ppm

### ORDERING INFORMATION (MODELS: PGM-622X)

- Wireless<sup>1,3</sup> and non-wireless configurations are available
- Refer to the Portables Pricing Guide for part numbers for monitors and accessories

**Toll-Free: 877-723-2878**