# MultiRAE PRO

Wireless Portable Multi-Threat Radiation and Chemical Detector

**The MultiRAE Pro is one of 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 location[1] for better situational awareness and faster incident response.

## APPLICATIONS

- Civil defense (Search and rescue)
- Homeland security
- HazMat response
- Military
- Semiconductor manufacturing
- Environmental

*CBRN detection with the MultiRAE Pro*

## EASE & FLEXIBILITY

- Detector of choice for government agencies and top HazMat teams worldwide
- Highly versatile and customizable
- Man Down Alarm with real-time remote wireless notification[2]
- Compliant with MIL-STD-810G and 461F performance standards
- Fully automatic bump testing and calibration with AutoRAE 2

## FEATURES AND BENEFITS

All-in-one monitoring capabilities for radiation, VOCs, oxygen, toxic, and combustible gases, up to 6 threat types at a time[3]

Large graphical display with easy-to-use, icon-driven user interface. Device Management with Honeywell SafetySuite

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

Five-way local and remote wireless notification of alarm conditions. Intelligent sensors store calibration data, so they can be swapped in the field[4]

**Honeywell**

**RAE** SYSTEMS

# MultiRAE Pro Specifications

## INSTRUMENT SPECIFICATIONS[4]

| | |
|---|---|
| **SIZE** | 7.6 in H x 3.8 in W x 2.6 in D [193 mm x 96.5 mm x 66 mm] |
| **WEIGHT** | 31 oz [880 g] |
| **SENSORS** | Intelligent interchangeable field-replaceable sensors |
| **BATTERY OPTIONS, RUNTIME5 AND RECHARGE TIME** | • Rechargeable Li-ion (~12-hour runtime, < 6-hour recharge time)<br>• Extended duration Li-ion (~18-hour runtime, < 9-hour recharge time)<br>• Alkaline adapter with 4 x AA batteries (~6-hour runtime) |
| **DISPLAY** | • Monochrome graphical LCD display (128 x 160) with backlighting<br>• Automatic screen "flip" feature |
| **DISPLAY READOUT** | • Real-time reading of gas concentrations and correction factor; Man Down Alarm on/off; visual compliance indicator; Instrument components' status<br>• 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<br>• 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)<br>• User-configurable datalogging intervals (from 1 to 3,600 seconds) |
| **COMMUNICATION AND DATA DOWNLOAD** | • Download data and upload instrument set-up from PC through charging cradle or using BLE module and dedicated App<br>• Wireless data and alarm status transmission via built-in RF modem (optional) |
| **WIRELESS NETWORK** | Mesh RAE Systems Dedicated Wireless Network |
| **WIRELESS RANGE (TYPICAL)** | Up to 650 ft [200 m] for sub 1 GHz Mesh Radio,<br>Up to 330 ft [100 m] for Wi-Fi and RAELink3 Mesh Modem,<br>Up to 15 ft (5 m) for BLE |
| **OPERATING TEMPERATURE** | -4°F to 122°F (-20°C to 50°C) |
| **HUMIDITY** | 0% to 95% relative humidity (non-condensing) |
| **DUST AND WATER RESISTANCE** | IP65 ingress protection rating |
| **SAFETY CERTIFICATIONS** | CSA: Class I, Division 1, Groups A, B, C, and D, T4<br>Class II, Division 1, Groups E, F, G, T85°C<br>ATEX: 0575 II 1G Ex ia IIC T4 Ga<br>2G Ex ia d IIC T4 Gb with IR Sensor installed<br>I M1 Ex ia I Ma<br>IECEx: Ex ia IIC T4 Ga<br>Ex ia d IIC T4 Gb with IR Sensor installed<br>I M1 Ex ia I Ma<br>IECEx/ANZEx: Ex ia IIC T4 Ga<br>Ex ia d IIC T4 Gb with IR Sensor installed<br>Ex ia I Ma |
| **EMI/RFI[6]** | 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** | • Four years on Liq $O_2$ sensors<br>• Three years on CO and $H_2S$ sensors<br>• Two years on non-consumable components and catalytic LEL sensors<br>• One year on all other sensors, pump, battery, and other consumable parts |
| **WIRELESS FREQUENCY** | ISM license free band. IEEE 802.15.4 Sub 1 GHz, IEEE 802.11 bands b/n/g 2.4 GHz |
| **WIRELESS APPROVALS** | FCC Part 15, CE R&TTE, Others[5] |

## SENSOR SPECIFICATIONS[5]

| RADIATION SENSORS | RANGE | SENSOR TYPE |
|---|---|---|
| GAMMA | 0 to 20,000 µRem/h (dose rate) | 1cc CsI (Tl) 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 |
| VOC 9.8 EV | 0 to 2,000 ppm | 0.1 ppm |
| BENZENE-SPECIFIC SNAPSHOT[8] | 0 to 200 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 ($CO_2$) 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) + | 0 to 500 ppm | 1 ppm |
| HYDROGEN SULFIDE ($H_2S$) COMBO | 0 to 200 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 ($H_2S$) | 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. |
| OXYGEN (LIQ $O_2$) | 0 to 30% Vol. | 0.1% Vol. |
| PHOSPHINE ($PH_3$) | 0 to 20 ppm | 0.1 ppm |
| PHOSPHINE ($PH_3$ H) | 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] When used in line with Honeywell specifications.

[3] A two-gas combination sensor is required for a 6-gas configuration.

[4] Honeywell RAE Systems recommends calibrating sensors on installation.

[5] Specifications are subject to change.

[6] Specification for non-wireless monitors.

[7] Please contact Honeywell RAE Systems for specific wireless approvals.

[8] Requires Benzene RAE-Sep Tube Cartridge.

## ORDERING INFORMATION  (MODEL: PGM-6248)

• Wireless[1] 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

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