



MultiRAE Pro

Wireless Portable Multi-Threat Radiation and Chemical Detector

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.



CBRN detection with the MultiRAE Pro

APPLICATIONS

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



- *Detector of choice for government agencies and top HazMat teams worldwide*
- *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 AutoRAE 2*

FEATURES & BENEFITS

- 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
- Device Management with Honeywell SafetySuite

MultiRAE Pro Specifications

INSTRUMENT SPECIFICATIONS ^a	
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 CO ₂ NDIR sensor
BATTERY OPTIONS, RUNTIMES 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 Continuous datalogging (6 months for 5 sensors at 1-minute intervals, 24/7) - User-configurable datalogging intervals (from 1 to 3,600 seconds)
DATALOGGING	- 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) MultiRAE Pro to Access Point ~ 330 feet (100 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
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 IM1 Ex ia I Ma IECEX: Ex ia IIC T4 Ga Ex ia d IIC T4 Gb with IR Sensor installed IM1 Ex ia I Ma IECEX/ANZEx: Ex ia IIC T4 Ga Ex ia d IIC T4 Gb with IR Sensor installed Ex ia I Ma
EMI/RFI5	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 - Three years on CO and H ₂ S sensors - Two years on non-consumable components and catalytic LEL 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 Wi-Fi 802.11 b/g
WIRELESS APPROVALS	FCC Part 15, CE R&TTE, Others ⁴
RADIO MODULE	Supports RM900A

SENSOR SPECIFICATIONS ^a		
RADIATION SENSORS	RANGE	SENSOR TYPE
GAMMA	0 to 20,000 μ Rem/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) +	0 to 500 ppm	1 ppm
HYDROGEN SULFIDE (H ₂ S) 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 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.
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 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

For more information

www.honeywellanalytics.com
www.raesystems.com

Europe, Middle East, Africa

Life Safety Distribution GmbH
Tel: 00800 333 222 44 (Freephone number)
Tel: +41 44 943 4380 (Alternative number)
Middle East Tel: +971 4 450 5800 (Fixed Gas Detection)
gasdetection@honeywell.com

Americas

Honeywell Analytics Distribution Inc.
Tel: +1 847 955 8200
Toll free: +1 800 538 0363
detectgas@honeywell.com
Honeywell RAE Systems
Phone: +1 408 952 8200
Toll Free: +1 888 723 4800

Asia Pacific

Honeywell Analytics Asia Pacific
Tel: +82 (0) 2 6909 0300
India Tel: +91 124 4752700
China Tel: +86 10 5885 8788-3000
analytics.ap@honeywell.com

Technical Services

EMEA: HAexpert@honeywell.com
US: ha.us.service@honeywell.com
AP: ha.ap.service@honeywell.com

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Device Management with
Honeywell SafetySuite



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