



AreaRAE Gamma

Wireless, Transportable Multi-gas
and Radiation Monitor



The AreaRAE Gamma is a combination multi-gas and radiation detector equipped with a wireless, RF (radio-frequency) modem for real-time communication to a base station. It is a rugged, weather-resistant, one- to five-sensor portable monitor that can run up to 18 hours before battery recharge. It includes a gamma sensor for measuring gamma radiation, plus options for four additional sensors, including a photoionization detector for parts-per-million measurement of volatile organic compounds, an LEL combustible gas sensor, an oxygen sensor, and specific electrochemical toxic sensors.

Key Features

Integrated

- Up to four gas sensors (PID, LEL, O₂ and selectable toxic gas)
- One radiation sensor (Gamma)
- Built-in sampling pump

Easy to Use

- Loud buzzer and large, extra-bright warning light
- Large LCD display and keypad
- Interchangeable Lithium-ion or alkaline battery pack

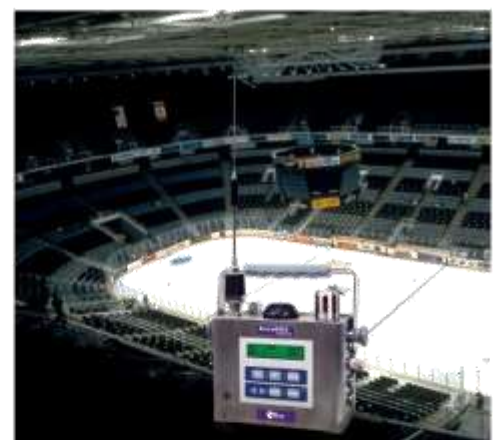
Durable

- Rugged, weather-resistant housing
- Continuous operation via AC source

Applications

- HazMat and Emergency Response
- Homeland Defense Applications
- Public Venue Protection
- First Responders
- Port Security
- Border Crossings

- View real-time sensor data and alarm status at command center using ProRAE Guardian Software
- Optional GPS provides ability to track and display readings from remote detectors
- License-free, ISM-band RF transmission with communication range up to 2 miles (3 km)
- Fully compatible with standard AreaRAE 5-gas monitoring system



The wireless AreaRAE Gamma can be quickly deployed for area-wide detection of gamma radiation, ppm measurement of VOCs, and monitoring of LELs and oxygen to provide real-time detection of HazMat incidents and public event safety.



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Specifications

Size	9.25" L x 5.0" W x 9.25" D (235mm L x 127mm W x 235mm D) without handle
Weight	8.5 lbs. (3.9 kg) with battery pack
Sensors	Up to five sensors (PID, LEL, Gamma, and two selectable toxics; or PID, LEL, Gamma, O ₂ , and one selectable toxic)
Battery	Rechargeable, 7.4V/4.5Ah, Lithium-ion battery pack with built-in charger (less than 10 hours charge time) or a 6 C-size alkaline battery pack
Operating Hours	Up to 18 hours continuous operation on battery power
Display	2-line, 16-digit LCD with manually activated LED back light
Keypads	3 operation and 4 programming keys
Direct Readout	Instantaneous values, sensor name, high and low values for all detectors, TWA and STEL values for toxic gases and VOCs, battery voltage and elapsed time
Alarm	Flashing red LED cluster to indicate exceeded preset limits, low battery or sensor failure
Alarm Setting	Separate alarm limit settings for TWA, STEL, Low and High alarm
Audible Alarm	110 dB buzzer at 10cm (typical)
Visible Alarm	Flashing red LED cluster
Alarm Mode	Latching/automatic reset
Datalogging	4,000 points for each sensor with time stamp, serial number, user ID, site ID
Data Storage	20,000 readings (64 hours, 5 channels at 1-minute intervals) in non-volatile memory
Datalog Interval	Programmable 1 to 3,600 sec
Communication	Upload data to PC and Download monitor setup from PC through RS-232 link to serial port on PC
EMC/RFI	EMC directive: 2004/108/EC. EMI and ESD test: 100MHz to 1GHz 30V/m, no alarm Contact: ±4kV Air: ±8kV, no alarm
Safety Certification	CSA Classified for use in Class I, Division 2, Groups A, B, C, and D
RF Range	Up to 2 miles, extendable with RAELink Repeaters
Calibration	Two-point field calibration for fresh air and standard reference gas
Sampling Pump	Internal integrated diaphragm pump with programmable High (400cc/min) and Low (300cc/min) flow rate settings
Low Flow Alarm	Autoshut off pump at low flow condition
Temperature	-4° to 113° F (-20° to 45° C)
Humidity	0% to 95% relative humidity (non-condensing)
Optional	Integrated GPS receiver
Wireless Frequency	ISM license free band (902 - 928 MHz)
Wireless Approvals	FCC Part 15, Others ¹

¹Contact RAE Systems for country specific wireless approvals and certificates. Specifications are subject to change.

Sensor Specifications

Radiation	DER Range	Energy Range	Sensitivity
Gamma	1 to 4000 µR/h (0.01 to 40 µSv/h)	0.060 to 3.0 MeV	>100 cps/µSv/hr

Gas Monitor	Range	Resolution
Oxygen	0 to 30.0%	0.1%
Combustible	1 to 100% LEL	1% LEL
VOCs	0 to 199 ppm 200 to 2,000 ppm	0.1 ppm 1 ppm
Carbon Monoxide	0 to 500 ppm	1 ppm
Carbon Monoxide	10 to 2000 ppm	10 ppm
Hydrogen Sulfide	0 to 100 ppm	1 ppm
Sulfur Dioxide	0 to 20.0 ppm	0.1 ppm
Nitric Oxide	0 to 250 ppm	1 ppm
Nitrogen Dioxide	0 to 20.0 ppm	0.1 ppm
Chlorine	0 to 10.0 ppm	0.1 ppm
Hydrogen Cyanide	0 to 100 ppm	1 ppm
Ammonia	0 to 50 ppm	1 ppm
Phosphine	0 to 5.0 ppm	0.1 ppm
Hydrogen Chloride	Call RAE Systems	
Hydrogen Fluoride	Call RAE Systems	

Specifications are subject to change.

Standard Monitor Includes:

- Monitor as specified
- Sensors as specified
- Calibration adapter
- Operation and maintenance manual
- Rechargeable Lithium-ion battery pack
- 120/240 VAC AC/DC Adapter
- Spare alkaline battery pack
- 10 spare external filters
- 5 internal filters
- Hard transport case with pre-cut foam padding
- Tool kit

Instrument with calibration also includes:

- Calibration gas (multiple cylinders possible, depending on the sensors installed)
- Calibration regulator and tubing (second regulator possible, depending on the types of calibration gases included)



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