



# MeshGuard

Semi-Fixed, Wireless Gas Monitor



MeshGuard is a rugged, battery-powered toxic gas detector integrated with a wireless mesh radio modem. Key features include extremely fast installation, self-configuration of the network, and worldwide approved wireless frequency coverage. Designed for use in harsh environments and easy to service in the field, MeshGuard is a truly unique wireless solution for remote chemical detection in hazardous areas.

- Fast deployment and decommissioning time
- Simple to install and operate
- Rugged and reliable
- Versatile to accommodate many applications

## KEY FEATURES

- Self-forming wireless network; units come online automatically
- Compact and lightweight
- IP-65 rated weather resistant, and splash guard equipped for sensor protection
- Multiple controller options for real-time wireless data collection and viewing
- Self-healing network automatically routes data back to controller through best wireless path available
- Battery powered operation for up to 6 months
- SolarPak provides continuous run time
- Intrinsically Safe
- Magnetic mounting option for quick and easy MeshGuard installation

## APPLICATIONS

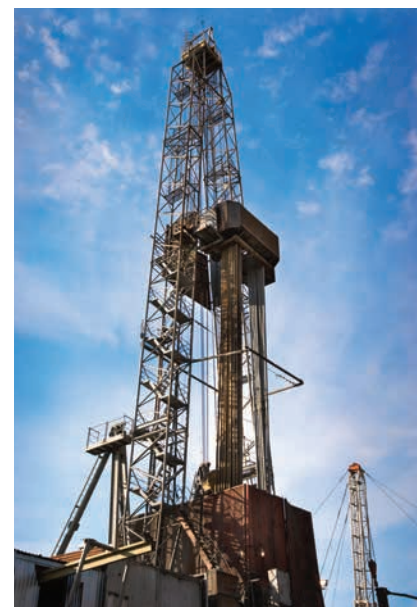
- Oil and gas drilling operations
- Oil and gas production
- Plant maintenance turnarounds
- Industrial safety
- Tank farms
- Shipyards and maritime



RAE PowerPak  
External Battery



MeshGuard  
inside protective  
stainless-steel  
housing



MeshGuard wireless gas detectors are designed for use in the harshest outdoor environments such as drilling rigs and in other industrial applications

\*Please refer to the MeshGuard Gamma datasheet for radiation specific information.



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## SPECIFICATIONS

### Sensor Specifications

Sensor	Range	Resolution	Response Time
H <sub>2</sub> S	0 to 100 ppm	0.1 ppm	T90 < 30 sec T10 < 30 sec
LEL /LEL IR	0 to 100% LEL	1% LEL	T90 < 30 sec T10 < 30 sec
CO	0 to 2000 ppm	1 ppm	T90 < 30 sec T10 < 30 sec
CO <sub>2</sub>	0 to 5% Vol 0 to 100% Vol	0.01% Vol 0.1% Vol	T90 < 30 sec T10 < 30 sec
O <sub>2</sub>	0 to 25%	0.1%	T90 < 15 sec T10 < 15 sec
NH <sub>3</sub>	0 to 100 ppm	1 ppm	T90 < 90 sec T10 < 90 sec
Cl <sub>2</sub>	0 to 50 ppm	0.1 ppm	T90 < 30 sec T10 < 30 sec
SO <sub>2</sub>	0 to 20 ppm 0 to 100 ppm	0.1 ppm 1ppm	T90 < 60 sec T10 < 60 sec

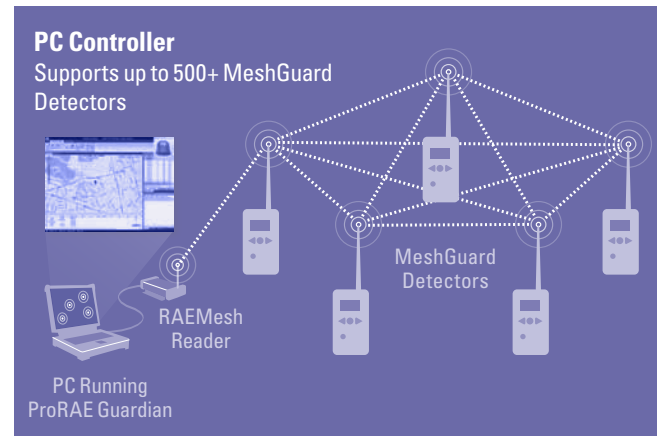
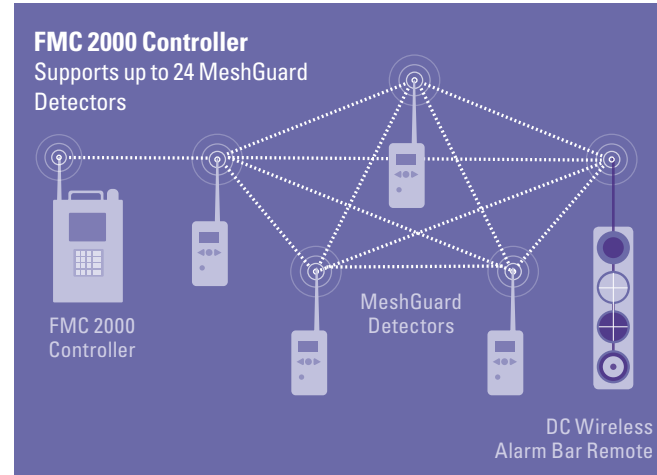
### Detector Specifications

Size	10.5" L x 3.7" W x 2.1" H (26.5cm x 9.5cm x 5.5cm)
Weight	1.3 lbs (0.6kg)
Visual Alarm	2 super-bright red LEDs
Audible Alarm	90dB @ 30cm
Calibration	Two-point field calibration
Operating Range	985 feet/300 meters (line of sight)
Keypad	Three operation and programming keys
Display	Customized LCD (1" x 1.5"/72mm x 108mm) with backlight
Power Supply	Disposable Lithium Battery, +3.6V (optional rechargeable external battery for extended run time)
Operating Time	Toxic Gas Sensors: Up to 6 months on internal battery (up to 1 year on external) LEL Gas Sensor: Up to 21 days on external PowerPak battery LEL IR Gas Sensor: Up to 2 months on internal battery* (up to 1 year on external) CO <sub>2</sub> Gas Sensor: Up to 3 months on external PowerPak battery
Operating Temperature	-40° to 122° F (-40° to +50° C) for LEL, LEL IR, CO and H <sub>2</sub> S sensors Other sensors -4° to 122° F (-20° to +50° C)
Humidity	5% to 95% relative humidity, non-condensing
IP Rating	IP-65
Safety Certifications	US and Canada: CID1, Groups A, B, C, D, T4 Europe: ATEX IM1/II 1G Ex ia I/IIC T4 IECEX Ex ia I/IIC T4 Contact RAE Systems for country-specific certification
Wireless Frequency	ISM license free band. IEEE 802.15.4 2.4 GHz
Wireless Approvals	FCC Part 15, CE R&TTE, Others2
Radio Module	Supports RM2400 and RM2400A

<sup>1</sup> MeshGuard LEL IR units operating in temperatures below -4°F (-20°C) may require a PowerPak external battery for extended runtimes.

<sup>2</sup> Contact RAE Systems for country specific wireless approvals and certificates. Specifications are subject to change.

## MESHGUARD SYSTEM CONFIGURATION OPTIONS



### CORPORATE HEADQUARTERS

**RAE Systems by Honeywell**  
1349 Moffett Park Drive  
Sunnyvale, CA 94089 USA  
RAE-InsideSales@honeywell.com

### WORLDWIDE SALES OFFICES

**USA/Canada** 1.877.723.2878  
**Europe** +800.333.222.44/+41.44.943.4380  
**Middle East** +971.4.450.5852  
**China** +86.10.5885.8788-3000  
**Asia Pacific** +852.2669.0828