



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

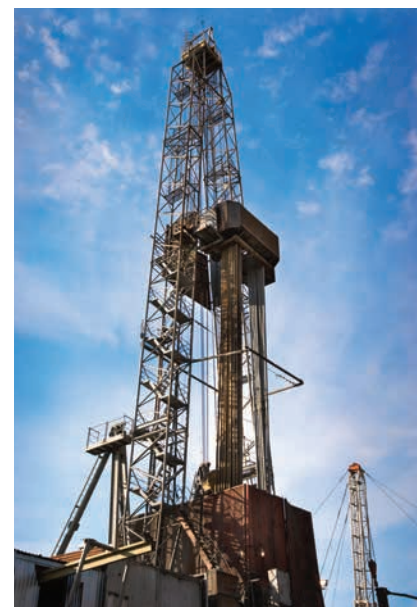
- Oil and gas drilling operations
- Oil and gas production
- Plant maintenance turnarounds
- Industrial safety
- Tank farms
- Shipyards and maritime



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 ₂ 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 ₂	0 to 5% Vol 0 to 100% Vol	0.01% Vol 0.1% Vol	T90 < 30 sec T10 < 30 sec
O ₂	0 to 25%	0.1%	T90 < 15 sec T10 < 15 sec
NH ₃	0 to 100 ppm	1 ppm	T90 < 90 sec T10 < 90 sec
Cl ₂	0 to 50 ppm	0.1 ppm	T90 < 30 sec T10 < 30 sec
SO ₂	0 to 20 ppm 0 to 100 ppm	0.1 ppm 1ppm	T90 < 60 sec T10 < 60 sec

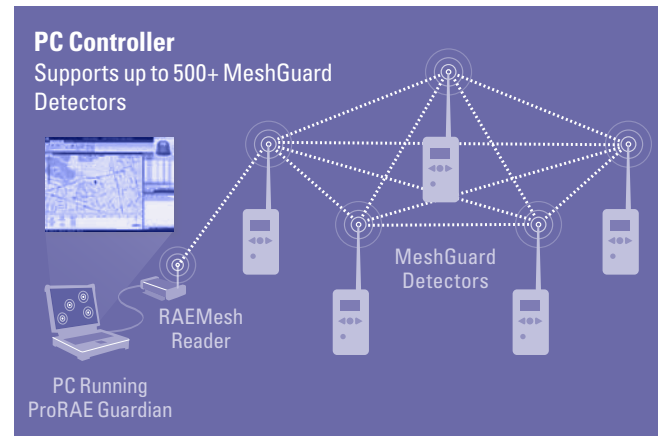
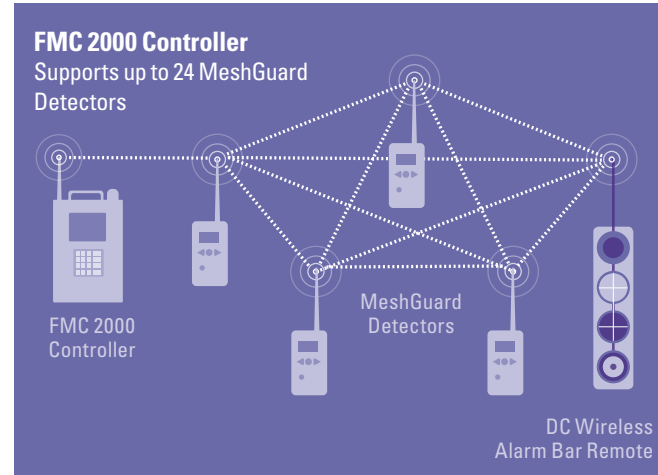
Detector Specifications

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 ₂ 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 ₂ 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

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

² 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