



# 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

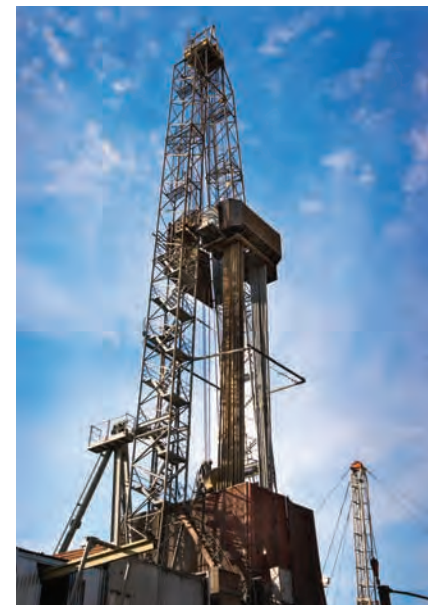
- Oil and gas drilling operations
- Oil and gas production
- Plant maintenance turnarounds
- Industrial safety
- Tank farms
- Shipyards and maritime



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<br>T10 < 30 sec |
| LEL /LEL IR      | 0 to 100% LEL                | 1% LEL                | T90 < 30 sec<br>T10 < 30 sec |
| CO               | 0 to 2000 ppm                | 1 ppm                 | T90 < 30 sec<br>T10 < 30 sec |
| CO <sub>2</sub>  | 0 to 5% Vol<br>0 to 100% Vol | 0.01% Vol<br>0.1% Vol | T90 < 30 sec<br>T10 < 30 sec |
| O <sub>2</sub>   | 0 to 25%                     | 0.1%                  | T90 < 15 sec<br>T10 < 15 sec |
| NH <sub>3</sub>  | 0 to 100 ppm                 | 1 ppm                 | T90 < 90 sec<br>T10 < 90 sec |
| Cl <sub>2</sub>  | 0 to 50 ppm                  | 0.1 ppm               | T90 < 30 sec<br>T10 < 30 sec |
| SO <sub>2</sub>  | 0 to 20 ppm<br>0 to 100 ppm  | 0.1 ppm<br>1ppm       | T90 < 60 sec<br>T10 < 60 sec |

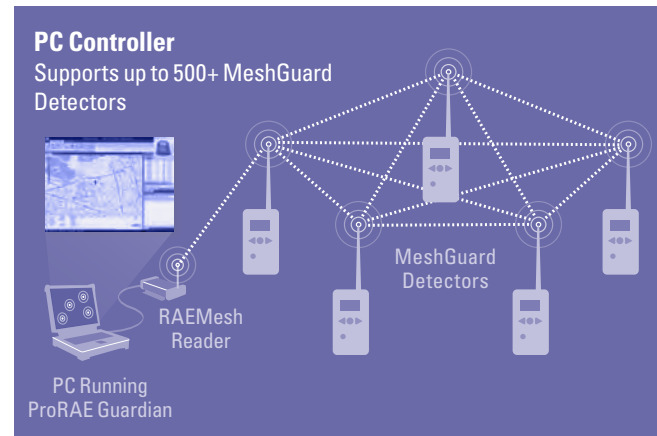
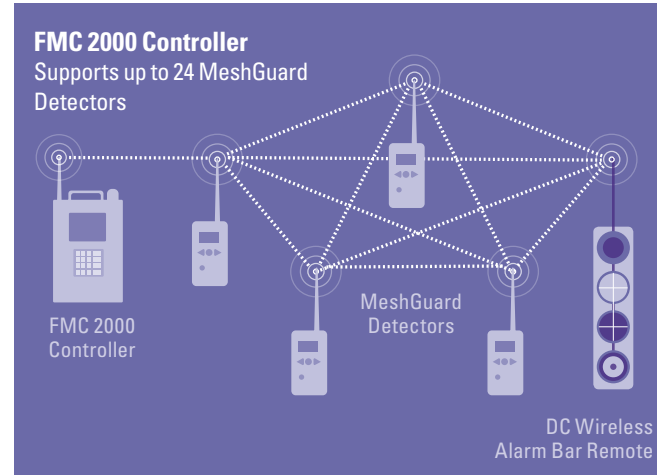
### Detector Specifications

|                       |  |
|-----------------------|--|
| 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:<br>Up to 6 months on internal battery (up to 1 year on external)<br>LEL Gas Sensor:<br>Up to 21 days on external PowerPak battery<br>LEL IR Gas Sensor:<br>Up to 2 months on internal battery* (up to 1 year on external)<br>CO <sub>2</sub> Gas Sensor:<br>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<br>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<br>Europe: ATEX IM1/II 1G Ex ia I/IIC T4<br>IECEX Ex ia I/IIC T4<br>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

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