MeshGuard and MeshGuard Gamma

RAE Systems by Honeywell
Battery-Powered Wireless
Gas Detector and Radiation Detector
MeshGuard
Battery-Powered Wireless Gas Detector

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 24/7 uptime
- 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

The RAE Systems by Honeywell MeshGuard gas detection monitor is a key building block of the MeshGuard intelligent network of connected sensors for gas detection in industrial safety and oil and gas applications.

The MeshGuard system is designed for quick deployment in areas where low cost/high ROI solutions are required.

MeshGuard is available with field-replaceable precision sensors specifically designed to sense toxic and flammable gases.

MeshGuard wireless gas detectors are designed for use in the harshest outdoor environments such as drilling rigs and in other industrial applications.
MeshGuard
Battery-Powered Wireless Gas Detector
Specifications

<table>
<thead>
<tr>
<th>Sensor Specifications*</th>
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</thead>
<tbody>
<tr>
<td>Sensor</td>
</tr>
<tr>
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<tr>
<td>H₂S</td>
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<td>SO₂</td>
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*Other sensors: contact RAE Systems

MeshGuard Detector Includes:
- MeshGuard detector with sensor as specified
- Operation and maintenance manual
- Calibration gas test adapter
- High-capacity Lithium battery installed
- Maintenance tool

Mesh Guard System Configuration Options

FMC 2000 Controller
Supports up to 24 MeshGuard Gamma Detectors

PC Controller
Supports up to 500+ MeshGuard Gamma Detectors

MeshGuard Ordering Information

**Detector Specifications**

**Basic parameters**

Visual Alarm: 2 super-bright red LEDs
Audible Alarm: 90dB @ 30cm
Calibration: Two-point field calibration
RF Frequency: 2.4GHz ISM Band, IEEE 802.15.4 standard compliant
Operating Range: 300 meters / 985 feet (line of sight)
Display: Customised LCD (1" x 1.5"/ 72mm x 108mm) with backlight
Keypad: Three operation and programming keys
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 2 years on external PowerPak battery)
Flammable Gas Sensor: up to 21 days on external PowerPak battery

**Environmental parameters**

Operating Temperature: -40° C to +50° C (-40° F to 122° F) for LEL, CO and H₂S sensors
Other sensors: -20° C to +50° C (-4° F to 122° F)
Humidity: 5% to 95% relative humidity, non-condensing

**Physical parameters**

Size: 26.5cm x 9.5cm x 5.5cm (10.5" L x 3.7" W x 2.1" H)
Weight: 0.6kg (1.3 lbs)

**Certifications**

Certifications: US and Canada: CID1, Groups A, B, C, D, T4
Europe: ATEX M1/H 1G Ex ia IIC T4
IECEx Ex ia IIC T4
Inmetro
Contact Honeywell for country-specific certification
RF Certifications: FCC Part 15, CE, SRRC

*Specifications are subject to change*
MeshGuard Gamma
Battery-Powered Radiation Detector

Key Features
- Self-forming wireless network; units come online automatically
- Local display with Dose Rate in μR/h, μSv/h or μGy/h
- High sensitivity scintillator detector
- Compact and lightweight
- IP-54 rated weather resistant
- Multiple controller options for real-time wireless data collection and viewing
- Directly compatible with ProRAE Guardian mobile command center software
- Self-healing network automatically routes data back to controller through best wireless path available
- Battery powered operation for up to 2 months
- SolarPak provides 24/7 uptime
- Magnetic mounting option for quick and easy MeshGuard installation

Applications
- Environmental monitoring and protection
- Nuclear industry plant monitoring
- Homeland security and venue protection
- Plant maintenance turnarounds
- Industrial safety
- Nuclear medicine

The RAE Systems by Honeywell MeshGuard Gamma radiation detection monitor is a key building block of the MeshGuard intelligent network of connected sensors for gamma radiation detection in industrial and environmental monitoring applications.

The MeshGuard system is designed for quick deployment in areas where low cost/high ROI solutions are required.

MeshGuard Gamma is available with field-replaceable pre-calibrated sensors specifically designed to sense gamma radiation.

MeshGuard Gamma provides real-time, 24 x 7 radiation detection for fence-line and area monitoring applications.
MeshGuard Gamma
Battery-Powered Radiation Detector
Specifications

**MeshGuard Gamma Ordering Information**
MeshGuard Gamma Detector Includes:
- MeshGuard Gamma detector
- Operation and maintenance manual
- High-capacity Lithium battery installed
- Maintenance tool
- Radiation check source

**Mesh Guard System Configuration Options**

**FMC 2000 Controller**
Supports up to 24 MeshGuard Gamma Detectors

**PC Controller**
Supports up to 500+ MeshGuard Gamma Detectors

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**Specifications**

<table>
<thead>
<tr>
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</tr>
</thead>
<tbody>
<tr>
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</tr>
<tr>
<td>Dose Rate Range</td>
</tr>
<tr>
<td>Energy Range</td>
</tr>
<tr>
<td>Accuracy</td>
</tr>
<tr>
<td>Response Time</td>
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<tr>
<td>Visual Alarm</td>
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<tr>
<td>Audible Alarm</td>
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<td>RF Frequency</td>
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<td>Operating Range</td>
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<td>Keypad</td>
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<tr>
<td>Power Supply</td>
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<tr>
<td>Humidity</td>
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<tbody>
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<tr>
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*Specifications are subject to change

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[Images of the devices and certifications logos]
RAE Systems by Honeywell MeshGuard monitors detect a wide range of gases and quickly relay their data to a central controller in a self-forming, self-healing mesh radio network.

MeshGuard is rapidly deployable in industrial and remote monitoring applications. All detectors are certified for the most hazardous environments—Class I, Division 1 or Zone 0. A variety of accessories are available for use with the MeshGuard wireless gas detection system.

**RAE PowerPak**

The RAE PowerPak is a rechargeable, external battery used to extend the run time of MeshGuard detectors.

- Powerpak is Class I, Division 1 (Zone 0) certified
- Hot swappable in the field
- PowerPak can operate an LEL detector for 20+ days, or an electrochemical sensor for 18+ months

**Mesh Router**

The Mesh Router allows wireless sensor networks to be deployed at greater distances from a central controller. MeshGuard Monitors and Routers work together to find the best possible transmission path for the sensor readings. The MeshRouter displays the realtime wireless signal strength at any given location, which enables rapid determination of suitable locations for MeshGuard Monitors.

The Mesh Router is a Class I, Division 1 (Zone 0) portable wireless device that has two primary functions:

1. To extend the wireless transmission range between points.
2. As a system deployment tool. Prior to deploying detectors, the Mesh Router can provide real-time signal strength at any given location.

The Mesh Router can operate continuously for 10+ days with an internal battery or 45+ days with an external PowerPak.

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**Specifications**

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<tr>
<td><strong>Size</strong></td>
<td>14.25&quot; H x 10.2&quot; W x 5.75&quot; D (36.2cm x 26cm x 14.6 cm)</td>
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<tr>
<td><strong>Weight</strong></td>
<td>15kg (33 lbs) with four internal batteries</td>
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<tr>
<td><strong>Operating Temperature</strong></td>
<td>-40° C to +55° C (-40° F to 131° F)</td>
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Mesh Reader
RAE Mesh Reader
The RAEMesh Reader is a device that allows the use of PC (instead of dedicated controller) to monitor wireless detectors in real time.

- The RAEMesh Reader receives data wirelessly from remote detectors, and pushes data to ProRAE Guardian software running on a PC
- The RAEMesh Reader can push data directly to a PC via RS232, or to a remote PC via ethernet
- The RAEMesh Reader is designed to be located in non-hazardous, indoor locations. An optional outdoor antenna with a 10m (30ft) cable can be used to extend the usage to outdoor locations

EchoView
The RAE Systems by Honeywell EchoView is a portable, intrinsically safe (Class I, Division 1 and Zone 0) alarm notification device that allows you to monitor your sensor network remotely. It displays the sensor readings of up to 16 MeshGuard Monitors on a wireless network and retrieves all monitor information that is typically viewed on the system controller.

- Class I, Division 1 (Zone 0) certified
- Allows users to be away from the controller and still be notified of alarm conditions
- The EchoView gets all sensor readings directly from the controller
- 10+ days run time with internal battery, 45+ days run-time with external PowerPak

FA200 Alarm Bar
The FA200 Alarm Bar has one audible (112dB at 3m/10ft) and four visible alarms. The alarm logic is fully configurable from the FMC 2000 multi-channel controller.

The FA200 Alarm Bar uses a simple mil-spec connector to connect to the FMC-2000 controller up to 10m (30ft) away. The five internal relays on the controller come pre-wired for use with an FA200 Alarm Bar, or can be rewired to trigger a variety of external alarms or process controls.
Honeywell Analytics is able to provide gas detection solutions to meet the requirements of all applications and industries. Contact us in the following ways:

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Experts in Gas Detection

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