RAE Systems Gas Detection

2010 Product Catalog

About RAE Systems

RAE Systems is the leading global provider of rapidly deployable connected, intelligent gas detction systems that enable real-time safety security and threat detection. RAE Systems products are used in over 100 countries by many of the world's leading corporations and government agencies.

RAE Systems products offer a full line of wireless-enabled solutions including personal, hand-held, transportable, and fixed instruments designed to meet the needs of any usage scenario. Applications include monitoring in energy production, refining, industrial and environmental safety, public venue protection and government first responder markets.

A proven technology leader that owns and manufactures its chemical sensor technology, RAE Systems holds over 20 chemical sensor patents and has developed proprietary photoionization, wireless, and radiation detection technologies. By leveraging nearly two decades' experience with a global sales channel and partners, RAE Systems provides the highest level of quality, value, and satisfaction to its customers around the world.

Markets We Serve

Oil & Gas
RAE Systems is the world leader in photoionization technology for the detection of volatile organic compounds such as benzene and other hydrocarbons. We offer a range of complementary products that help detect and protect against problems before they occur.

HazMat
RAE Systems' gas detection solutions are widely used by hazardous materials response teams in fire departments around the world. Within the United States, our products have become the industry standard for HazMat teams across the country.

Industrial Safety
In a confined space, it's important to know you've got the tools on hand to ensure reliable personal protection and regulatory compliance. Combustible gases and VOCs can be found anywhere. Finding and fixing leaks early on is crucial to keeping people and property safe.

Civil Defense
RAE Systems' innovative applications are used by government agencies ranging from the U.S. Department of Homeland Security to NASA. Our solutions provide a cost-effective way to manage everything from venue protection to decontamination.

Environmental
RAE Systems is the largest PID supplier for the environmental market. Our humidity compensation technology is setting the standard, helping to eliminate false positives and deliver accurate and precise results when it matters the most.

Product Matrix

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Models of Usage

Colorimetric Gas Detection Tubes & Pumps

Quick Measurement of Many Gases & Vapors

RAE Systems' large selection of colorimetric gas detection tubes enables quick, on-the-spot measurement of many gases and vapors. The one-time-use tubes are easy to read, with a sharp, clear color change, and provide accuracy with no need for calibration.

Gas detection tubes operate by chemical reaction between the vapor-phase compound and a liquid or solid detecting reagent, which is supported on an inert matrix.

Colorimetric Gas Detection Tubes

- Easy to read, with sharp, clear color change
- Quick, direct measurement
- Accurate
- No calibration needed
- Quality controlled
- Large selection of tubes

Hand Pump (LP-1200)

- Solid metal construction with lifetime warranty
- Springless piston design accurately draws 50 and 100 cc volumes
- Tube tip breaker and glass tip holder
- Clear end-of-flow indicator
- Tapered inlet design avoids leaks with different diameter tubes
- Simple stroke counter

ToxiRAE II

Personal Gas Monitor for Single Gas

IECEx   ATEX

ToxiRAE II is a single-gas personal protection monitor that continuously displays toxic gas concentrations. A simple-to-use one-button product, the ToxiRAE II is easy to calibrate and offers preset alarms that can be modified to meet specialized requirements.

Key Features

- Large, easy-to-read display continuously shows gas concentration in ppm
- Displays STEL, TWA, and Peak values
- Sensors available: H_2S, CO, O_2, NH_3, Cl_2, ClO_2, HCN, NO, NO_2, PH_3, SO_2
- Field-replaceable filter and battery
- User-adjustable high, low, STEL, and TWA alarms
- Simple calibration
- Durable, highly impact-resistant, carbon-loaded ABS housing
- Highly resistant to RFI
- IP-65 rated weather resistant

ToxiRAE 3

Single Gas Monitor for CO or H₂S

IECEx ATEX CSPus CE

ToxiRAE 3 is a portable full-featured single-gas monitor that is easily worn over protective clothing and hand-carry equipment. STEL, TWA, low and high alarms can be recorded. The detector is warranted for 2 years and is maintenance-free, with a replaceable battery.

Key Features

- High-performance micro sensor with industry's fastest response time
- 0.1 ppm H₂S resolution, and high-range 1999 ppm CO sensor available
- Large, easy-to-read display for gas concentration or days remaining (end-user adjustable)
- Rugged stainless-steel enclosure (IP-67 rated)
- Full activity records when used with AutoRAE Lite calibration station

AutoRAE Lite

Automated Bump Test and Calibration Station for ToxiRAE 3 or QRAE II

AutoRAE Lite is a high-speed, low-operation-cost bump test and calibration station with data storage. It provides direct functional bump test indication and operates on a low-pressure system with a built-in pump.

Key Features

- Compact, low-cost bump and calibration station
- 12-second bump test
- 2-minute calibration
- Storage of logged data on a standard SD card
- Portable when used with batteries
- Full configuration of gas monitors

ACCESSORIES

AutoRAE Lite for ToxiRAE 3
Automated Bump Test and Calibration Station
See full description on page 7

AUTORAE LITE IS AN ACCESSORY FOR:

ToxiRAE 3
Single-Gas Monitor
See full description on page 5

QRAE II
4-Gas Detector
See full description on page 8

QRAE II

4-Gas Diffusion or Pump Detector for O_2, Combustibles, H_2S, CO

IECEx   ATEX

QRAE II is a full-featured, compact, one- to four-sensor gas detector for oxygen, combustibles, hydrogen sulfide, carbon monoxide.

Key features include an easy-to-change battery pack, a water-resistant case and a new state-of-the-art SPE O_2 sensor.

Key Features

- Patented SPE O_2 Oxygen sensor
- Best EMI/RFI immunity technology for products in its class, eliminating radio interference
- Easy access to pump, sensors, filter and battery compartment without exposing electronic components to potential damage
- IP-65 water- and dust-resistant case
- Strong, protective, concussion-proof design

MultiRAE Plus

4-Gas and PID Monitor

Wireless

ATEX

The MultiRAE Plus combines a photoionization detector with a four-gas confined space monitor in one compact device with a sampling pump. With the addition of a RAELink3 wireless modem, the MultiRAE Plus can provide real-time monitoring of information up to 2 miles (3 km) away.

Key Features

- O_2, LEL, PID, and any two plug-in "smart" toxic sensors: CO, H_2S, SO_2, NO, NO_2, Cl_2, HCN, NH_3, PH_3
- 0 to 2,000 ppm measurement of VOCs with 0.1 ppm resolution
- Strong, built-in sample pump supports tubes of up to 100 feet (30m) horizontally or vertically
- Stores up to 80 hours of sensor data at one-minute intervals for download to PC
- Loud audible alarm that varies for different conditions

ACCESSORIES

AutoRAE Lite for QRAE II
Automated Bump Test and Calibration Station
See full description on page 7

ACCESSORIES

RAELink3
Wireless Modem
See full description on page 17

GammaRAE II R

Gamma Radiation Detector & Dosimeter in One

Wireless

ATEX ⓒ ⑤Pus CE

The GammaRAE II R is a gamma radiation detector and full-range dosimeter in a single instrument. Designed specifically to meet the needs of first responders, it has the rapid response of a detector and the accurate dose measurement of a dosimeter.

Key Features

- Two types of sensors for excellent response in high and low dose rate ranges
- Wireless data transmission up to 2 miles (3 km) when used with a RAELink3
- Accurately measures accumulated dose to the wearer
- IP-67, immersible in water for easy decontamination
- Certified for use in Class I, Division 1 hazardous environments
- Top-mounted, invertible display
- Two AA alkaline batteries last up to 600 hours

ACCESSORIES

RAELink3
Wireless Modem
See full description on page 17

NeutronRAE II

Detector for Gamma & Neutron Radiation

ATEX ⓒ ⑤Pus CE

NeutronRAE II is a personal radiation detector that provides rapid detection of both gamma (γ) ray and neutron sources, even in potentially flammable environments. Certified intrinsically safe and water-immersible for chemical decontamination purposes, the NeutronRAE II can be safely used in more environments than any other personal gamma and neutron radiation detector.

Key Features

- Detects neutrons from weapons-grade Plutonium (^{239}Pu)
- Sensitive CsI and LiI scintillators for excellent search capability and fast response
- Top-mounted invertible display
- IP-67, immersible in water for easy decontamination
- Certified for use in Class I, Division 1 hazardous environments
- Two AA alkaline batteries last up to 600 hours

MiniRAE Lite

Handheld VOC Monitor for General Purpose Use in Non-Hazardous Environments

CE

The MiniRAE Lite provides PID performance at a modest price. Accurate VOC monitoring up to 5,000 ppm, 3-second response time, and humidity compensation make it an excellent instrument for applications ranging from environmental to construction.

Key Features

• Easy access to lamp and sensor in seconds without tools
• Large graphic display for easy overview of information
• Field-interchangeable battery pack
• Integrated flashlight
• Multi-language support with 12 languages encoded
• IP-65 design

MiniRAE 3000

Portable Handheld VOC Monitor for ppm Measurement

Wireless

ATEX   c(SP)us   CE

The MiniRAE3000 uses a third-generation patented PID to accurately measure more ionizable chemicals than any other product on the market. It provides full-range measurement from 0 to 15,000 ppm and up to 6 months of datalogging.

Key Features

• 3-second response time
• Humidity compensation with built-in humidity and temperature sensors
• Wireless data transmission up to 2 miles (3 km) when used with a RAELink3
• Large graphic display with integrated flashlight
• Multi-language support with 10 languages encoded
• IP-67 waterproof design

ACCESSORIES

RAELink3
Wireless Modem
See full description on page 17

ppbRAE 3000

Portable Handheld VOC Monitor for ppb Measurement

Wireless

ATEX CSP us CE

The compact ppbRAE 3000 is a comprehensive VOC gas monitor and datalogger for hazardous environments. The most advanced handheld VOC monitor available for parts-per-billion detection, this third-generation patented PID device monitors VOC using a photoionization detector with a 9.8 eV, 10.6 eV, or 11.7 eV UV-discharge lamp.

Key Features

• 3-second response time
• Extended range from 1 ppb to 10,000 ppm with improved linearity
• Humidity compensation with integrated humidity and temperature sensors
• Data transfer to PC via Bluetooth
• Wireless data transmission up to 2 miles (3 km) when used with a RAELink3

UltraRAE 3000

Portable Handheld Benzene and Compound-Specific VOC Monitor

Wireless

ATEX CSP us CE

A compound-specific monitor, the UltraRAE3000 can detect benzene from 50 ppb to 200 ppm and other VOCs from 0.05 to 10,000 ppm. In benzene-specific mode, it is ideal for applications including tank entry pre-screening during petrochemical plant maintenance, hazardous material response, and refinery down-stream monitoring.

Key Features

• Humidity compensation with built-in humidity sensor
• Automatic temperature-controlled sampling time calculation
• Unique 15-minute benzene STEL calculation with 15-minute real-time benzene-specific measurement and recording
• Highly specific readings, combining a 9.8eV UV lamp and RAE-Sep benzene tube
• Wireless data transmission up to 2 miles (3 km) when used with a RAELink3

ACCESSORIES

RAELink3
Wireless Modem
See full description on page 17

ACCESSORIES

RAELink3
Wireless Modem
See full description on page 17

RAE-Sep Tubes
Used with UltraRAE 3000 for benzene testing

ChemRAE

Chemical Warfare Agent Detection and Identification System

Wireless

ChemRAE state-of-the-art handheld chemical warfare agent (CWA) monitor detects CWAs and toxic industrial chemicals, and then classifies them using ion mobility spectroscopy (IMS). ChemRAE can be used as a stand-alone portable monitor or integrated into a real-time wireless safety system by using a RAELink3 wireless modem.

Key Features

- Display provides agent class, a bar graph of agent concentration and relative time-based dose
- Wireless data transmission up to 2 miles (3 km) when used with a RAELink3
- Low life-cycle cost with no consumable components
- Clear, simple user interface
- One-handed operation
- Can be powered by a rechargeable lithium-ion battery pack or AA batteries

ACCESSORIES

RAELink3

Wireless Modem

See full description on page 17

RAELink3

Wireless Transmission System with Integrated Global Positioning System

Wireless

ATEX   c SP us   CE

The RAELink3 wireless modem allows integration of many RAE Systems gas and radiation monitors, and select third-party devices, into a real-time wireless safety network. Monitors linked with a RAELink3 modem can communicate sensor data and GPS coordinates to a command center's PC running ProRAE Remote or ProRAE Guardian Software up to 2 miles (3 km) away.

Key Features

- GPS equipped for tracking and viewing sensors on a local map
- Transmits data up to 2 miles (3 km)
- Easily configures in the field to interface with other real-time wireless safety systems
- Bluetooth equipped for optional wireless connection to monitors
- Programmable as a host modem, repeater, or remote modem, as needed
- Configurable for a variety of monitors and detection technologies

RAELink3 works with the following products:

- MiniRAE 2000 & MiniRAE 3000
- ppbRAE Plus & ppbRAE 3000
- UltraRAE 3000
- MultiRAE Plus
- ChemRAE
- GammaRAE II R
- PROENGIN AP4C
- TSI DustTrak II

AreaRAE Network

Real-Time Wireless Safety System for Remote Monitoring and Data Collection

RAELink3   AP4C   ChemRAE   WeatherPak
AreaRAE
ppbRAE   DustTrak   GammaRAE II R
MultiRAE Plus

RDK Ruggedized Host
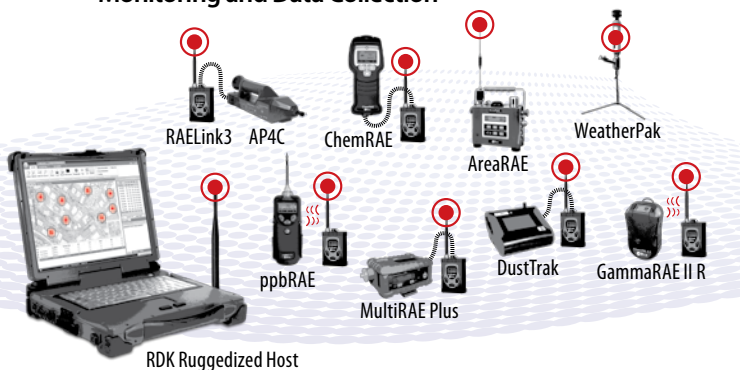
AreaRAE is a real-time wireless safety system for monitoring of chemical hazards. Rapidly deployable detectors communicate sensor information for toxic and flammable gases, radiation, chemical warfare agents and more over a 2 mile (3km) zone. Real-time integration of these sensors with meteorological data and GPS coordinates provides quick assessment and tracking of chemical threats. Multiple systems can merge through the internet, providing real-time viewing of sensor information by remote experts. The network can easily interface with other systems allowing integration of air monitoring data with analysis and decision making software. AreaRAE provides a real-time safety viewing screen for hazardous area monitoring applications in confined space entry, emergency response, fence line monitoring, and public venue protection.

Key Features

AreaRAE system components and accessories include:

- AreaRAE Steel
- AreaRAE Gamma Steel
- RAELink3
- Rapid Deployment Kit (RDK)
- WeatherPak
- RDK Ruggedized Host
- ProRAE Remote
- ProRAE Guardian
- PlumeRAE

AreaRAE Steel

Wireless Multi-Gas Monitor

ATEX

AreaRAE Steel is a multi-gas, wireless monitor. Housed in a stainless-steel enclosure, it is rugged, portable and weather-resistant, ensuring that it can withstand harsh environments. Strategically placed AreaRAE Steel monitors can be used to quickly establish a perimeter, allowing individuals to back off to a safe position and receive readings from up to 2 miles (3 km) away.

Key Features

- Up to five sensors (PID, LEL, O_2 and two toxic gas electrochemical)
- Wireless data transmission up to 2 miles (3 km)
- Loud buzzer and large, extra-bright warning light
- Optional GPS
- Rugged, weather-resistant stainless-steel housing
- Built-in sampling pump
- Interchangeable lithium-ion or alkaline battery pack

ACCESSORIES

BiPod Stand
See full description on page 22

SolarRAE
See full description on page 22

AreaRAE Inert

Wireless Multi-Gas Monitor for Use in Low-Oxygen Environments

Wireless

Designed specifically for use in low-oxygen environments, the AreaRAE Inert provides precise monitoring of toxic and explosive gases without the need for dilution fittings.

Wireless real-time transmission increases worker safety and enables viewing of multiple locations. The AreaRAE Inert is easy to operate and very fast to deploy, reducing operational costs.

Key Features
- Up to five sensors (PID, LEL, O_2, and two toxic)
- Rugged, weather-resistant stainless-steel housing
- Wireless data transmission up to 2 miles (3 km)
- Over 18 hours of run time on interchangeable lithium-ion battery
- Built-in pump can draw up to 100 feet (30 m)

AreaRAE Gamma Steel

Wireless Multi-Gas and Radiation Monitor

Wireless

ATEX

AreaRAE Gamma Steel is a rugged, weather-resistant, portable monitor with embedded RAELink modem for real-time wireless communication with ProRAE Remote software. It includes a gamma sensor for measuring gamma radiation, plus options for four additional sensors, including a photo-ionization detector for parts-per-million measurement of volatile organic compounds, an LEL combustible gas sensor, oxygen sensor, and specific electrochemical toxic sensors.

Key Features
- Up to four gas sensors (PID, LEL, O_2 and selectable toxic gas)
- One radiation sensor (Gamma)
- Built-in modem for data transmission up to 2 miles (3 km)
- Loud buzzer and large, extra-bright warning light
- Built-in sampling pump
- Interchangeable lithium-ion or alkaline battery pack
- Optional GPS

ACCESSORIES

BiPod Stand
See full description on page 22

SolarRAE
See full description on page 22

AreaRAE Accessories

BiPod Stand

The stainless-steel Bipod holds an AreaRAE securely at a height that facilitates operation and monitoring. Simple construction allows for quick deployment and dismantling.

SolarRAE

The SolarRAE provides safe, reliable power generation without the expense of installing utility power. Intended for use with RAE Systems wireless products, including AreaRAE, MiniRAE 3000, etc., it features an externally mounted 30-watt solar panel that provides power to a 55-Amp/hr sealed gel battery and can provide continuous power for up to one week.

WeatherPak

WeatherPak for PlumeRAE is unique in that it employs RAE Systems' RAELink2 wireless modem and an "Ultra-Sonic" Wind Sensor. Unlike mechanical wind sensors, an ultra-sonic wind sensor has no moving parts, is very rugged and is very accurate even at low wind speeds.

AreaRAE Rapid Deployment Kit (RDK)

Rapid Deployment System for Hazardous Environment Detection

ATEX

The Rapid Deployment Kit (RDK) is a complete solution designed for quick assessment of gaseous and radiation threats. The kit includes four wireless 5-gas AreaRAE detectors with in-case charging, and a Host Controller for monitoring from a command center up to 2 miles (3 km) away. The system can scale up with the addition of Detector Kits, each containing four AreaRAEs.

ACCESSORIES

BiPod Stand
See full description on page 22

WeatherPak
See full description on page 22

RDK Ruggedized Host

Military-Spec Laptop Computer with Integrated RAELink Wireless Modem

Wireless

RDK Ruggedized Host is a turn-key controller for AreaRAE-family sensors. Built to military standards for extensive deployments in extreme environments, it provides situational awareness of chemical and radiation threats by managing and displaying real-time sensor data from AreaRAE-family monitors over a wide area. Sensor information may be overlaid on a local mapping area and logged for post-event viewing. System data can integrate with third-party software through a local network or be pushed over the Internet for viewing beyond the wireless range.

Key Features

- Magnesium case certified to MIL-STD 810F and IP-54
- Embedded RAELink modem
- Rain, dust, and vibration shielding
- Resistive touchscreen
- Shock-resistant and electromagnetically shielded
- Removable shock-mounted 2.5" SATA HDD

MeshGuard Network

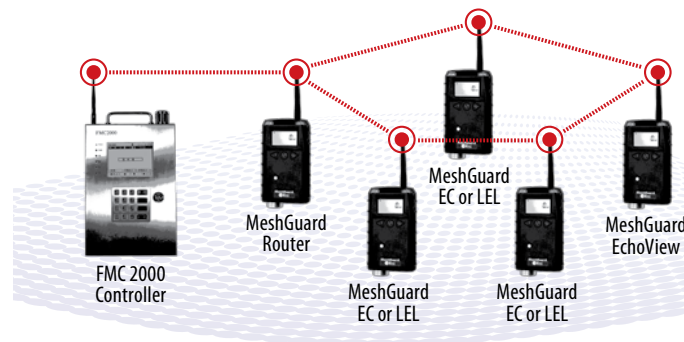**Extended Runtime Wireless Gas Detection System for Hazardous Environments**

Wireless ATEX ℅CSP°us IECEx CE FCC

FMC 2000 Controller

MeshGuard Router

MeshGuard EC or LEL

MeshGuard EC or LEL

MeshGuard EC or LEL

MeshGuard EC or LEL

MeshGuard EchoView

MeshGuard is rapidly deployable in numerous industrial and remote monitoring applications. All detectors are certified for the most hazardous environments—Class I, Division 1 or Zone 0. MeshGuard units include the powerful combination of reliable sensors, wireless data transmission, and long battery life. MeshGuards detect a wide range of gases and quickly relay their data to a central controller. Each MeshGuard-family component communicates seamlessly with all others in a self-forming, self-healing mesh radio network.

Key Features

MeshGuard system components and accessories include:

- MeshGuard EC and LEL wireless sensors
- MeshGuard Router
- MeshGuard EchoView
- FMC 2000 Multi-Channel Controller
- FA-200 Alarm Bar
- Extended-life battery PowerPaks
- ProRAE Guardian software

MeshGuard EC

Wireless Gas Detector with 6-Month Continuous Runtime for Hazardous Environments

Wireless

ATEX c℺us CE

The MeshGuard EC operates with an electrochemical sensor for toxic gases, such as CO, H_2S, and SO_2. It is designed for two-point field calibration, and the sensor, filter, and battery are easy to replace. All sensor and alarm data are wirelessly transmitted to a remote base station while simultaneously displayed on the large backlit LCD.

Key Features

- Certified for use in Class I, Division 1 and Zone 0 hazardous environments
- Compatible with RAE PowerPak for extended battery power
- IP-65 rated for use in harsh environments
- Six month runtime

ACCESSORIES

RAE PowerPak
See full description on page 29

Stainless-Steel Housing
See full description on page 29

MeshGuard LEL

Wireless Flamable Gas Detector for Use in Hazardous Environments

Wireless

ATEX c℺us CE

The MeshGuard LEL precisely monitors the lower explosive limit (%LEL) of flammable gases. Wireless connectivity allows for real-time data transmission to a central controller.

Key Features

- Certified for use in Class I, Division 1 and Zone 0 hazardous environments
- Compatible with RAE PowerPak for extended battery power
- IP-65 rated for use in harsh environments

ACCESSORIES

RAE PowerPak
See full description on page 29

Stainless-Steel Housing
See full description on page 29

MeshGuard Router

Wireless Range Extender and Deployment Tool

Wireless

ATEG ⊂🄬us CE

The MeshGuard 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. In addition, the MeshGuard Router displays the real-time wireless signal strength at any given location, enabling rapid determination of suitable locations for MeshGuard Monitors.

Key Features

• Expands network range by providing additional access points for all wireless monitors within range

• Approved for use in Class I, Division 1 and Zone 0 hazardous environments

• Real-time wireless signal strength indicator allows for easy and reliable network deployment

• Provides system redundancy and intelligent signal routing to ensure all sensor data is received by the system controller

MeshGuard Accessories

FA200 Alarm Bar

The FA200 Alarm Bar has one audible (112dB at 1m) and four visible alarms. The alarm logic is fully configurable from the FMC2000 multi-channel controller.

RAE PowerPak

The RAE PowerPak can be used to power MeshGuard Monitors and Routers. This intrinsically safe (Class I, Division 1 and Zone 0) rechargeable battery power source is ideal for monitoring applications that require longer runtime than a standard internal battery affords.

Stainless-Steel Housing

Custom-fit stainless-steel enclosure protects a MeshGuard Monitor, Router, or EchoView from damage and tampering. The enclosure can be secured to a pole or wall with the included hardware.

FMC 2000

Wireless Multi-Channel Controller for MeshGuard

Wireless

CE FCC

The FMC 2000 is a multi-channel wireless controller designed for integration with RAE Systems' MeshGuard intelligent network of connected monitors. It has a large graphic display and integrated audible and visual alarms.
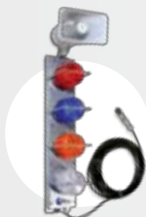
Key Features

- Wireless controller for use in MeshGuard networks
- Manages up to 24 MeshGuard monitors
- 5 programmable SPDT relay outputs
- RS-485, Modbus, and Ethernet interfaces
- Backup battery for up to 15 hours of operation
- Data logging with removable SD card storage
- Stainless-steel enclosure

MeshGuard EchoView

Battery-Operated Mimic Panel for MeshGuard Network

Wireless

ATEX CSPus CE

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

Key Features

- Portable device acts as a mimic panel and allows real-time alarm notification anywhere on a MeshGuard wireless network
- Approved for use in Class I, Division 1 and Zone 0 hazardous environments
- Loud, 102dB alarm can be heard in industrial environments
- Improves safety response time by immediately providing alarms to key personnel
- Frees safety personnel to monitor the network from outside a central station

ACCESSORIES

FA200 Alarm Bar
See full description on page 29

MeshGuard
Rapid Deployment Kit (RDK)

Complete Hazardous Environment Gas Detection System for Use in Extended Runtime Deployments

The MeshGuard RDK provides a complete solution when a fixed gas monitoring network must be deployed or relocated quickly. Various configurations are available, including MeshGuard EC and LEL Monitors, MeshGuard Routers, and an FMC2000 Controller, all in a rugged, watertight case with wheels.

Key Features

- Complete wireless detection system in one ruggedized kit
- All monitors approved for use in Class I, Division 1 and Zone 0 hazardous environments
- A rapidly deployable self-forming and self-healing wireless gas detection system

RAEGuard EC, LEL, & PID

Fixed Gas Detector for Toxics and Flammable Gases

RAEGuard EC & LEL

ATEX c(UL)us CE

RAEGuard PID

ATEX c(UL)us CE ⟨Ex⟩

RAEGuard EC, LEL and PID are fixed gas transmitters housed in ruggedized enclosures. RAEGuards feature local digital displays and magnetic function keys for performing calibration. RAEGuard sensors are compatible with RAE Systems FMC-10, FMC-40, FMC-60, and other third-party controllers.

Key Features

- Available sensors: CO, H_2S, O_2, SO_2, LEL, PID
- Operate from a 9 to 36 VDC power source
- Analog (4-20mA) and digital (RS-485) signal outputs
- PID ranges of 0.01 to 20 ppm, 0.1 to 100 ppm, and 1 to 1000 ppm
- Certified for use in Class I, Division 1 and Zone 1 hazardous environments

RAEGuard S

Fixed Gas Detectors in Stainless Steel Housing

ATEX $C\epsilon$

The RAEGuard S is a fixed gas transmitter housed in a ruggedized stainless steel enclosure. RAEGuard S is equipped with a local digital display and magnetic function keys for performing calibration. RAEGuard S sensors are designed for operation with RAE Systems FMC-10, FMC-40, FMC-60, and other compatible controllers.

Key Features
- Available sensors: CO, H$_2$S, O$_2$, LEL
- Stainless-steel enclosure
- Offline sensor calibration
- Operates from a 9 to 36 VDC power source
- Analog (4-20mA), digital (RS-485, Modbus RTU), signal outputs
- Certified for use in ATEX Zone 1 hazardous environments

Controllers for Fixed System Monitors

RAEGuard FMC-10

The FMC-10 fixed single-point alarm unit delivers economical and reliable monitoring of gas levels in a wide range of environments, from commercial premises to heavy industrial applications that may require hazardous area sensing.

- VOC, flammable, oxygen or toxic gases
- Wall or panel mount
- Two alarm stages and relays
- Compact size
- 4-20mA analog output
- Up to IP-65 rating

RAEGuard FMC-40

The FMC-40 is a 1- to 4-channel gas alarm that operates on single-channel plug-and-play cards.

- Versatile system configuration
- 1 to 4 sensors
- VOC, flammable, oxygen and toxic gases
- Plug in sensor channel cards
- Two alarm stages
- Selectable alarm relays
- Analog 4-20mA output

Controllers for Fixed System Monitors (Continued)

RAEGuard FMC-60

The FMC-60 multi-channel controller operates on a 4-core (addressable) or 2/3-wire (direct) cable network and has the capacity to monitor up to 64 addressable and 16 direct sensors of various gas types. The alphanumeric screen indicates the reporting sensor, gas type, concentration and alarm status. Alarm levels that are exceeded automatically activate a variety of signal outputs, including analog/digital data and user-selectable relays.

Key Features

• Up to 64 addressable sensors (4-wire) and up to 16 direct 4-20mA sensors (2/3-wire)
• On screen text description of sensor locations
• System parameters set up via PC or front panel
• Repeater panel option
• 64 Additional relays option
• Continuous datalogging via external datalogger or PC (optional)

ProRAE Remote

Wireless Multi-Channel PC Controller Software

ProRAE Remote provides a simple yet powerful solution that integrates the outputs of remote AreaRAE-family sensors into user-friendly displays on a PC. It facilitates real-time wireless communication from up to 64 remote monitors to a host computer up to 2 miles (3 km) away. With the GPS option, the sensor data is displayed on a multi-layered mapping area with detailed and accurate representation of streets, highways, railroads, rivers, and borders.

Key Features

• Simple, intuitive user interface
• Real-time text and rolling graph of remote wireless sensor data
• Communicates with up to 64 remote devices

PRORAE REMOTE IS AN ACCESSORY FOR:

AreaRAE RDK
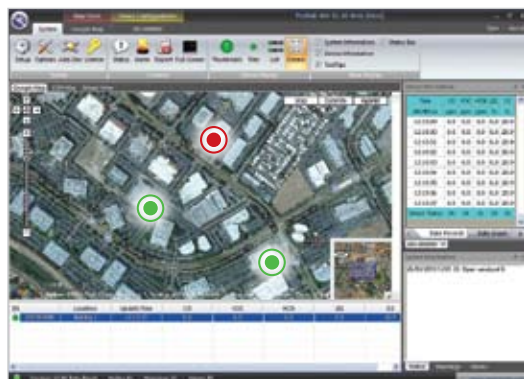See full description on page 23

AreaRAE Monitors
See full descriptions pages 19–21

ProRAE Guardian

Real-Time Wireless Safety System

ProRAE Guardian is an advanced virtual command center for real-time monitoring of wireless sensors. A variety of RAE Systems monitors and third-party products can communicate directly or through gateway products with ProRAE Guardian using one of several communication networks such as the AreaRAE or MeshGuard family. ProRAE Guardian provides seamless integration with third-party software through a variety of communication protocols, including XML and Modbus. Data display can be configured to meet specific application needs, and includes options for overlaying on a local image or mapping. ProRAE Guardian enables critical decision support for industrial safety and emergency response applications.

Key Features

- Real-time text and rolling graph of remote monitors
- Communicates with up to 512 remote monitors
- Displays sensor data on image, local mapping, or with web access on Google map
- Supports multiple sensor detection technologies

PlumeRAE

Plume Measurement and Decision Support for First Responders
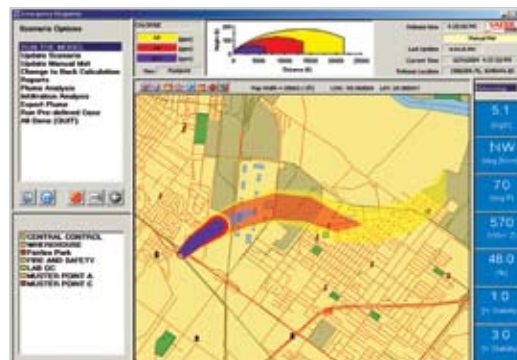
PlumeRAE is a unique, turn-key solution for rapid monitoring and assessment of situations involving the release of hazardous substances. PlumeRAE measurement software integrates information from other RAE Systems products such as AreaRAEs, as well as data transmitted by a Coastal Environmental Systems PlumeRAE WeatherPak®. Furthermore, the plume measurement software displays a graphic of the toxic plume, the speed at which it is spreading, and the concentration of the toxic compound.

Key Features

- Tracks and validates plume movement and dispersal
- Employs intelligent placement tactics for safely locating responders

PLUMERAE IS AN ACCESSORY FOR:

AreaRAE RDK
See full description on page 23

WeatherPak
See full description on page 22

Complete Detection Solutions

In addition to making innovative products that enable real-time safety and security threat detection, RAE Systems offers complete detection solutions that include comprehensive after-sale support and training, an assurance of high quality, and service around the world.

Experience
The most experienced gas detection sales and service team worldwide.

Quality
RAE Systems is ISO 9000 and ATEX certified, providing our customers with the highest-quality products and service.

Training
Classroom training and extensive training materials are available for both products and applications, including the *RAE Systems Application & Technical Notes* book, *The PID Handbook*, and *The Gas Detection Tubes & Sampling Handbook*.

Service
A trained, global distribution network provides comprehensive service and support within close proximity to our customers.

Technical Customer Support
In-house and in-field technical support is available around the clock in the areas of wireless, photoionization, gas detection, radiation and tube chemistry.

Value-Added Distribution
Over 120 countries have value-added stocking distributors that support our customers in their local language and customs.

For a complete listing of calibration supplies, parts and instrument accessories, visit our website at www.raesystems.com

RAE Systems Sales Offices

Corporate Headquarters
RAE Systems, Inc.
3775 North First Street
San Jose, CA 95134 USA
877 723 2878 (toll-free)
+1 408 952 8200
raesales@raesystems.com
www.raesystems.com

Worldwide Sales Offices
Asia Pacific
+852 2669 0828
www.raesystems.com.hk

China
+86 10 5885 8788
www.raesystems.cn

Europe
+45 86 52 51 55
www.raesystems.eu

Middle East
+971 4 887 5562

Regional Sales Offices
Australia
+(613) 9431 3500
www.raesystems.com.au

Austria & Switzerland
+49 171 516 6880

Benelux
+31 104426 149
www.rae.nl

Eastern Europe & Russia
+44 (0)23 9282 2368

France
+33 478 46 1665
www.raesystems.fr

Germany
+49 (0)172 9203 911
www.raesystems.de

Hong Kong
+852 9133 6225

Japan
+81 80 5301 4466
www.raesystems.jp

Korea
+82 10 2692 4113
www.raekorea.co.kr

Singapore
+65 9830 8466
www.raesystems.com sg

Spain
+34 93 378 83 52
www.raesystems.es

Taiwan
+886 937 900 527

United Kingdom
+44 (0) 1865 408368
www.raesystems.co.uk

Protection Through Detection

RAE Systems Inc.
3775 North First Street
San Jose, CA 95134 USA
877.723.2878 (toll-free)
+1.408.952.8200

www.raesystems.com