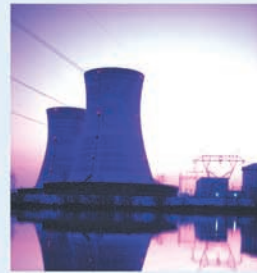


# Integrated Wireless Monitoring System



Time-critical Information. Anytime. Anywhere.





## The time-critical information you need, wherever you need it. Anytime. Anywhere.

When lives and property are on the line, the quality and timeliness of the information you use to make decisions is critical. In an emergency, every moment you delay in taking action can increase the potential for damage, or even loss-of-life.

**RAE Systems'** Integrated Monitoring Systems allow you to collect and evaluate critical, decision making information from a wide variety of remotely located gas detectors, transducers, security system components, and other monitoring devices. The system is open architecture, which means you can choose any device with a compatible output, and easily blend it into a system that provides exactly the information you need.

The information is wirelessly transmitted by means of a built-in radio frequency (RF) modem to a Host Controller located exactly where the information needs to be evaluated. The location where the readings are displayed and interpreted can be literally anywhere on earth where real-time information is needed to make critical decisions.

The availability of real-time data from remotely located measurement and security devices has the potential for totally redefining the type, timeliness and quality of the information used to make many types of on-the-spot decisions.

**RAE Integrated Systems save time, save money, improve safety, and protect property.**



## Advanced Technology to Ensure a Safer Environment

Located in the heart of California's Silicon Valley, RAE Systems is a global systems supplier of Environmental Health, and Safety (EHS) and Security products. RAE Systems offers a wide range of products including gas detection sensors and security monitoring systems and devices. RAE's comprehensive, integrated products and patented technologies are used across diverse industries, and range from wireless networks, to real-time atmospheric monitors and photo-ionization detectors (PIDs).

RAE's products are used in weapons-of-mass destruction (WMD) investigation, environmental, safety, indoor air quality, HAZMAT, petrochemical, semiconductor, and confined space entry monitoring programs all over the world.

No matter what you need to monitor or measure, RAE Systems has an Integrated Wireless Monitoring System solution, just for you.



## RAE Integrated Wireless Monitoring Systems:

- The World's most advanced family of gas detection sensors, including RAE's patented Photo-ionization Detector (PID) for the measurement of Volatile Organic Compounds (VOCs).
- Rapid and cost-effective deployment through easily-established wireless communication links.
- Installation is a fraction of the cost of traditional, hard-wired systems.
- Intuitive and easy-to-use **ProRAE Remote** Host Controller software runs on desk-top or laptop PC.
- Robust, dependable communication via frequency hopping, spread spectrum, license-free, ISM band wireless modem.
- Open-architecture: As long as a monitoring device is equipped with a compatible output (such as 4 – 20mA driver), it can be added to a RAE Integrated System.
- Fully scalable: RAE Integrated Systems can include up to 128 or more remotely located detectors, monitors, or other system elements.
- Complete turn-key system: Installation is as simple as turning on the Host Controller. All system elements communicate automatically.



## Real-time information from places you don't want to send your workers

RAE Integrated Systems can be used to establish an instant emergency monitoring perimeter during HAZMAT, spills, fires or other types of emergency response. Simply position the monitors at the necessary locations, then withdraw to a position of safety to view the monitoring results.

**AreaRAE** detectors can be used as permanent or portable detectors for the real-time, simultaneous measurement of up to five specific atmospheric hazards including combustible gas, oxygen deficiency and enrichment, specific toxic gases, and toxic VOCs.

The Host Controller can be a portable laptop computer located in the fire engine, or an **AreaCOM** integrated controller for use in areas requiring a Hazardous Location Classification.

The same information can be transmitted via the Internet to headquarters or disaster coordination facilities literally anywhere in the world. *And all in real-time!*





**RAE Integrated Systems never take the weekend off**

RAE Integrated systems are designed for twenty-four hours-a-day, seven days-per-week operation. Portable, rugged, and weather-proof **AreaRAE** gas detectors can be operated for up to 24-hours via their internal rechargeable lithium-ion battery, or connected to a long-term power source for continuous operation.

**RAEGuard** photo-ionization detectors offer parts-per-billion level detection of volatile organic contaminants, making them perfect for fenceline and permanently installed perimeter monitoring applications. RAEGuard detectors are installed in Explosion Proof housings that are Classified for permanent installation in Class I Division 1 Hazardous Locations.

**AreaPORT** Wireless Input Modules are used to add non-wirelessly equipped devices to the system. Each AreaPORT provides a wireless interface for up to four non-wireless detectors or other devices.

Installation is easy. Simply connect the gas detectors or other remotely located system elements to a solar panel or permanent line-power source, and view the results from your control room, portable **ProRAE Monitor**, or even via a hand-held **AreaPDA**. *Set-up is completely automatic.*



FENCELINE MONITORING



## Integrated Indoor Air Quality

Indoor Air Quality (IAQ) is an increasing concern. RAE Systems' proprietary carbon dioxide (CO<sub>2</sub>) and photo-ionization detectors let you directly measure the conditions leading to indoor air quality complaints. At the same time, RAE's open architecture approach allows you to include other safety, comfort and security devices such as motion detectors, smoke and fire detectors or other alarms *all in the same integrated safety and security system.*

RAE integrated systems can be permanently deployed, or used in short-term IAQ evaluation and assessment. RAE systems can be used to passively monitor, or actively control

the HVAC systems in schools, hospitals, hotels, convention centers, manufacturing plants, and a host of other indoor locations.

*Don't wait for workers to complain or call in sick. RAE Integrated IAQ Systems let you take action in real-time to correct problems.*





### Public event safety and security

RAE Integrated Systems can be permanently installed, or deployed on an as-needed basis during high-profile public gatherings such as sports events, concerts, conventions, meetings attended by public officials, or other potential terrorist targets. The portable and easily deployed nature of RAE Integrated Systems make them particularly well suited for short-term security monitoring missions.

RAE Integrated Systems are open architecture, which means you can choose any device with a compatible output, and easily blend it into a system that provides exactly the information you need. Since communication between system elements is entirely wireless, deployment is simply a matter of

locating the system elements where the information needs to be collected, turning them on, then reviewing the monitored information in real-time on the **ProRAE Remote Host Controller**. Readings can even be displayed directly on a site map of the facility.

Once the event is concluded, the monitors can be rapidly removed, put into storage for the next deployment, or transported to another location that needs them.

RAE Wirelessly Integrated Systems provide a complete solution for event security system needs.



SAFETY MONITORING



## Weapons of Mass Destruction (WMD) Response

RAE Systems' customers include the United States Navy, Marine Corps, Army, Air Force, Environmental Protection Agency, Occupational Safety and Health Administration, and the Department of Justice (including the FBI, Treasury Department, Secret Service, and Drug Enforcement Agency). RAE Systems instruments are used in a wide variety of programs for the detection of vapors associated with explosives, chemical warfare agents (CWAs), toxic industrial chemicals (TICs), and as part of the personal protective equipment issued to bomb-disposal, hostage-rescue, clandestine crime lab, hazardous material (HAZMAT), and other high-risk response teams throughout the country.

RAE Integrated Systems can be permanently installed, or configured as wirelessly connected, fully-portable systems. RAE Integrated System detectors can be immediately deployed wherever the mission requires. Encrypted, digital system readings can be transmitted to a Host Controller located up to two-miles away from the position of the detectors.

RAE Integrated Systems provide the critical information you need to make decisions. Where you need it, when you need it, in real time.



SECURITY MONITORING





### Integrated Environmental Monitoring Systems

Environmental and remediation safety and security concerns range from specific toxic contaminants, to explosive gases, to radiation hazards, to unauthorized entry. In addition, the location where the information needs to be collected is frequently remote from the rest of the facility.

Two-thirds of the cost of traditional hard-wired safety and security systems is due to installation, and the need to tie system elements together by means of expensive, hard-wired connections. *RAE Wirelessly Integrated Systems can reduce the cost of acquisition by 60% or more when compared to traditional hard-wired systems!*

Installation is simply a matter of connecting the remotely located system elements to a solar panel or line-power source. Real-time monitoring results can be viewed on the screen of a **ProRAE Remote** Host Controller located up to two-miles away from the detectors.

**PpbRAE** detectors can be used to measure highly dangerous VOCs in parts-per-billion concentrations, while the **RAELink Communication Kit** allows real-time readings to be transmitted to a Host Controller up to two-miles away from the incident.

*Installation is easy. The information is comprehensive. The results are available in real-time.*



ENVIRONMENTAL MONITORING



**RAE Systems Wide Area Networks Span the Globe with Real-Time System Information**

As corporations and communications become more global in nature, the information provided by safety and security systems needs to be reviewed and integrated at increasingly remote or centralized locations. For a natural gas transmission company with a pipeline system spanning thousands of miles, or a shipping transportation company with vessels scattered across the seven seas, the ability to communicate critical information in real-time over a wide area network is critical.

RAE Systems is at the forefront of developing communications technology that allows the real-time communication of critical information anywhere on earth.

RAE Integrated System elements can even be outfitted with GPS modems that allow their exact location to be constantly updated and integrated with other system information.

The information provided by RAE Integrated Systems can be transmitted via cellular telephone (CDPD) modem or Internet connection anywhere in the world. RAE Systems' Application Specific Private Exchange Network (ASPEN) systems with embedded Internet servers provide a truly world-wide, turn-key solution for real-time safety and security communication

***RAE Wireless Integrated Systems  
Critical information. Real-time. Anytime.  
Anywhere.***



Host

Communications Kit

Remote Units

Passive Monitor





## **RAE Systems is World's Leading Manufacturer of Wirelessly Integrated Monitoring Systems**

RAE Systems manufactures a wide array of technologically advanced single and multiple sensor atmospheric monitors, photo-ionization detectors, gas detection tubes, and sampling pumps. Based in the heart of California's Silicon Valley, RAE Systems is a progressive, high-tech company with manufacturing and distribution networks spanning the entire globe.

RAE Systems' proprietary, patent protected technology has made it the World's Leading Manufacturer of portable photo-ionization detector equipped instruments. RAE's products are used in weapons-of-mass destruction (WMD) investigation, environmental, safety, indoor air quality, HAZMAT, petrochemical, semiconductor, and confined space entry monitoring programs all over the world.

RAE Systems' monitors are used in civilian and government atmospheric monitoring programs in over 50 countries. The Company's products are used in all major United States manufacturing industries, as well by numerous city, state and federal agencies and departments.

A substantial number of municipal agencies and city departments have standardized their programs on RAE Systems' products for confined space and HAZMAT incident response. RAE Systems is also the leading supplier of gas detectors used for jet fuel vapor monitoring programs. Commercial aviation customers with sizable numbers of RAE Systems' instruments include American Airlines, United Airlines and US Airways. RAE Systems' customers include many of the World's Leading corporations, such as General Motors, Honda, Exxon, IBM, Mobil, Dow, Texaco, DuPont, Chevron, Hewlett-Packard, British Petroleum, Amoco, Motorola, Boeing, Maersk and Intel.

## ***RAE Systems: Advanced Technology for Safer Environments.***

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