Thank You for Attending Today's Webinar:

Tips for Ensuring Reliable Gas Detection Measurements

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HONEYWELL RAE SYSTEMS

Product Overview

ABOUT RAE SYSTEMS

- RAE Systems is the leading global provider of rapidly deployable connected, intelligent gas and radiations detection systems that enable real-time safety and security threat detection.

- RAE Systems products are used in over 100 countries by many of the world's leading corporations and government agencies.

- RAE Systems offers a full line of wireless solutions including personal, hand-held, transportable, and fixed instruments designed to meet the monitoring needs in energy production, refining, industrial and environmental safety, national security, hazardous materials response, and environmental applications.

- 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 over two decades of 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.

PRODUCT OVERVIEW

- **3000 Series Handheld PID**
- **MultiRAE Family**
- **AreaRAE Plus/Pro**
- **BW™ RigRat**
- **Other Wireless Products**
- **Software Offerings**

3RD GENERATION OF HANDHELD PID MODELS

4 Photo Ionization Detector models

  MiniRAE 3000+

  ppbRAE 3000+

  UltraRAE 3000+

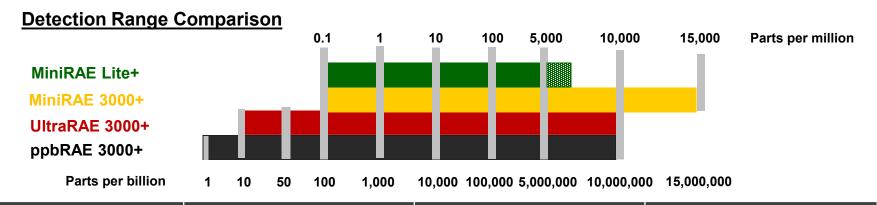 MiniRAE Lite+

Honeywell
RAE SYSTEMS

DIFFERENCES BETWEEN MODELS

Detection Range Comparison

	MiniRAE Lite+	MiniRAE 3000+	UltraRAE 3000+	ppbRAE 3000+
Ppb-level detection	No	No	Yes (10ppb)	Yes (1ppb)
Compound Specific	No	No	Benzene 200 / 0.010 ppm Butadiene 200 / 0.010 ppm	No
11.7eV lamp	No	Yes	Yes	No
9.8eV lamp	No	Yes	Yes	Yes
Wireless options* (*Regions specific)	BLE (optional)	BLE Bluetooth Mesh	BLE Bluetooth Mesh	BLE Bluetooth Mesh
Datalogging	Yes	Yes	Yes	Yes
Gas Library	No	Yes	Yes	Yes
Reflex PID Technology™	Yes	Yes	Yes	Yes
MIL-STD-810F-compliant	No	Yes	No	Yes

MINIRAE 3000+

Proven, patented PID technology

3-second response time (T_{90})
Extended range (up to 15,000 ppm, no dilution required)
Exceptional linearity
Humidity compensation
Patented PID Sensor auto-cleaning and Reflex PID technology
9.8 eV, 10.6 eV, or 11.7 eV lamp options available
3-year warranty on the 10.6 eV lamp
Extensive onboard library includes 200+ target gases

- Selected target gas and correction factor shown on the screen
- Gas readings displayed as numbers or as a graph

Multiple Connectivity options

Real-time remote visibility into instrument readings and alarm status

Wireless remote alarm notification

Dedicated APP for enhanced datalogging capability

Designed for effective service in the field

Access to battery, lamp and sensor in seconds without tools

Rugged housing withstands harshest environments

US military performance standard MIL-STD-810F-compliant

IP-65/67 dust tight and waterproof design for easy decontamination

Proven Technology

MINIRAE 3000+

Key Industries:

- Oil & Gas
- Chemical Industries
- Pharmaceutical
- Environmental
- Emergency response
- Civil defense

Key Applications:

- Industrial hygiene
- Environmental remediation
- Leak / point detection
- HazMat response
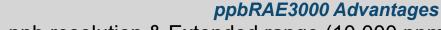- Arson investigation
- Container Inspection

ppbRAE3000

Vertical / Markets

- Emergency response
- Military / civil defense
- Homeland security
- Chemical
- Pharmaceutical
- Environmental / IAQ
- Oil & Gas

ppbRAE3000 Advantages

- 1 ppb resolution & Extended range (10,000 ppm)
- Exceptional linearity
- Humidity compensation
- IP-65/67 dust tight and waterproof design for easy decontamination
- Supported by **ConneXt Safety Solution**
- Supported by AutoRAE2

Applications

- HazMat response
- Arson investigation
- Initial PPE assessment
- Spill delineation
- Remediation
- Decontamination
- Industrial hygiene
- Leak / point detection
- Environmental remediation
- Indoor air quality

Honeywell

Highly Versatile and Customizable

UltraRAE3000

Targeted Customers / Who to talk to?

- Oil and gas
- Chemical
- Pharmaceutical

Applications

- Industrial hygiene
- Leak / point detection

UltraRAE3000 Advantages

- Low cost per measurement
- Automatic, temperature-based sampling time calculation for benzene 25 parts-per-billion resolution and LDL (benzene)
- 15-minute benzene STEL calculation on continuous real-time benzene-specific measurement
- Compound-specific measurement of Benzene or Butadiene, by a combination of a 9.8eV PID lamp and RAE-Sep™ tubes
- Supported by **ConneXt Safety Solution**
- Supported by AutoRAE2

CONNEXT COMPATIBLE

Highly Versatile and Customizable

WIRELESS OPTIONS

- ## Bluetooth 2.0
    - Connects with RAELink3
    - Optional

- ## Mesh Network support (900MHz and 868 MHz)
    - Connects to RAELink3-Mesh, AreaRAE Plus or AreaRAE Pro
    - Connects with Echoview
    - Optional

- ## Bluetooth Low Energy (BLE) 4.0
    - Pairs with Android or iOS phones
    - Connects to Device Configurator App
    - BLE 4.0 radio option
        - Standard option for UltraRAE3000+, MiniRAE3000+ and ppbRAE3000+
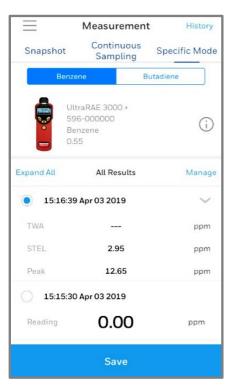   - Optional for MiniRAE Lite+

MULTIRAE FAMILY

MULTIRAE SERIES

Overview	The most advanced wireless multi threats monitor family on the market.
Key differentiators	Highly Versatile and Customizable Flexible Application And Rugged Design "*Detector of choice*" for government agencies and top HazMat teams worldwide since launch (+40k units on the market WW)
Communication	Wireless – Mesh & Serial – P2P and BLE Fully compatible with our **ConneXt Safety Solutions**
Sensing Technologies	Up to 6 sensor in the same product (Gamma / Motion / PID / NDIR / EC / LEL) And close to 30 sensors types to choose
Sampling mode	Diffusion and Pumped models
Certifications Approvals	All major IS certification (CSA, ATEX- IECEX, INMETRO…); All major Wireless approval (FCC, RTTE,…) Compliant with MIL-STD-810G and 461F performance standards

MULTIRAE SERIES

Most powerful 5-gas + ppm PID instrument on the market

    MIL-STD-810G and MIL-STD-461F -compliant

    Greatest PID sensor range in its class (up to 5,000 ppm Isobutylene)

    More than 20 interchangeable intelligent sensor options

Wireless

    Real-time visibility into instrument readings and alarm status

    Wireless remote alarm notification, including man down alarm

Largest display in its class

Most extensive gas / correction factor libraries

    55 CFs for LEL

    >190 CFs for PID

Long battery runtime (with extended Li-ion battery)

Easy battery replacement and sensor installation process

Great visibility of LED alarm lights

Extensive language support (19 languages)

Optional colored boots (separate purchase)

1. Arabic	4. Danish	7. French	10. Italian	13. Norwegian	16. Russian
2. Chinese	5. Dutch	8. German	11. Japanese	14. Polish	17. Spanish
3. Czech	6. English	9. Indonesian	12. Korean	15. Portuguese	18. Swedish
					19. Turkish

13

Applications

Fire / Hazmat / Gvt Agencies

Personal Protection / CSE

IH / Leak Detection

Benzene

CONNEXT
COMPATIBLE

Highly Versatile and Customizable

MODELS DIFFERENCES (FIRMWARE V 1.52 AND GREATER)

	MultiRAE Pro	MultiRAE	MultiRAE Lite
Sampling	Built-in pump	Built-in pump	Built-in pump or diffusion
ɣ radiation sensor	Yes	-	-
PID sensor supported	10.6 eV ppb 0.01 to 2,000/ 0.01ppm 10.6 eV HR 0.1 to 5,000 / 0.1 ppm 9.8eV 0.1 to 2000/0.1 ppm	10.6 eV 0.1 to 5,000 / 0.1 ppm 9.8eV 0.1 to 2000/0.1 ppm	10.6 eV, Low Range 1 to 1,000 /1 ppm (Pumped version only)
EC sensors	18	18	21 / 18
Catalytic %LEL sensor	Yes	Yes	Yes
Combustible NDIR sensors	%LEL or %Vol. CH_4	%LEL or %Vol. CH_4	%LEL or %Vol. CH_4 (Pumped only)
CO_2 NDIR sensor	Yes	Yes	Yes
Wireless modem	Mesh	Mesh	Mesh / WiFi (pending)
IP rating	IP-65	IP-65	IP-65 (Pumped) IP-67 (Diffusion)
AutoRAE 2 support	Yes	Yes	Pumped version only
Monitor comes in:	Pelican case	Hard plastic case	Cardboard box with sleeve

AVAILABLE SENSORS

Electrochemical Sensor	Range	Resolution	Warranty
Ammonia (NH_3)	0-100 ppm	1 ppm	1 yr
Carbon Monoxide (CO) (Warranty update 11/2017)	0-500 ppm	1 ppm	3 yr
Carbon Monoxide (CO), Ext. Range	0-2000 ppm	10 ppm	1 yr
Carbon Monoxide (CO), H2-Comp	0-2000 ppm	10 ppm	1 yr
Carbon Monoxide (CO) + Hydrogen Sulfide (H_2S)	0-500 ppm - CO 0-200 ppm – H_2S	1 ppm 0.1 ppm	1 yr
Chlorine (CL_2)	0-50 ppm	0.1 ppm	1 yr
Chlorine Dioxide (CLO_2)	0-1 ppm	0.03 ppm	1 yr
Ethylene Oxide (EtO-A)	0-100 ppm	0.5 ppm	1 yr
Ethylene Oxide (EtO-B)	0-10 ppm	0.1 ppm	1 yr
Ethylene Oxide (EtO-C), Ext Range (Diffusion model only)	0-500 ppm	10 ppm	1 yr
Formaldehyde (HCHO)	0-10 ppm	0.05 ppm	1 yr

AVAILABLE SENSORS

Electrochemical Sensor	Range	Resolution	Warranty
Hydrogen Cyanide (HCN)	0-50 ppm	0.5 ppm	1 yr
Hydrogen Sulfide (H_2S) (Warranty update 12/2017)	0-100 ppm	0.1 ppm	3 yr
Hydrogen Sulfide (H_2S), Ext Range (Diffusion model only)	0-1000 ppm	1 ppm	1 yr
Methyl Mercaptan (CH_3-SH)	0-10 ppm	0.1 ppm	1 yr
Nitric Oxide (NO)	0-250 ppm	0.5 ppm	1 yr
Nitric Dioxide (NO_2)	0-20 ppm	0.1 ppm	1 yr
Methyl Mercaptan (CH_3-SH)	0-10 ppm	0.1 ppm	1 yr
Nitric Oxide (NO)	0-250 ppm	0.5 ppm	1 yr
Nitric Dioxide (NO_2)	0-20 ppm	0.1 ppm	1 yr
Oxygen (Liq)	0-30% VOL	0.11% VOL	4 yr
Oxygen (Pb)	0-30% VOL	0.11% VOL	2 yr
Phosphine (PH_3)	0-20ppm	0.1 ppm	1 yr
Sulfer Dioxide (SO_2)	0-20 ppm	0.1 ppm	1 yr

AVAILABLE SENSOR

Combustible Sensor	Range	Resolution	Warranty
Catalytic LEL	0-100% LEL	1.0 %LEL	2 yr
NDIR (0-100% LEL CH$_4$)	0-100% LEL	1.0 %LEL	1 yr
NDIR (0-100% VOL CH$_4$)	0-100% VOL	0.1 %VOL	1 yr

Carbon Dioxide Sensor	Range	Resolution	Warranty
Carbon Dioxide (CO$_2$) NDIR	0-50,000 ppm	100 ppm	1 yr

AREA MONITORING

AreaRAE Plus

AreaRAE Pro

APPLICATIONS

1st Responder / Hazmat / Civil defense

Industrial

Highly Versatile and Customizable

An Overview of AreaRAE Plus / Pro

Summary

The most advanced wireless Transportable Local Area Monitor on the market. *Complexity has never been this simple!*

Key differentiators

- All-in-one gas, radiation, ppb level VOC and meteorological detector
- Multiple options for monitoring threats from a remote location
- RAEMet sensor for meteorological measurements and plume modeling
- Easy to deploy, use and service

Communications

- Up to 4 on-board Wireless modules in same unit
  - Primary radio module (ISM and/ or Wi-Fi)
  - Secondary Mesh radio module
  - Standard GPS
  - BLE*

Sensing technologies

- Multiple sensing technologies in one product
  - PID, EC, Combustible, Gamma, Meteorological & GPS
  - More than 25 sensors types to choose
  - Up to 12 sensors readings in same unit **(7 gas sensors)**

Certifications

- All major IS certifications (CSA C1 Div 2, ATEX/IECEX Zone II)
- All major Wireless approvals (FCC/IC, R&TTE)
- Designed and tested with MIL STD 810G and 461F

Flexible and Versatile with Advanced Communications

AreaRAE Plus

AreaRAE Plus is a wireless, transportable area monitor that can simultaneously detect toxic and combustible gases, volatile organic chemicals, and meteorological factors that affect the speed and direction of the gas.

Up to six 4R+ sensors for toxic and combustible gas.

Choose from a mix of up to 20 sensors based on your needs and switch them out whenever your needs change.

7R+ photoionization detector.

Monitor VOCs in *parts per million*, with built-in compensation for temperature and humidity.

Range: 0.1 – 5000 ppm

Optional meteorological sensor for tracking toxic plumes.

Optional WiFi radio

AREARAE PRO

AreaRAE Pro is a wireless, transportable area monitor that can simultaneously detect toxic and combustible gases, volatile organic compounds, radiation and meteorological factors.

Up to six 4R+ sensors for toxic and combustible gas.

more than 20 interchangeable

sensors that can be swapped at a moments notice

7R+ photoionization detector.

Monitor VOCs in ***parts per billion***, with built-in compensation for temperature and humidity.

Range: 0.01 – 2000ppm

Meteorological station for tracking toxic plumes (standard)

Optional gamma sensor for radiation detection

Detect and measure gamma radiation with increased sensitivity and faster response without using an additional sensor slot.

Optional WiFi Radio
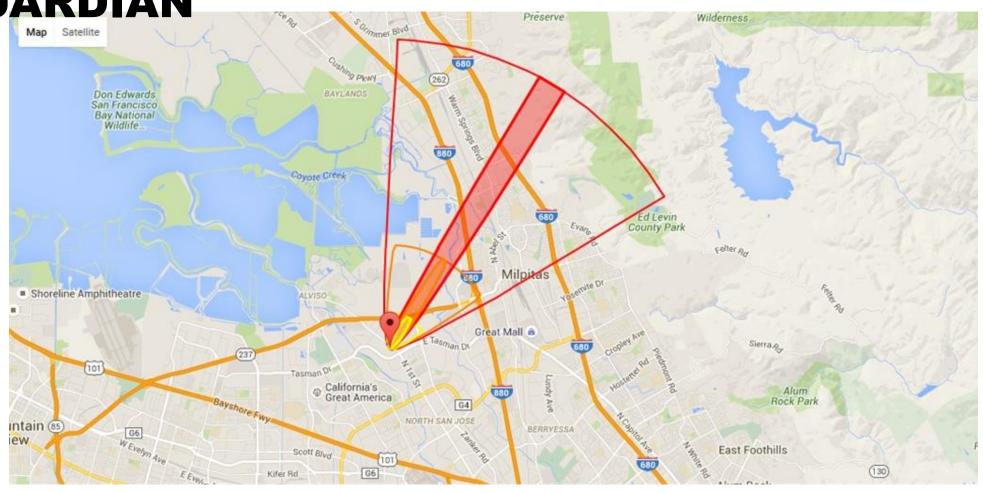
MORE THAN JUST A GAS MONITOR - RAEMET

- On board cost effective meteorological station
- Provides microclimate at point of gas detection
- Essential for air dispersion monitoring solution

	RAEMet (Range / Resolution)
Wind speed	0 - 20 meter/s / 0.1 meter/s 0 - 35 miles/h / 0.22 miles/h
Wind Direction	0° to 359° / 1°
%RH	0 to 100%RH / 1%RH
Temperature	-20°C to 60°C / 0.1°C -4°F to 140°C / 0.1°C

- No tool needed for installation
- Compatible with AREARAE Plus

PLUME MODELING THROUGH PRORAE GUARDIAN

- ProRAE Guardian Software Integrates With Freely-Available ALOHA software
- Predictive Plume Modeling Based On Gas Types And Weather Conditions
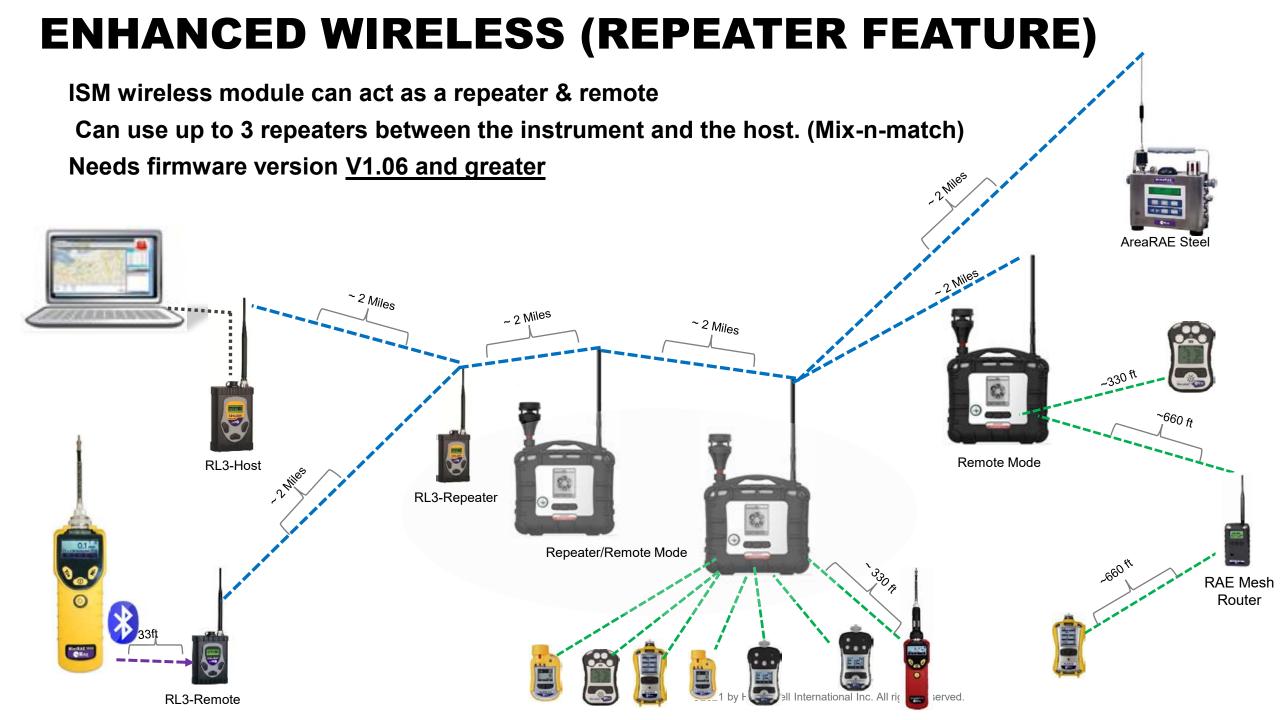
ACCESSORY – TRIPOD BASE PLATE

- W01-3018-000
Tripod base
plate kit

ENHANCED WIRELESS (REPEATER FEATURE)

ISM wireless module can act as a repeater & remote

Can use up to 3 repeaters between the instrument and the host. (Mix-n-match)

Needs firmware version **V1.06 and greater**

~ 2 Miles

AreaRAE Steel

~ 2 Miles

~ 2 Miles

~ 2 Miles

~ 2 Miles

RL3-Host

RL3-Repeater

~ 2 Miles

Repeater/Remote Mode

~330 ft

~660 ft

Remote Mode

~ 330 ft

~660 ft

RAE Mesh Router

33ft

RL3-Remote

BW RIGRAT

KEY FEATURES

Honeywell BW™ RigRat
- 6 gas sensor slots
- 17 4R+ sensors to select from
- Noise sensor (optional)
- I/O connectivity ports (optional)
  − Metrological sensor
  − Analog and digital input
  − 3 optical output relay switches

Fast and easy operation
- 1 button operation
- High resolution display
- Smart phone app for easy programming

Alarm indication
- 108 db @ 1 meter (front and back)
- IntelliFlash, non-compliance, bump, and calibration reminders
- 3 LED light colors (Red, Amber, Green)
- 4 LED array for 360 degrees view
- Low, High, STEL, TWA, 24-hr Peak

Long runtimes
- Up to 8 weeks of continuous operation on a single charge
- Line power and solar options

Carrying and mounting
- Carrying strap
- Holes for solid mounting in the base

Rugged Design
- Dropped test -40°C
- Protective cage
- Accelerated test 7 years outdoor test performed
- Accelerated 50,000 miles off-road driving performed
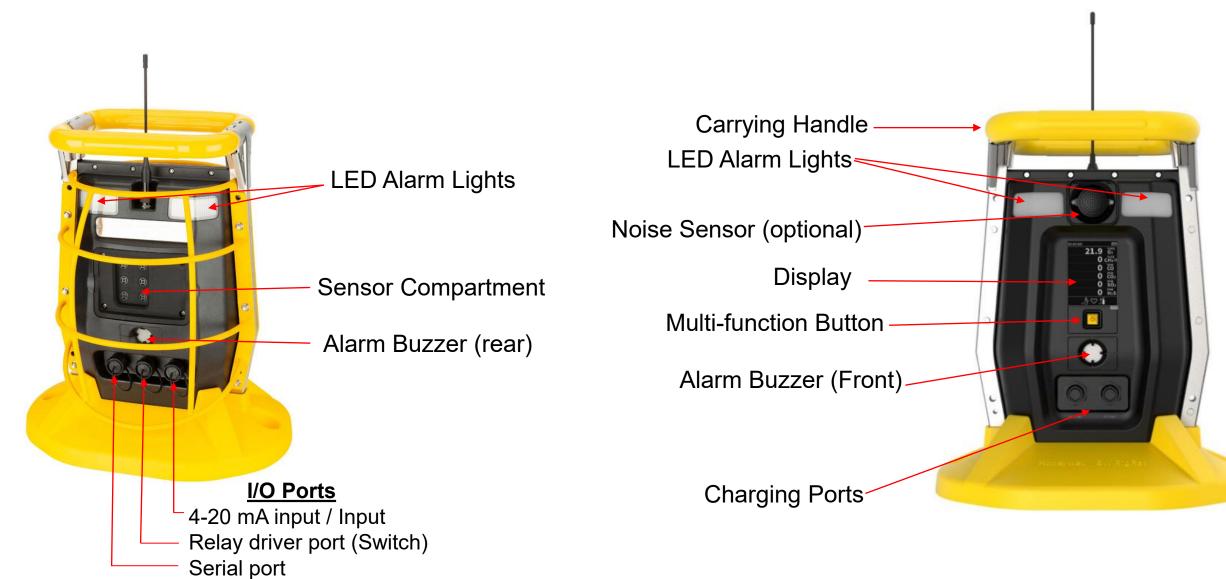- IP 65/67 test after -40°C drop test
- Weight – 17.7 lbs. (8 kg)

Sampling
- Pumped or diffusion models

Special features
- Built-in calibration certificate
- Intelligent inert mode

Optional Protective Cage

Anchor Point

USER INTERFACE (FRONT VIEW)

LED Alarm Lights

Sensor Compartment

Alarm Buzzer (rear)

I/O Ports
4-20 mA input / Input
Relay driver port (Switch)
Serial port

Carrying Handle

LED Alarm Lights

Noise Sensor (optional)

Display

Multi-function Button

Alarm Buzzer (Front)

Charging Ports

WIRELESS FEATURES

WIRELESS SAFETY PERIMETER

Position several Honeywell BW RigRat monitors to form a wireless safety perimeter. Use the wireless assistant for quick deployment

HONEYWELL TOUCHPOINT™ PLUS Wireless COMPATIBLE

Use with the Honeywell Touchpoint™ Plus-Wireless controller for visibility on Honeywell BW RigRat monitors and workers' personal detectors.

REMOTE MONITORING

Use with Honeywell's remote monitoring software to see gas readings, location and other data from any device with an internet connection — for fast, informed decisions..

APPLICATIONS

Typical applications for the BW™ RigRat deployment include work in confined spaces, hot work, planned maintenance, repairs and short-term environmental monitoring.

Hot Work / CSE	**Refinery and Chemical Plant**	**Utility Workers & Trenchwork**	**Wastewater Facilities**	**Fence Line Deployment**
Welding in any small or crowded area with limited access and little or no airflow or ventilation is dangerous Continuous air monitoring may be necessary during welding or while in confined space	Turn arounds and shutdown require temporary and location sensitive monitoring	Hazardous atmospheres should be evaluated prior to entry and during work based on containment(s) present.	During normal operations, toxic hazard risks exist. Workers will need mobile area monitoring	Protects workers from upwind environmental threats as well as the community from potential hazard due to on-site work
Confined Space	**Planned Maintenance**	**Repairs**	**Temporary Monitoring**	**Environmental Monitoring**

SENSOR OFFERINGS

COMBUSTIBLE SENSOR		
LEL(NDIR-LP)	0-100% LEL 1% LEL; 0-100% VOL 0.1% VOL	0-100% LEL CH_4 only; -40°C ~ 60°C -40°F ~ 140°F
LEL (NDIR) (Inert Mode)	0-100% LEL 1% LEL; 0-100% VOL 0.1% VOL	0-100% LEL CH_4 & Propane; -20°C ~ 50°C -4°F ~ 131°F
LEL (CATALYTIC- BEAD) 1-Series Whittle	0-100% LEL 1% LEL	0-100% LEL CH_4 & Propane; -40°C ~ 60°C -40°F ~ 140°F
CARBON DIOXIDE (CO2)		
CO2 (NDIR)	0-5% VOL; 0.01% for volume readings, 100 ppm for parts per million readings	-20°C ~ 50°C -4°F ~ 131°F
PID SENSORS		
PID (10.6eV)	0-2000 ppm, 0.1 ppm;	-20°C ~ 50°C -4°F ~ 131°F

ELECTROCHEMICAL SENSORS (4R+ smart sensors)		
CO (EC)	0-500 ppm, 1 ppm	-40°C ~ 60°C -40°F ~ 140°F
CO (EC high range)	0-2000 ppm, 10 ppm	-20°C ~ 50°C -4°F ~ 131°F
CO (H_2 compensated)	0-1000 ppm, 5 ppm	-20°C ~ 50°C -4°F ~ 131°F
H_2S (EC)	0-100 ppm, 0.1	-40°C ~ 60°C -40°F ~ 140°F
H_2S (EC high range)	0-1000 ppm, 1 ppm	-20°C ~ 50°C -4°F ~ 131°F
SO_2 (EC)	0-20 ppm, 0.1 ppm	-20°C ~ 50°C -4°F ~ 131°F
O_2 (EC)	0-30% VOL, 0.1% VOL	-20°C ~ 50°C -4°F ~ 131°F
NO (EC)	0-250 ppm, 0.5 ppm	-20°C ~ 50°C -4°F ~ 131°F
NO_2 (EC)	0-20 ppm, 0.1 ppm	-20°C ~ 50°C -4°F ~ 131°F
HCN (EC)	0-50 ppm, 0.5 ppm	-20°C ~ 50°C -4°F ~ 131°F
NH_3 (EC)	0-100 ppm, 1 ppm	-20°C ~ 50°C -4°F ~ 131°F
CL_2 (EC)	0-50 ppm, 0.1 ppm	-20°C ~ 50°C -4°F ~ 131°F

Sensors for initial release, more to come

BW™ RIGRAT
CLOSED-LOOP

Want to monitor a small or large area?

- **Create a safety perimeter around a tank or pipe**
- **Position several monitors to form a wireless chain**

Wireless Options

- Mesh 868 MHz, 915 MHz, 2.4 GHz
- Work mode: Router

Wireless distance at ground level:

- 984 ft./300m (868-915 MHz)
- 492 ft./150m (2.4 GHz)

- Perimeter Monitoring
- Confined Space Entry
- Network Hopping
- Entering a Hazardous Area
- Fence line Monitoring

984 ft. (300 m)

WIRELESS CLOSED LOOP

Mesh Network

- **A controller is not required for this application**

- **Self-Healing Mesh Network**
  No need to reform the network if a monitor is removed or added in.

- **Alarming**
  - One goes into alarm, all the units in the network go into alarm. .
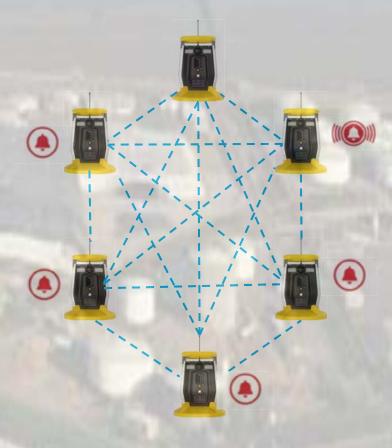
- **Mesh Network Summary Screen**
  Displays status information in the Network
  Displays the instrument is in Alarm

00:00 AM   03/15/16   95% 🔋
Mesh network summary

Device type: Closed loop
Channel:16
PAN ID: 999
Unit ID: 50A

👆 CLICK to skip

00:00 AM   03/15/16   95% 🔋
Mesh network summary

Device type: Closed loop
Units in network: 6

☠

Units in alarm: 2

👆 CLICK to skip

02:25 AM 09/02/2020   82% 🔋 ℹ
Mesh network summary

HRRD000020A7   High
HRRD000115A7   OK

👆 CLICK to scroll

TOUCHPOINT™ PLUS WIRELESS

The Touchpoint™ Plus Wireless is a multi-channel controller with a built-in wireless modem that is designed for integration with RAE Systems by Honeywell Meshguard intelligent network of connected sensors combined with traditional hard wir sensors.

Built-in security safeguards to resist tampering.

Has 8 analogue 4-20 mA inputs for combination of traditional wired products and wireless products.
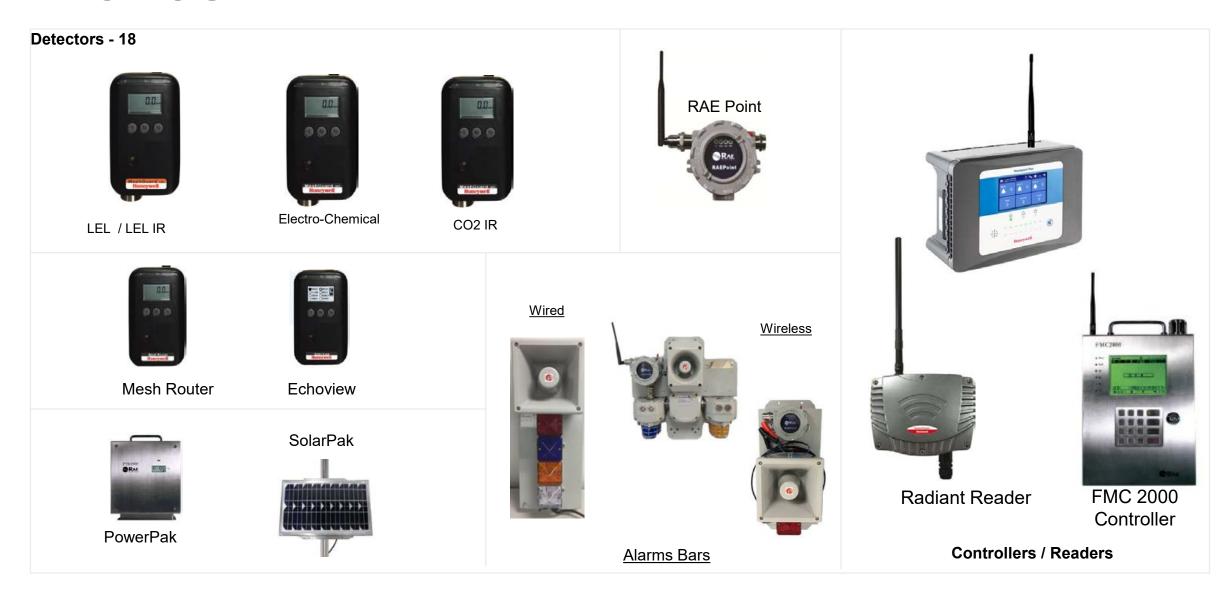
Quick and easy installation

Rugged and reliable

Flexible to handle a variety of data processing and communication needs

New Controller – released Q2 2019

MESHGUARD FAMILY

Detectors - 18

LEL / LEL IR

Electro-Chemical

CO2 IR

RAE Point

Mesh Router

Echoview

PowerPak

SolarPak

Wired

Wireless

Alarms Bars

Radiant Reader

FMC 2000 Controller

Controllers / Readers

FEATURES

Designed to sense Toxic, Oxygen and Flammable gases

Transmits sensor data back to a Controller or a Reader via a Mesh Radio Network

Built-in internal modem (2.4 GHz)

Flexible whip antenna (TNC Connector Type)

Stainless-steel housing

IP-65 rated weather resistant, and splash equipped for sensor protection

Self-healing Network automatically routes data back to the controller through the best wireless path available.

Field-replaceable precision sensors

Battery powered; field replaceable

Optional External Battery Pak for extended use

Intrinsically Safe

Simple to install and operate

Fast deploying and decommission time

Magnetic mounting option for quick and easy installation

18 Detector models to select from

SPECIFICATIONS

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
Keypad	Three operation and programming keys
Display	Customised 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 2 years on external) **Flammable 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)
IP Rating	IP-65

Environmantal parameters

Operating Temperature	-40° C to +50° C (-40° F to 122° F) for LEL, LEL IR, 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	6.2" H x 3.7" W x 2.0" D (15.7cm x 9.3cm x 5.1 cm)
Weight	1.2 Kg (2.6 lbs)

Certifications

Wireless Frequency	ISM license free band, IEEE 802.15.4 2.4 GHz
Wireless Approvals	PCC Part 15, CE R&TTE, Others***
Radio Module	Supports RM2400A
Certifications	**US and Canada:** Class I, Division 1, Groups A, B, C,D, T4 **Europe:** ATEX IM1/II 1G Ex ia I/IIC T4 **Customs Union:** PO Ex ia I Ma/0Ex ia IIC T4 Ga PB Ex d ia I Mb/1Ex d ia IIC T4 Gb Contact manufacturer for country-specific certification

*Specifications are subject to change
**MeshGuard LEL IR units operating in temperatures below -20°C (-4°F) may require a PowerPak external battery for extended runtimes
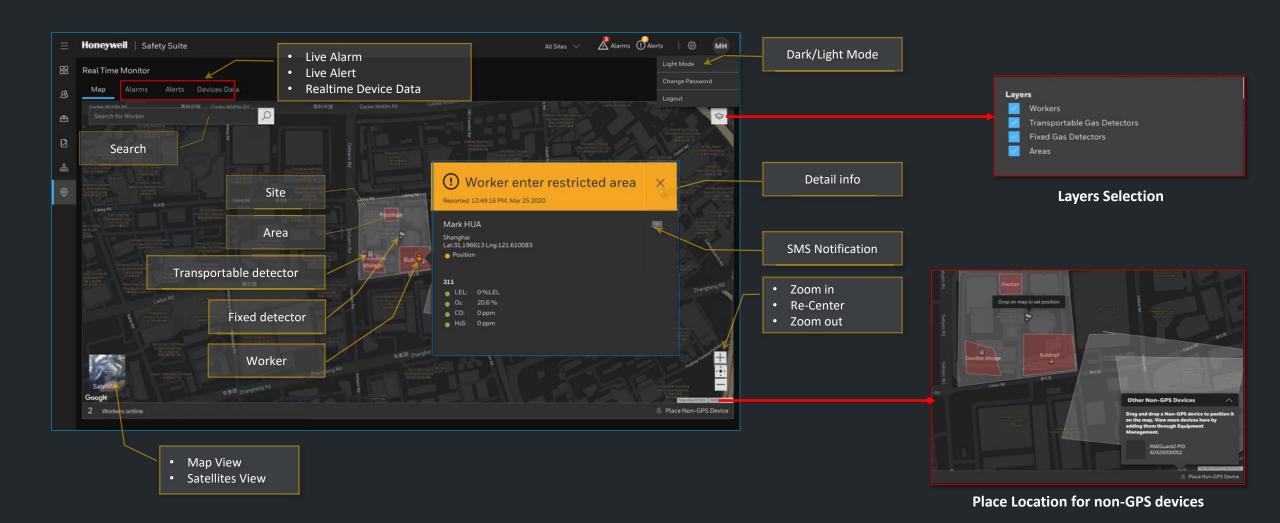***Contact Honeywell for country specific wireless aprovals and certificates

SENSOR SPECIFICATIONS

Sensor	Range	Resolution	Response Time
H$_2$S	0 to 100 ppm	0.1 ppm	T90 < 30 sec / T10 < 30 sec
H$_2$S	0 to 1000 ppm	1 ppm	T90 < 45 sec / T10 < 45 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$_2$ IR	0 to 50% Vol 0 to 100% Vol	0.01% Vol 0.1% Vol	T90 < 30 sec / T10 < 30 sec
O$_2$	0 to 25% Vol	0.1% Vol	T90 < 15 sec / T10 < 15 sec
NH$_3$	0 to 100 ppm	1 ppm	T90 < 30 sec / T10 < 90 sec
Cl$_2$	0 to 10 ppm	0.1 ppm	T90 < 30 sec / T10 < 30 sec
SO$_2$	0 to 20 ppm 0 to 100 ppm	0.1 ppm 1 ppm	T90 < 60 sec / T10 < 60 sec
HCN	0-50 ppm	0.5 ppm	T90 < 200 sec / T10 < 200 sec
NO	0-250 ppm	0.5 ppm	T90 < 45 sec / T10 < 45 sec
PH$_3$	0-20 ppm	0.1 ppm	T90 < 60 sec / T10 < 60 sec
HCl	0-15 ppm	1 ppm	T90 < 200 sec / T10 < 200 sec
ETO-A	0-100 ppm	1 ppm	T90 < 45 sec / T10 < 45 sec
ETO-B	0-10 ppm	0.1 ppm	T90 < 45 sec / T10 < 45 sec
ETO-C	0-500 ppm	10 ppm	T90 < 45 sec / T10 < 45 sec
NO$_2$	0-20 ppm	0.1 ppm	T90 < 45 sec / T10 < 45 sec
HF	0-10 ppm	0.1 ppm	T90 < 200 sec / T10 < 200 sec

WHAT IS SAFETY SUITE

Centralized platform empowers you to manage gas detector, personal protection equipment, organize training, monitor compliance, manage risk and reduce administration time—all from one interface

Alert/Alarm

Dashboard - SPG

Real Time Monitoring

Safety Suite

Asset Management

Safety Compliance

REAL TIME MONITORING

- Live Alarm
- Live Alert
- Realtime Device Data

Dark/Light Mode

Layers Selection

Search

Detail info

Site

Area

SMS Notification

Transportable detector

- Zoom in
- Re-Center
- Zoom out

Fixed detector

Worker

Place Location for non-GPS devices

- Map View
- Satellites View

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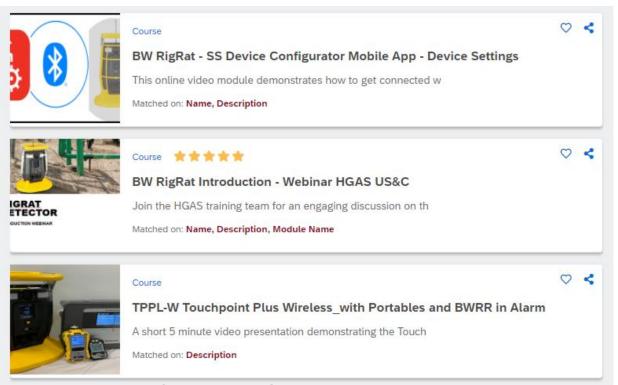
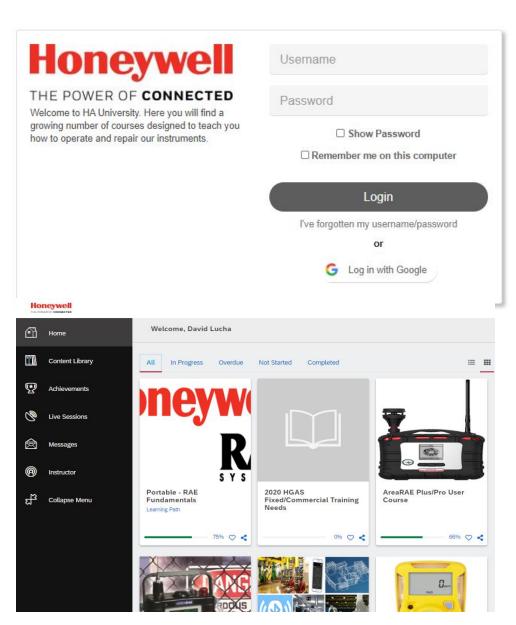**Need help dl-ca3utraining@Honeywell.com**

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