



## AreaRAE Plus

Multiple gas threats. One easy-to-use transportable area detector.

# AreaRAE Plus

Visibility on more threats than ever – all in one flexible area detector with remote monitoring

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.

Whether you need to protect your community by monitoring a fence line, protect your employees during a maintenance turnaround, or protect your fire and hazmat team during emergency response, the AreaRAE Plus alerts you to threats with local audible and visual alarms. Plus, it works with Honeywell's remote monitoring software to give you a real-time view of threat readings from a safe location.

AreaRAE Plus delivers flexibility for your changing requirements:

- **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.

- **Optional meteorological sensor for tracking toxic plumes.**

Honeywell's compact RAEMet sensor sits at the top of the AreaRAE Plus and measures wind speed, wind direction, temperature and humidity. This information is then modeled in Honeywell's real time monitoring software which integrates the ALOHA hazard monitoring program.



## Applications

- Industrial emergency response teams
- Maintenance turnarounds / Shutdowns
- Fence line monitoring
- Clearing a confined space for entry
- Wastewater pipeline rehabilitation
- Site remediation
- Fumigation, excavation and other environmental liabilities

## Ease & Flexibility

- Available in Rapid Deployment Kit for quick threat assessment
- User-friendly interface; turn it on and go
- Flexible power options for short and long-term deployments
- Easy to hear and see, with 108-decibel alarm
- Easy USB connection to configuration software
- Built-in Mesh modem for short range communication with RAE Systems wireless portable detectors.
- Device Management with Honeywell Sotera™

## Remote Visibility on Threats

- Delivers real-time readings to Honeywell's remote monitoring software, so you can instantly determine the location and severity of a threat
- Map-based display is accessible from any computer with an internet connection – or from our laptop as a turnkey host
- Enables coordination and data sharing in joint operations

## Specifications

DIMENSIONS	314 x 306 x 166 mm (with rubber boot) 12.36" x 12.04" x 6.53" (with rubber boot)
WEIGHT	6.3 kg (13.88 lb) full option configuration 6.5 kg (14.33 lb) full option configuration (+RAEMet)
GAS SENSORS SLOTS	up to 7; see Sensor list
ADDITIONAL SENSOR	RAEMet (Wind Speed, Wind Direction, Temperature & Humidity)
GPS	Standard equipment in every unit
BATTERY	Rechargeable 7.2 V / 10 Ah Li-ion battery pack with built-in charger Alkaline Battery Adapter
OPERATING HOURS	~20 hours with wireless connectivity on Li-ion battery pack Specification at room temperature (20°C)
DISPLAY	Large 240 x 320 pixel LCD backlit display 64 x 85 mm / 2.5" x 3.33"
KEYPADS	3 operation and programming keys
ALARMS	Multi-tone 108 dB buzzer @ 3.3 ft / 1 m, Bright LED 360 degree view and on-screen indication of alarm conditions Additional diagnostic alarm and display message for low battery Wireless connectivity alarm
DATA LOGGING	Continuous data logging (90 days for 7 gas sensors, 1 Gamma sensor, 1 RAEMet (wind speed & direction, temp and RH), and GPS at 1 min intervals, 24/7)
DATA STORAGE	24M bytes (memory full action: stop when full or Wrap around)
DATA INTERVAL	User-configurable from 1 to 3,600 sec
WIRELESS <sup>1</sup>	Standard Bluetooth Low Energy module (BT4.0) and GPS
	Primary radio module: - Long range ISM License Free 900 MHz or 2.4 GHz radio - IEEE 802.11 b/g Wi-Fi
	Secondary radio module: Short range IEEE 802.15.4 900 MHz or 868MHz Mesh Radio
	Wireless range <sup>3</sup> : Up to 2 miles (3 km) for ISM 900 MHz; Up to 1.2 miles (2 km) for ISM 2.4 GHz; Up to 330 ft (100m) for Wi-Fi; Up to 660 ft (200m) for Mesh secondary radio; Up to 15 ft (5m) for BLE. Wireless Approval: FCC Part 15, CE R&TTE, Others <sup>4</sup>
COMMUNICATION	Communicates to ProRAE Studio II via USB cable to PC;
	Wireless data and alarm status transmission via Wi-Fi or ISM modem;
	Act as gateway to connect up to 8 remote instruments (using secondary radio module)
SAFETY CERTIFICATION	US / Canada: Class 1, Division 2 Groups A, B, C, D
SAMPLING PUMP	Built-in pump, typical flow rate 450 cc/min
TEMPERATURE	-20 °C to +50 °C / (-4 °F to +122 °F)
HUMIDITY	0% to 95% relative humidity (non-condensing)
INGRESS PROTECTION (IP)	IP 65
PERFORMANCE TESTS	MIL-STD-810G and 461F
	LEL CSA C2.2No. 152, ISA-12.13.01
WARRANTY <sup>2</sup>	Four years for O <sub>2</sub> Liquid Oxygen sensors Three years for CO, and H <sub>2</sub> S sensors Two years for non-consumable components, catalytic LEL sensor and 10.6eV 7R+ PID lamp One year on all other sensors, battery, and other consumable parts Six months for 9.8eV lamp PID sensor

RAEMet SPECIFICATIONS (Optional)	
WIND SPEED	Range: 0 to 20 m/s (0 to 44 mph) Start Speed: 0.1 m/s (0.22 mph)
WIND DIRECTION	Range: 360° (No dead band)
TEMPERATURE	-20 °C to 60 °C (-4 °F to 140 °F) Resolution 0.1 °C (1.8 °F)
HUMIDITY	10 to 95% RH Resolution 1% RH
COMPASS	Resolution 1°
POWER	Power supplied by the AreaRAE Plus

<sup>1</sup>Additional equipment and/or software licenses may be required to enable remote wireless monitoring and alarm transmission

<sup>2</sup>Against factory defects

<sup>3</sup>Receiving > 80%

<sup>4</sup>Contact RAE Systems for country specific wireless approvals and certificates

Specifications are subject to change

## Supported Sensors

SENSOR	RANGE	RESOLUTION
<b>PID SENSORS</b>		
7R+, 10.6 eV ppm	0 to 5,000 ppm	0.1 ppm
4R+, 9.8 eV*	0 to 2,000 ppm	0.1 ppm
<b>COMBUSTIBLE SENSOR</b>		
CATALYTIC BEAD SENSOR	0 to 100% LEL	1% LEL
<b>NDIR SENSOR</b>		
Carbone Dioxide (CO <sub>2</sub> )	<b>0 to 50,000 ppm</b>	100 ppm
<b>ELECTROCHEMICAL SENSORS</b>		
AMMONIA (NH <sub>3</sub> )	0 to 100 ppm	1 ppm
CARBON MONOXIDE (CO)	0 to 500 ppm	1 ppm
CARBON MONOXIDE EXT. (CO HR)	0 to 2,000 ppm	10 ppm
CARBON MONOXIDE H <sub>2</sub> Comp (CO H <sub>2</sub> Comp)	0 to 2,000 ppm	10 ppm
CHLORINE (Cl <sub>2</sub> )	0 to 50 ppm	0.1 ppm
CHLORINE DIOXIDE (ClO <sub>2</sub> )	0 to 1 ppm	0.03 ppm
ETHYLENE OXIDE (ETO-A)	0 to 100 ppm	0.5 ppm
ETHYLENE OXIDE (ETO-B)	0 to 10 ppm	0.1 ppm
ETHYLENE OXIDE (ETO-C)	0 to 500 ppm	10 ppm
HYDROGEN (H <sub>2</sub> )	0 to 2,000 ppm	10 ppm
HYDROGEN CHLORIDE (HCl)	0 to 15 ppm	1 ppm
HYDROGEN CYANIDE (HCN)	0 to 50 ppm	0.5 ppm
HYDROGEN FLUORIDE (HF)	0.5 to 10 ppm	0.1 ppm
HYDROGEN SULFIDE (H <sub>2</sub> S)	0 to 100 ppm	0.1 ppm
HYDROGEN SULFIDE EXT. (H <sub>2</sub> S HR)	0 to 1,000 ppm	1 ppm
OXYGEN (O <sub>2</sub> )	0 to 30 %	0.10 %
SULFUR DIOXIDE (SO <sub>2</sub> )	0 to 20 ppm	0.1 ppm
NITRIC OXIDE (NO)	0 to 250 ppm	0.5 ppm
NITROGEN DIOXIDE (NO <sub>2</sub> )	0 to 20 ppm	0.1 ppm
PHOSPHINE (PH <sub>3</sub> )	0 to 20 ppm	0.1 ppm