

Aretas Aerial

UAV RADIATION MONITORING SOLUTIONS



Call today and let us help make your UAV project a success 877-218-6232

Aretas Aerial

a division of Aretas Sensor Networks, Inc.

877.218.6232

www.aretasaerial.com

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UAV RADIATION MONITORING SOLUTIONS

V Series Overview

UAV SYSTEMS

1. UAV VEHICLE

We help choose the right UAV for your specific needs



2. COMPONENTS PAYLOAD

The right components for the job which can include:

FLIR THERMAL IMAGING



HD VIDEO & PHOTOGRAPHY



3. LIVE & ARCHIVED DATA

Live on-site data for immediate decision making. Archived data for investigations



Aretas Aerial - Live Actionable Data

This wireless radiation monitoring system is capable of detecting beta radiation (electrons), gamma radiation (photons) and X-rays from a safe distance. Our radiation monitoring devices are industrial level hardware and built for hostile environments / hot zones. The unit is battery powered with customizable reporting intervals and low power modes that can enable long-term battery powered operation up to many months. Access your data online 24/7 and set alerts thresholds that notify you before there is an issue.

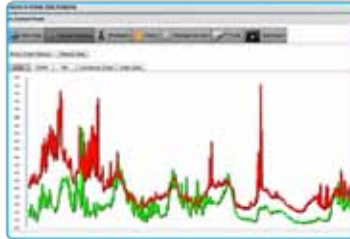


Events such as the Fukushima nuclear power plant disaster or Chernobyl can be monitored remotely by drones, not only for radiation detection but also to locate injured people. Identifying hot zones with FLIR, even gathering air quality data such as particulates, CO, VOC's and more. Aretas is here to provide emergency response teams with the hardware and software needed to perform effectively in the field.

Heatmap View

Radiation sensor readings can be transmitted wirelessly from an irradiated hot zone and viewed through the online Reporting, Mapping and Analytics system. Multiple sensors can be viewed remotely and radioactive zones can be geographically highlighted on our heatmap view.

Online Analytics



This real-time reporting can be viewed from your PC using the Aretas mapping & reporting software giving you access to critical data to make decisions 24/7 at any of your locations world-wide. The software allows you to set alerts, strategies, thresholds, view historical data and watch numerous locations and buildings at once. Call today for a free demo of the system.

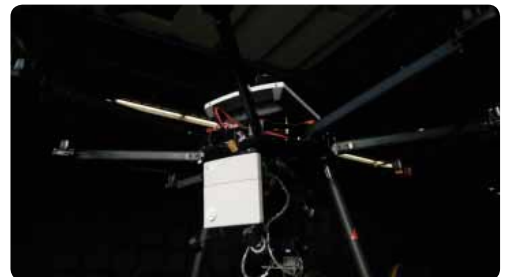


Multiple Gas Sensors

All of the Aretas Aerial solutions are expandable to include one or more of our core sensor technologies such as temperature, relative humidity and gases such as VOCs. Aretas is an agile company that will work with you to create the specific monitoring solutions you need.

Other Sensor Options

- UAV CO Carbon Monoxide Monitoring
- UAV CO2 Carbon Dioxide Monitoring
- UAV NO2 Nitrogen Dioxide Monitoring
- UAV O3 Ozone Monitoring
- UAV VOC Monitoring
- UAV PM Fine Particulate Monitoring



UAV RADIATION MONITORING SOLUTIONS

V Series Overview

Radiation Sensor Features

- Detects beta and gamma radiation and X-rays
- Battery powered with customizable reporting intervals and low power modes that can enable long-term battery powered operation (months).
- Wireless communication between one or more monitors and the communication bridge or PC based data collection.
- Industrial level hardware is built for hostile environments / hot zones.
- 24/7 remote monitoring and threshold based alerting.
- With the optional Internet based communication bridge you can access data online world-wide.
- Data can be exported to GIS or other custom mapping systems.
- Data can also be exported from our large-scale data warehouse via API and analyzed by other programs.
- High immunity to RF and electrostatic fields

Radiation Monitor Specifications

- Detector sensitivity: 5.8 cpm \pm 15% for 1 μ Sv/h radiation dose
- Linear response over wide temperature range (-30°C to 50°C)
- Measurement range of radiation dose equivalent rate (Cs-137 & Co-60): 0.1 μ Sv/h to 100 mSv/h

Custom Payloads

HD Video / DSLR Camera

UAV's can be customized to carry just about any camera type from small form factor HD to small body cinema grade camera such as the Blackmagic.

Thermal Camera

The Thermal camera is an LWIR camera solution that is smaller than a dime, keeping weight on our UAVs to a minimum, and is ten times less expensive than a traditional IR camera. Using a focal plane array (FPA) of 80 \times 60 active pixel the video resolution from this small package is impressive. Other thermal cameras are available to meet your specific project requirements.



- Thermal sensitivity <50 mK
- Multiple lens options: 50° / 25° FOV
- Spectral range Long Wave infrared, 8 μ m to 14 μ m

UAV Platforms to suit a variety of requirements

- UAV Quadcopter V650
- UAV Hexacopter V680
- UAV Heavy Lift Quadcopter V690
- UAV Octocopter V1000

If you're looking for different specs for your thermal imaging needs, just ask. Customizing payloads are our specialty.

