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DR2000 FLYING LAB

DR2000 Drone Based Environmental Monitoring

After years of testing and client feedback, we have improved upon the DR1000 technology in several ways. A weight reduction to 520g – 640g now allows for a much more diverse drone portfolio.

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Scentroid's DR2000 Drone Based Environmental Monitoring and Air Quality Analyzer

After years of testing and client feedback, we have improved upon the DR1000 technology in several ways. First and foremost, a weight reduction to 520g – 640g now allows for a much more diverse drone portfolio, and a smaller weight grants the operator a longer flight time. We have also improved the DR2000's communication capabilities, offering more range and a faster/higher throughput.

Our advancements in sensor electronics allow for a much more stable and accurate reading, electrochemical sensor health and lifetime check, and improved particulate matter measurements. On top of that, our sensors now boast a significantly shorter warm up time.

Our newly designed advanced lightweight carbon fibre casing now provides a sleek, aerodynamic body, further reducing drag. And last but certainly not least, our improved sample intake provides continuous and smooth airflow for stable readings, dramatically reducing the pulsation from pumps.

The DR2000 Drone Based Environmental Monitoring Flying laboratory provides a robust platform to conduct both impact assessments and air quality measurements for a wide range of applications. This includes the monitoring of fugitive emissions, flare emissions, leak detection along oil pipelines, landfill methane, odour emissions, military or emergency applications, urban scanning, and much, much more!

A thermal imaging camera can also be installed for visual confirmation of fugitive emissions in a variety of applications such as landfills, storage tanks, and oil/gas pipes.

Need to take an air sample for post analysis or to send to a laboratory for testing?

Scentroid DR2000 equipped with a sample collection module will collect and store air samples in a secure PTFE bag. Simply click on "Grab a sample" button on the ground station app and the drone will fill the sample bag. Coupled with a wide variety of sample bag technology that can be shipped to you at the time of ordering, Scentroid has you covered for all of your sampling needs!

Intelligent Flying Air Quality Monitoring Laboratory

The DR2000 measures gases using a series of sensors selected based on application. With a library of over 50 sensors, Scentroid has every sensory requirement covered! Each DR2000 unit can be equipped with:

- 4 Electrochemical , 1 NDIR sensor (CO₂), 1 PID sensor (VOC), 1 MOS, and PM 1, PM 2.5, PM 4 and PM 10
- Volatile organic compound sensing using photo-ionization technology

- Temperature, humidity, and barometric pressure
- High accuracy GPS recording
- High accuracy altitude measurements

Recommended Drones:

Due to its new lightweight design, the DR2000 Drone Based Environmental Monitoring companion can now be mounted to a much wider series of drones. Our system is completely self-contained and requires nothing from the attached drone except to operate solely as a vehicle. Although it can be attached to many drones, we feature it being used with the DJI Inspire 2.

Reliability of the DR2000 Drone Based Environmental Monitor

The DR2000 provides 3 levels of data storage:

Storage of data on pre-installed SD card

Transmission and storage of data on the on-ground station

Transmission and storage of data on the cloud/localized server

DR2000 Cloud-Based Hosting

The central monitoring station is hosted on a secure cloud-based server; allowing remote access with any smart device that is connected to the internet. The access is restricted, and the data is encrypted for maximum security. Users are given an identification and password combination which will define their permission level. For example, a standard user who accesses the platform is only able to view and download the results, while a user with administrator access can reconfigure the system and redefine parameters.

The monitoring station is designed to collect all data from the sensors and present the sensor data in an easy to understand graphical interface.

Utilizing the DR2000 Flying Laboratory's Local Server

DR2000 can be configured so that the native DRIMS2 software is hosted on a local server, specified by the user. This server must have an adequate connection to a secure Wi-Fi or LAN network. Scentroid will provide all the necessary hardware and software to set up a local server. This option includes Computer hardware, DRIMS2 software, Ethernet hub.

RF Communication (LoRa)

low power consumption. With a line of sight range of 10 Km, the DR2000 can send data back to the ground stations in any environment.

The data is stored on the ground station and synced through any wifi network to Scentroid's powerful Drone Information Management System (DRIMS 2).



General Capabilities

DR1000 can travel 150 meters above ground level. User can take samples, set intervals for measurement, adjust the sampling rate, and perform maintenance



Ground Station

10 Inch tablet equipped with LORA communication capabilities and customized DRIMS2 mobile software



Hazardous Sampling

A DR2000 unit can be flown into a flare plume or reach various hard to access places for direct sampling



Lightweight Design

A weight reduction from its predecessor to 800g now allows for a much more diverse drone portfolio, and less weight grants the operator a longer flight time



Cloud Access

Data can be accessed on location or remotely using encrypted cloud-based hosting. See below for our DRIMS2 Software breakdown



New and Improved Battery Life!

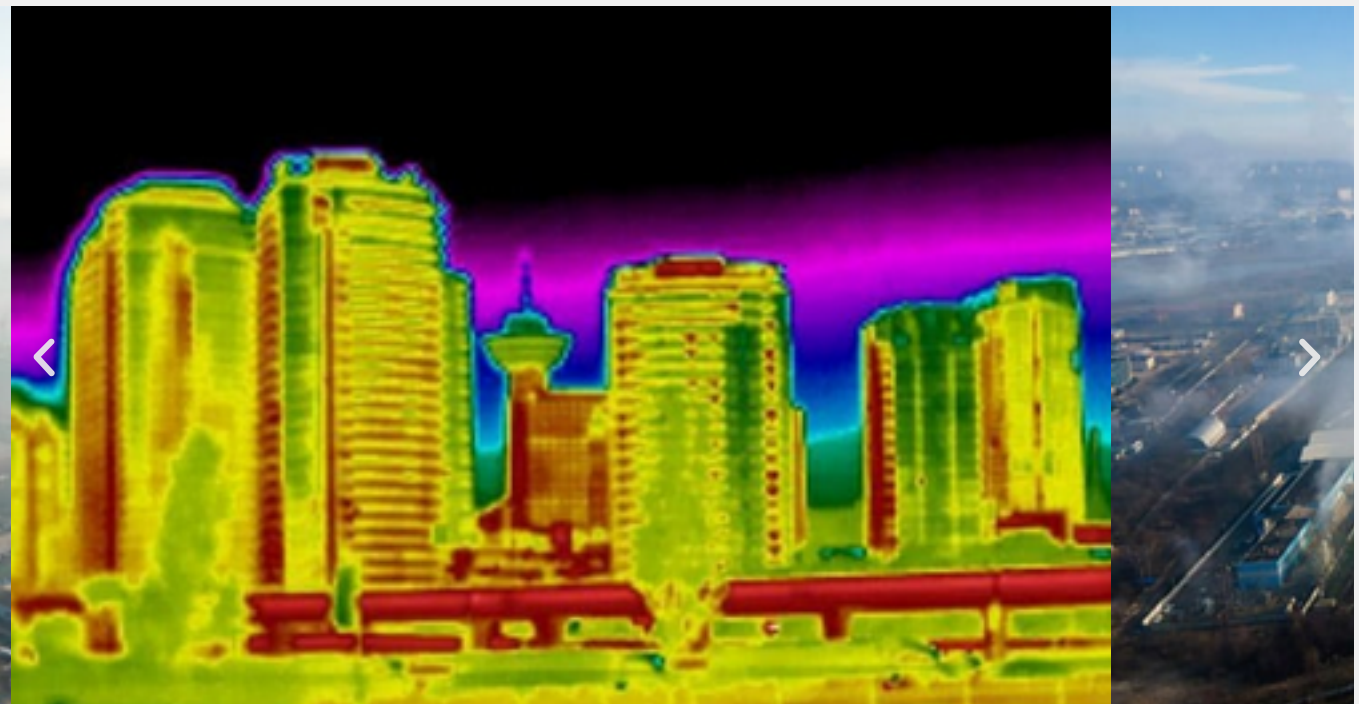
The DR2000 will come equipped with a fast charge battery for continuous operation of up to 12 hours

DR2000 NEW FEATURES AND ADD-ONS

NEW: Sample Bag Filling

a cost-effective air sample collection device. Use the DR2000 to collect samples directly and in hard to reach places without dilution from stack, ambient air, without the assistance of other sampling devices such as flux chambers or wind tunnels.

[Click here to view](#) our collection of sample bags.



Live Camera and Thermal Imaging

Our DR2000 units can now be fitted with a camera, giving you the tools you need to record your entire UAV monitoring project.

With our thermal camera add-on, DR2000 inspections will be able to detect the leaks from a variety of volatile organic compounds and pipelines. Aerial thermal inspections can also result in the early detection of damage to structural abnormalities, piping and detect other external and internal inconsistencies.

Heater Module for High Humidity

Install the heater module to enhance the accuracy and extend the operating conditions to highly humid environment. Through use of a heater module, the effect of extreme humidity on particulate matter readings will significantly reduce.





Compatible with a Wide Variety of Drones

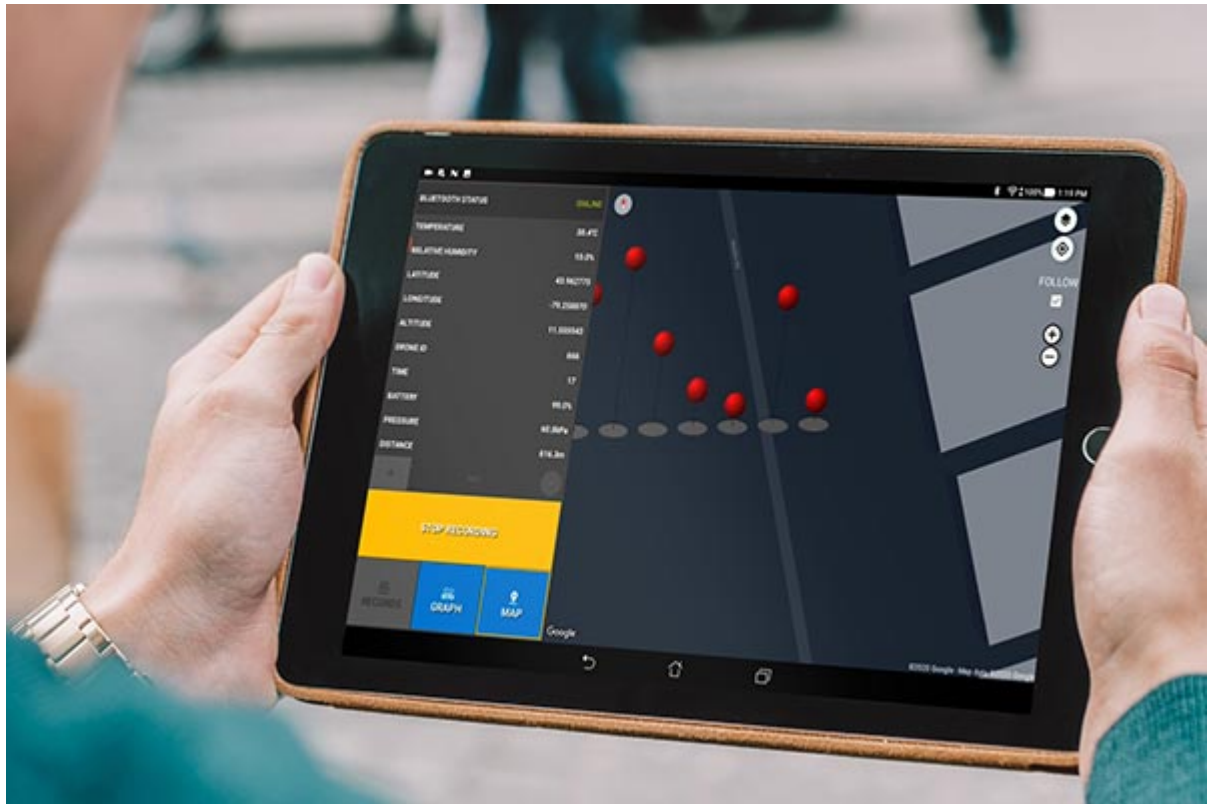
Scentroid is capable of retrofitting a wide variety of drones with the DR2000. Let us know your drone model and the maximum payload weight, and we will create a custom mounting bracket just for you!

Pictured left: The DR2000 attached to a Yuneec H520E Commercial Hexacopter (YUNH520EUS), and an ALTI Ascend-C 2m Wingspan drone.

DRIMS2 (Drone Information Management System) Software:

The Scentroid Drone Information Management System, DRIMS2, our all-inclusive software, is used to view historical data, run diagnostics, configure, and set alarm levels for DR2000. Provided as part of the DR2000 package, the software is installed on our on-board server (default), Scentroid's cloud-based server (default) and on your localized server (optional).

DRIMS2 provides easy analysis tools for an operator to determine pollutant hot spots, possible sources, sampled areas, and much more. The easy to use graphical interface allows anyone to run complicated data analytics without being a GIS expert.



Find out more about our DRIMS2 Software here:

[DRIMS2 Software Page](#)



Special Offer!

First time Scentroid DR2000 customers will receive a free one-year subscription to our DRIMS2 cloud software!

DRIMS2 Ground Station:

The Scentroid ground station, included with every DR2000 Flying Laboratory, consists of a specialized tablet connected to a miniature PC with a high gain powerful communication antenna. Our tablets also come pre-installed with our DRIMS2 Ground Station component software. This branch of DRIMS2 software provides the user with a means to log all acquired data as it occurs. This includes all live data as well as historical data for sensors, including GPS position, altitude, temperature, and humidity.

The user can also command the drone when to take a sample and when to perform routine maintenance such as calibrating sensors. The readings are continuous, and the user can choose whether to display them live with our diagnostics feature or forward it to a database. If an optional on-board camera is present, a video feed will also be sent to the ground station for simultaneous viewing.



The DRIMS2 software also provides a 3D live mapping of all your readings. The system can provide an auto generated isometric map displaying altitude, along with an auto generated heat map. By automatically syncing with the DRIMS2 cloud software, data export, transfer, and backup are all made easy.

DRIMS2 Analysis Software:

The DR2000 comes with simultaneous GPRS and WIFI communication capabilities. The GPRS is used to

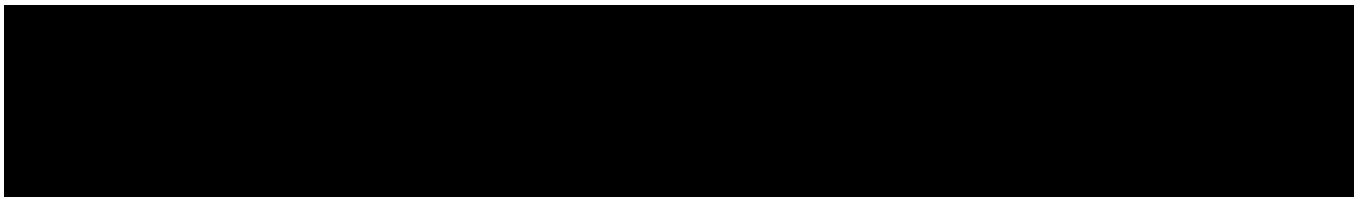
Our DRIMS2 Analysis software serves as the perfect companion to any monitoring job – an offsite wealth of information is stored in a beautiful and easy to navigate interface. After securely logging in, users can select their drone, select their flight/flight date, favorite, name, or even search for a specific sampling node.

With access to a heat map along with viewing altitude in a 3D setting, managing a sensory project has never been easier (or more informative!).



Video Resources:







Wastewater



Landfill & Compost



Oil & Gas



Chemical



Related Products to DR2000 Flying Laboratory:



CTair Plus



TR8



TR8 Plus



DR1000



+ Scentroid Quality Policy



Scentroid is committed to provide our customers with the highest quality products & services. We use established best practices of our industry to meet or exceed your quality expectations. To achieve these objectives and meet the requirements of our customers, we aim to:

- Empower our clients with vast in-depth knowledge, state-of-the-art instruments, and extensive customer support.
- Strive in every aspect of our operation to put our client first and use our research expertise to develop the most innovative and effective products and services in the sensory industry.
- Ensuring the customer needs and expectations are determined and fulfilled with the aim of achieving their utmost satisfaction.
- Striving to deliver products on time with zero defects.
- Training all members of staff in the needs and responsibilities of our quality management system (QMS).
- We strive to continuously improve the effectiveness of the quality management system (QMS) by maintaining, monitoring, reviewing, auditing and enhancing our compliance to ISO 9001:2015
- QMS shall be communicated throughout the organization as well as the system of identifying, reporting, investigating and resolving all non-conformances and taking action to prevent recurrences.

+ 24 Month Warranty



Need assistance? Call our dedicated team at 1.888.988.4337 or click



SCENTROID

Future of Sensory Technology



416.479.0078



info@scentroid.com



70 Innovator Ave. Unit 7
Stouffville, ON. L4A 0Y2

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