

DR1000 FLYING LAB

Environmental Monitoring System



The Scentroid DR1000 Flying Lab provides simultaneous monitoring of multiple chemicals. While in flight, up to (8) built-in sensors can provide remote monitoring of chemicals selected at the time of ordering. Sensors can be provided for 100's of chemical contaminants including H₂S, CH₄, CO₂, SO₂, and VOCs. Chemical concentration readings are tagged with GPS position and altitude to provide 3D mapping of ambient pollution and odour levels



The DR1000 Flying Lab allows the operator to stay safely away from any hard to reach or potentially hazardous sources while acquiring the required air sample for laboratory analysis.



The DR1000 now features a brand-new patented sampling system that samples only undisturbed ambient air, completely avoiding propeller downwash.



General Capabilities

DR1000 can travel any distance above ground level, up to 150 meters, for sampling



Thermal Camera

A thermal imaging camera can be installed for visual confirmation of fugitive emissions



Battery Life

The DR1000 is come equipped with a fast charge battery for continuous operation of up to 3 hours, before recharging



Cloud Access

Data can be accessed on location or remotely using encrypted cloud-based hosting



Ground Station

9" Tablet equipped with LoRa communication capabilities and customized DRIMS2 mobile software

DR1000 analyzes data continuously while in flight at a rate of more than 100 samples per second.

It sends back to the ground station using long range radio transmission (LoRa protocol), providing a secure & encrypted transmission of data

Data is automatically stamped with GPS position, latitude, time, date, relative humidity, and temperature.

This data can be used for numerous applications using our proprietary DR1000 analysis software.

Dimensions, Weight	26 cm x 16 cm x 18 cm, 3.4kg
Max. # of Sensors	8
Type of sensors	PID, NDIR, EC, Laser Particulate Counter, Temperature and Relative Humidity, and barometric pressure
Sampling rate	Approximately 1/s
Time in flight	Drone dependent
Communication	LoRa, GSM/WiFi
On-board data storage	16GB SD card
Cloud Server	Included by default (optional for Local Server)
Temp/Humid Range	5°C to 40 °C(Temperature), 10 - 90% (RH)
Calibration	Auto-zero before flight. Full sensor calibration recommended once annually
Mounting hardware	Customizable mounting lid. Triple mounting safety redundancy to the drone (mounting screws, counter-weight ties, zip ties)
Location and Altitude	GPS Based with barometric pressure augmentation