SC1000

AirLab SC1000

Flying Laboratory

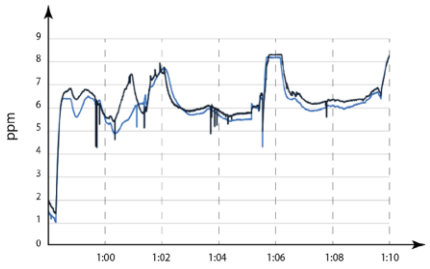
The SC1000 consists of a flying laboratory and a commercial drone. The SC1000 can be used to sample and analyze ambient air at heights of up to 150 meters above ground level that was previously impossible to accomplish. Air quality mapping, asset safety & performance monitoring, model verification, analysis of potentially dangerous sites are all made possible by this novel innovation.

> IMPROVES AIR SAMPLING CAPABILITY OVER DIFFICULT TERRAIN AND AT DIFFERENT HEIGHTS

It is often necessary to sample stacks, ponds, and other location where human access is difficult and /or dangerous. Furthermore, operator exposure to dangerous chemicals during sampling must be carefully considered. The S&C sampling drone gas detector allows the operator to stay safely away from potentially hazardous sources while acquiring the required air sample for laboratory analysis. The sampling drone can also be used to sample ambient air at an elevation of up to 150 meters above ground level that was previously impossible to accomplish.

> CONTINUOUS CHEMICAL MONITORING

In addition to air sample bag collections, the SC1000 flying laboratory is capable of providing up to five remote chemical sensors to monitor chemical concentration levels. Data from on-board sensors are transmitted to a customer supplied operator's Android phone to be viewed live and logged. While in flight, every 2 seconds, the drone will record GPS positions, altitude, temperature, humidity, H2S, VOC, SO2, Methane, and any chemical that is being monitored. The data can be used to create a map of the emission plume in real-time.



> ONE OPERATOR CAN HANDLE EVERYTHING

The SC1000 flying laboratory is a complete package that allows one person to fly the drone to take samples from all inaccessible and unreachable locations at the site, while monitoring the exact location of the drone including longitude, latitude, altitude and height via the S&C Drone Sampler Application residing on a customer supplied Android phone that is attached to the drone remote control via a supplied mount.

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SPECIFICATIONS

SC1000

FLYING LABORATORY

Manufacturer	S&C
Model	SC1000
Maximum operating time with full charge battery	10 hours
Time to fill up a sample bag	15 Sec per Liter
Weight	1135 g

SAMPLING DRONE

Sampling done weight	4200 g
Diagonal length	1180 mm
Sampling drone battery	LiPo 6S 15000 mAh
Drive PWM frequency	8KHz
Signal frequency	30Hz ~ 450Hz
Working voltage	6S Li Po

LIVE CHEMICAL MONITORING

The SC1000 flying laboratory provides continuous monitoring of multiple chemicals. While in flight, five built-in chemical sensors can provide remote monitoring of chemicals selected at the time of ordering. Chemical monitoring can be provided for H2S, CH4, CO2, SO2, VOCs, and close to 30 other selected chemicals. Data is transmitted to the operator's supplied Android phone for live monitoring and recording. Chemical readings along with GPS position and altitude can provide 3D mapping of ambient pollution and odor levels. This feature can also be used to guide the operator into a plume for bag sampling. See the following table for a list of available sensors. Note sensors are specified at the time of ordering.

STANDARD SENSORS

Sensor ID	Chemical	Range	Lowest Detection	Resolution (ppm)
MT1	Methane (LEL)	0-100% LEL	0 ppm	1% LEL
CD2	Carbon Dioxide - Low Concentration	0-5000ppm	0 ppm	15 ppm
SD2	Sulfur Dioxide (low Concentration)	100ppm	0 ppb	20 ppb
HS1	Hydrogen Sulfide (low Concentration - ppb)	1 ppm	3 ppb	1 ppb
PD1	Total VOCs (ppb) - PID	50 ppm (isobutylene)	0 ppm	1 (ppb isobutylene)

AVAILABLE SENSORS

Over 30 other sensors are available and can be substituted for any of the standard sensors.

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