

soarability



Sniffer4D Mini2

Multi-gas Detection & Mapping System

For DJI M30 Series Aircrafts

# Sniffer4D Mini2



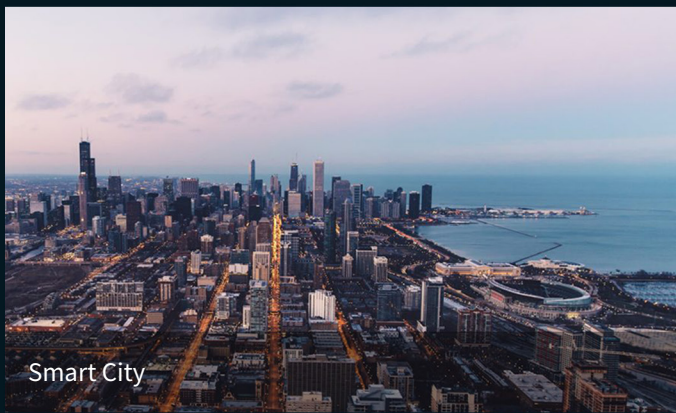
## A Multi-gas Detection & Mapping System for DJI M30/M30T

Sniffer4D Mini2 consists of a compact yet powerful multi-gas detection hardware, and user-friendly analytic software. This system can measure and visualize real-time 3D gas concentration distributions. By providing timely & actionable information, Sniffer4D Mini2 helps first responders, oil & gas industry, environmental protection agencies, and researchers improve efficiency, mitigate risks, and reduce costs.

# Typical Applications



Ambient Air Monitoring



Smart City



Carbon Monitoring



HAZMAT Response



Plant & Pipeline Inspection

# One-stop Workflow

From data collection to result delivery.

## Available Parameters

PM2.5 PM10 SO2 CO NO2 O2 O3 VOCs

LEL / CH4 CO2 HF H2S NH3 HCl

H2 Cl2 PH3 NO HCN Odor (OU)

## • Sense Up to 9 Gases at a Time

Sniffer4D is able to obtain up to 9 gas concentration distributions at one time. Users can flexibly choose or alter their sensor configurations that suit their applications and budgets.

### Examples:

- PM2.5, PM10, O3, NO2, CO, SO2, VOCs, Odor (OU) for ambient air monitoring;
- VOCs, CH4, CO, Cl2, O2, NO2, H2S, CO2 for HAZMAT response;
- VOCs, CH4, H2S, SO2 for oil & gas plant leak detection.

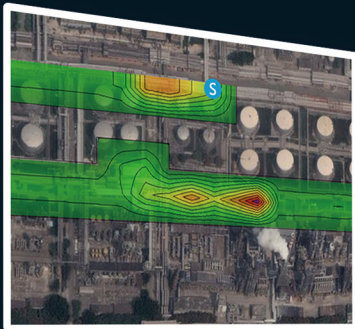


## ! See Your Real-time Data, Anywhere

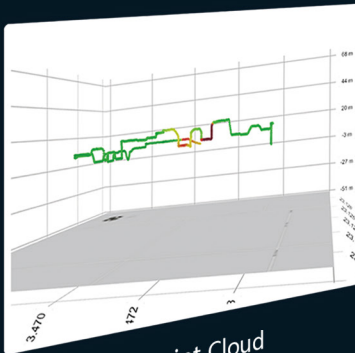
Sniffer4D's built-in cellular connectivity & US-based Cloud server enable secure real-time data transmission with unlimited range to decision makers in different locations.

## Advanced Real-time Visualization

Sniffer4D Mapper software visualizes and analyzes data from one or more Sniffer4Ds in real time, providing intuitive & insightful information for decision makers.



2D Isoline Map



3D Point Cloud



2D Grid Map



Reporting your work has never been easier.

## Soarability Technologies

## Mission Time: 2019/09/09 11:36:57 to 2019/9/09 12:01:35

Sniffer4D DeviceID: 8ac3f6aa Modual ID: 100

**Method:** Electrochemical

Sample Dots: 1478

Average Size of the Grid: 46.1612 Meter X 46.1612 Meter (2130.855 Square Meter)

The total detected area: 127851.281 (Square Meter)

Central Coordinates of the Area: 114.0782 E, 22.5980 N

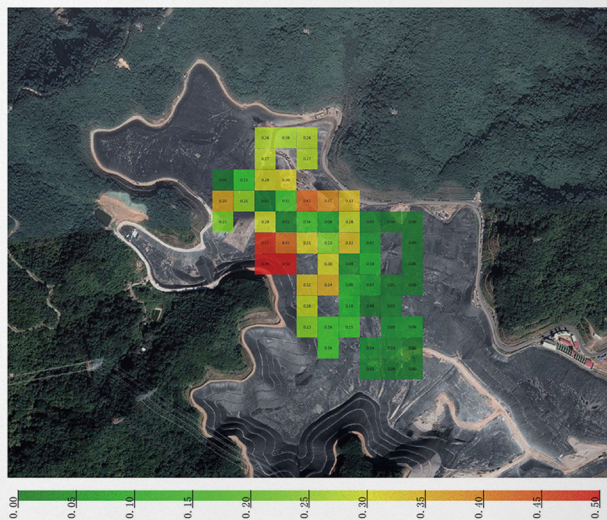
H<sub>2</sub>S Average Concentration: 0.163 mg/m<sup>3</sup>

H<sub>2</sub>S Maximum Grid Concentration: 0.497 mg/m<sup>3</sup>(114.0775 E, 22.5978 N)

H<sub>2</sub>S Minimum Grid Concentration: 0.000 mg/m<sup>3</sup> (114.0798 E, 22.5957 N)

H<sub>2</sub>S Maximum Point Concentration: 0.983 mg/m<sup>3</sup> (114.0777 E, 22.5980 N) 2019/09/09 11:58:46

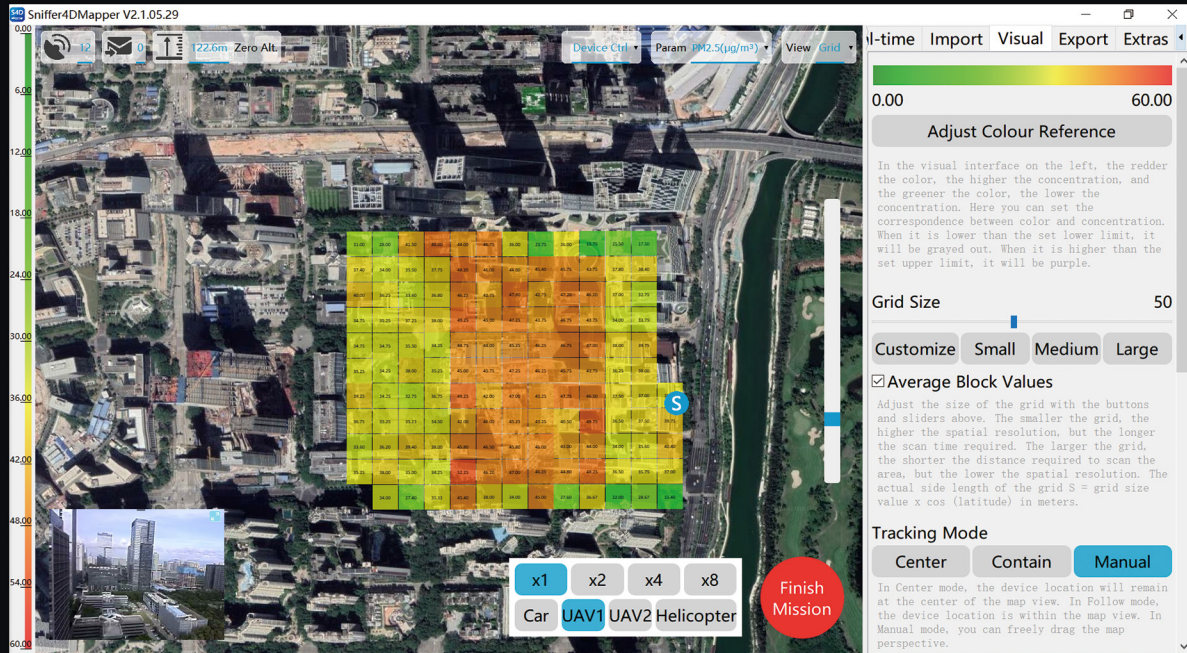
H<sub>2</sub>S Minimum Point Concentration: 0.000 mg/m<sup>3</sup> (114.0793 E, 22.5984 N) 2019/09/09 11:46:36



| y: SifferdMapper 1.3.11.18 |              |           |          |                |            |             |          |
|----------------------------|--------------|-----------|----------|----------------|------------|-------------|----------|
| ctName                     | Organization | Longitude | Latitude | Temperature °C | Humidity % | Pressure Pa | VOCs ppm |
| 2019/9/9 11:36             | -0.0762963   | 114.0757  | 22.59848 | 36.666668      | 35.098038  | 98118.0547  | 0.030519 |
| 2019/9/9 11:36             | -0.0762963   | 114.0757  | 22.59848 | 36.666668      | 35.098038  | 98118.0547  | 0.030519 |
| 2019/9/9 11:37             | -0.0762963   | 114.0757  | 22.59848 | 36.666668      | 35.098038  | 98118.0547  | 0.030519 |
| 2019/9/9 11:37             | -0.0762963   | 114.0757  | 22.59848 | 36.666668      | 35.098038  | 98118.0547  | 0.030519 |
| 2019/9/9 11:37             | -0.0762963   | 114.0757  | 22.59848 | 36.666668      | 35.098038  | 98118.0547  | 0.030519 |
| 2019/9/9 11:37             | -0.0762963   | 114.0757  | 22.59848 | 36.666668      | 35.098038  | 98118.0547  | 0.030519 |
| 2019/9/9 11:37             | -0.0762963   | 114.0757  | 22.59848 | 36.666668      | 35.098038  | 98118.0547  | 0.030519 |
| 2019/9/9 11:37             | -0.0762963   | 114.0757  | 22.59848 | 36.666668      | 35.294117  | 98118.0547  | 0.030519 |
| 2019/9/9 11:37             | -0.0762963   | 114.0757  | 22.59848 | 36.666668      | 35.294117  | 98118.0547  | 0.030519 |
| 2019/9/9 11:37             | -0.0762963   | 114.0757  | 22.59848 | 36.666668      | 35.294117  | 98118.0547  | 0.030519 |
| 2019/9/9 11:37             | -0.0762963   | 114.0757  | 22.59848 | 36.666668      | 35.098038  | 98113.1719  | 0.030519 |
| 2019/9/9 11:37             | 0.19837      | 114.0757  | 22.59848 | 36.666668      | 35.098038  | 98108.2891  | 0.030519 |
| 2019/9/9 11:37             | 0.473037     | 114.0757  | 22.59848 | 36.862743      | 35.098038  | 98103.4063  | 0.030519 |
| 2019/9/9 11:37             | 1.5717       | 114.0757  | 22.59848 | 36.862743      | 35.098038  | 98093.6406  | 0.030519 |
| 2019/9/9 11:37             | 3.2197       | 114.0757  | 22.59848 | 36.862743      | 35.098038  | 98078.9922  | 0.030519 |
| 2019/9/9 11:37             | 4.8677       | 114.0757  | 22.59848 | 36.862743      | 35.098038  | 98064.3599  | 0.030519 |
| 2019/9/9 11:37             | 6.24104      | 114.0757  | 22.59848 | 36.862743      | 34.901962  | 98054.5703  | 0.030519 |
| 2019/9/9 11:37             | 6.37837      | 114.0757  | 22.59847 | 36.862743      | 34.901962  | 98044.8047  | 0.030519 |
| 2019/9/9 11:37             | 6.5157       | 114.0757  | 22.59846 | 36.862743      | 34.901962  | 98039.9219  | 0.030519 |
| 2019/9/9 11:37             | 6.65304      | 114.0757  | 22.59844 | 36.862743      | 34.705883  | 98035.0391  | 0.030519 |
| 2019/9/9 11:37             | 6.65304      | 114.0757  | 22.59842 | 36.862743      | 34.705883  | 98030.1563  | 0.031281 |
| 2019/9/9 11:37             | 6.65304      | 114.0758  | 22.5984  | 36.862743      | 34.509804  | 98030.1563  | 0.032044 |
| 2019/9/9 11:37             | 6.65304      | 114.0758  | 22.59839 | 36.862743      | 34.313725  | 98025.2734  | 0.032807 |
| 2019/9/9 11:37             | 6.65304      | 114.0758  | 22.59838 | 36.862743      | 34.117645  | 98025.2734  | 0.03357  |
| 2019/9/9 11:37             | 6.65304      | 114.0758  | 22.59838 | 36.862743      | 34.117645  | 98025.2734  | 0.034333 |
| 2019/9/9 11:37             | 6.65304      | 114.0758  | 22.59838 | 36.666668      | 34.117645  | 98025.2734  | 0.035096 |
| 2019/9/9 11:37             | 6.65304      | 114.0758  | 22.5984  | 36.666668      | 34.117645  | 98025.2734  | 0.035859 |
| 2019/9/9 11:37             | 6.65304      | 114.0758  | 22.59841 | 36.666668      | 34.117645  | 98015.5078  | 0.035859 |
| 2019/9/9 11:37             | 6.5157       | 114.0758  | 22.59843 | 36.666668      | 33.92157   | 98015.5078  | 0.035859 |
| 2019/9/9 11:37             | 6.24104      | 114.0758  | 22.59844 | 36.666668      | 33.92157   | 98010.625   | 0.035859 |
| 2019/9/9 11:39             | -0.0762963   | 114.0757  | 22.59848 | 36.666668      |            |             |          |
| 2019/9/9 11:39             | -0.0762963   | 114.0757  | 22.59848 | 36.666668      |            |             |          |
| 2019/9/9 11:39             | -0.0762963   | 114.0757  | 22.59848 | 36.666668      |            |             |          |
| 2019/9/9 11:39             | -0.0762963   | 114.0757  | 22.59848 | 36.666668      |            |             |          |

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# More Software Features



- \* Display real-time gas concentration values and temporal graphs;
- \* Display Sniffer4D's working status (e.g. GPS satellite number, altitude);
- \* Automatically retrieve data collected by Sniffer4D during communication interruption back to the software;
- \* Display real-time video feed from drone;
- \* Support connecting to multiple Sniffer4Ds at the same time;
- \* Display real-time UAS camera view;
- \* Support screen recording during missions;
- \* Calculate estimated Fuel Sulfur Content (FSC);
- \* Import historical mission files;
- \* Import & display orthophoto;
- \* Import geo-tagged photos;
- \* Calibrate Sniffer4D;
- \* Show demo missions;
- \* Automatic update.

# Seamless Integration with DJI M30/M30T

Sniffer4D Mini2's all-new industrial and structural designs bring significant reduction in its size and weight, maximizing M30's flight time. The new quick-release mount and cable connection, shorten the operation preparation time even further.



Compact body  
102x103x72mm

Ultra lightweight  
250-300g

Active air intake

Built-in  
4G/3G/EDGE/GPRS

Data retrieval  
algorithm

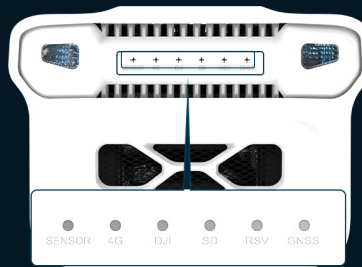
SD card data  
storage

# User-friendly Designs



## Plug & Play

With Sniffer4D Mini2's built-in 4G connectivity, all you need to do is to plug the cable to the PSDK port on the top of DJI M30.



## Status LEDs

The 6 status LEDs enable users to quickly understand Sniffer4D Mini2's working status, boosting your work efficiency.



## Warning Lights

The 3 warning lights on Sniffer4D Mini2 have larger visible angle. They change color under different gas concentrations, notifying nearby people about the risks.



## DJI Cloud API

Sniffer4D Mini2 supports DJI's new Cloud API, bringing unprecedented amount of visual information to the M30's large screen remote control.

# Verified Data Quality



Proprietary ultra-low  
noise signal processing  
electronics



State-of-the-art  
sensing components



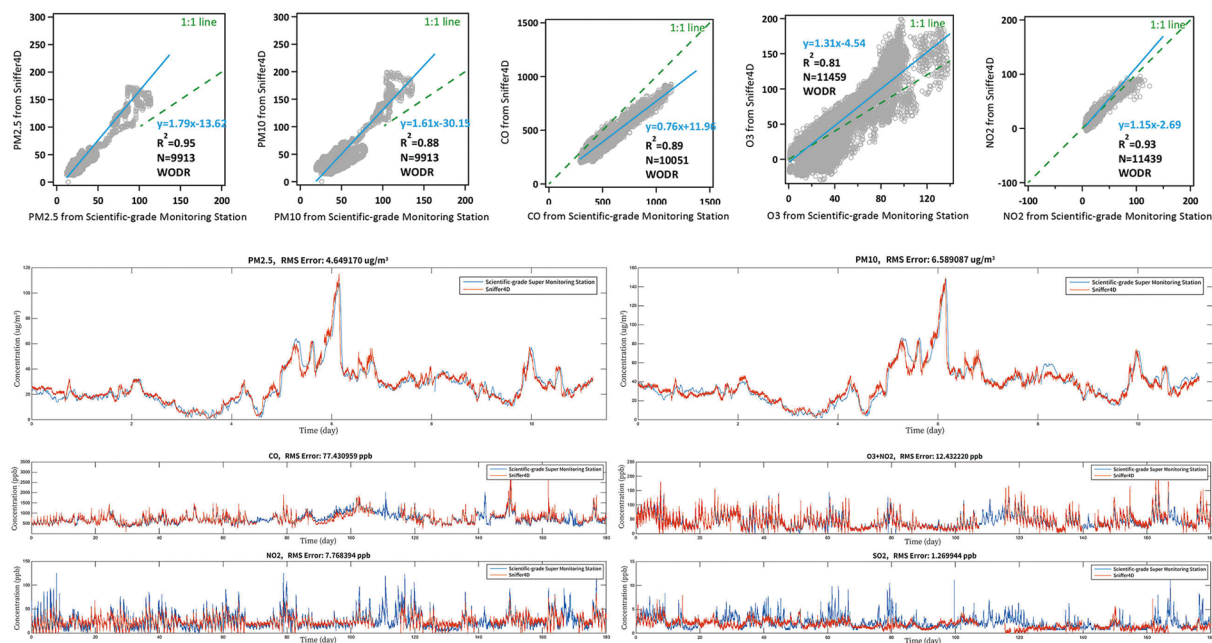
Proprietary  
environmental and bias  
compensation algorithms



Rigorous quality  
control process

## Advanced Hardware & Algorithm Design

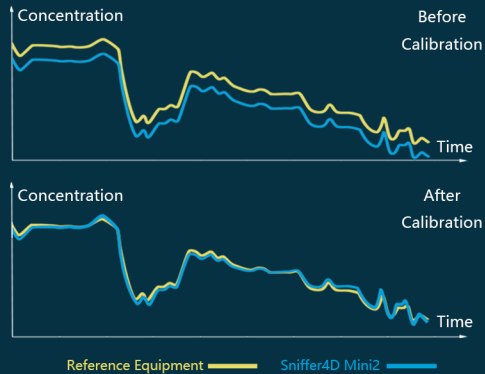
Ensure Sniffer4D's excellent data linearity, repeatability, reliability and short response time.



Industry leading data quality ( $R^2$  0.81-0.95) in co-location test with a scientific grade monitoring station.

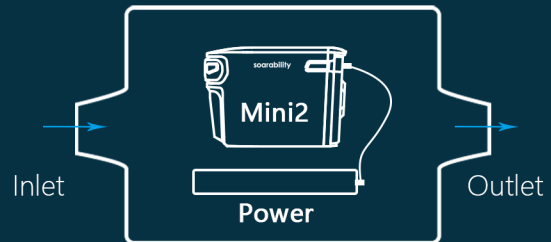
# Flexible & Easy Calibration

Every Sniffer4D is factory calibrated before being shipped out. We recommend re-calibrating the device every 6 months. There are generally 3 ways to calibrate Sniffer4D.



## Data Learning

Compare long-term datasets from Sniffer4D and a local reference monitoring station (placed at the same location) to determine the calibration parameters.



## Calibrating Gas

Inject gases with known concentrations into the calibration chamber

## Local Air Quality

|                               |     |                                |    |
|-------------------------------|-----|--------------------------------|----|
| PM10 $\mu\text{g}/\text{m}^3$ | 25  | PM2.5 $\mu\text{g}/\text{m}^3$ | 26 |
| NO2 $\mu\text{g}/\text{m}^3$  | 39  | O3 $\mu\text{g}/\text{m}^3$    | 23 |
| CO $\mu\text{g}/\text{m}^3$   | 416 | SO2 $\mu\text{g}/\text{m}^3$   | 3  |

## Quick Adjustment

Use local AQI information to roughly determine the calibration parameters.

# About Soarability



Founded in 2016, SZ Soarability Technology LLC is a world leader in developing drone-based environmental data acquisition systems.

As of March 2022, Soarability's products are helping users in 33 countries across 6 continents to improve work efficiency and reduce risks.



For more information  
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