SENSYS®
Magnetometers & Survey Solutions

UAV / drone magnetometer survey kit

MAGDRONE R1

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Applications

- Survey & Surveillance
- Mine exploration / tracking / monitoring at flexible heights
- UXO detection on unreachable, flooded or mined areas

Features

- Self-folding sensor arm
- Attachable to any UAV with 1+ kg payload
- adjustable recording rate
- live data output
- USB interface
- Data processing tool

The MagDrone R1 is an ultra portable survey kit to be attachable to any UAV / drone with a 1+kg payload only.

The kit features a self-folding carbon fiber sensor arm to keep the distance to the ground as low as possible without risking the equipment. The built-in 3-axis Fluxgate can output serial live data with up to 1,000 Hz. The MagDrone R1 is optimized for small and mid size survey UAVs equipped with UgCS Skyhub or similar.

The survey kit can be used for general purpose surveys, science related magnetic cartographies, mine exploration or sensitive applications like UXO detection.

The MagDrone DataTool helps to identify flown tracks, cut, filter and compensate the raw data, generates a preview and exports into various formats to further process the recorded values i. e. using the MAGNETO® software, GIS tools or in Matlab.

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R1: TECHNICAL

General Technical Data

Power Supply	24...48 V DC (XT30)
Operating Temperature	-20°C to + 50°C
Weight	595 g
Overall power consumption	2,5W

FGM3D/75 Fluxgate

Number of sensors	1
Specified measurement range	±75,000 nT (other ranges on request)
Number of sensor axis	3
Noise level @1Hz [pT/ (Hz)]	10 pT < sensor >= 30 pT

Data Transfer

Hardware interface	USB 2.0
User Interface	UgCS Skyhub/Custom Payload Manager or other serial port terminals
Sampling rate	200 - 1,000 Hz
Live data output	Via UDP
Raw data filtering, track & flight direction detection, noise compensation, MagBase referencing, export, preview	MagDrone DataTool (included)
Data interpretation, visualization, object calculation, etc.	MAGNETO® Software

R1: DIMENSIONS