

# UAV magnetometer with cesium sensor AeroQuantumMag



AIRBORNE MAGNETOMETRY  
MARINE MAGNETOMETRY  
DRONE MAGNETOMETRY  
MARINE ERT  
MARINE SEISMICS  
BOREHOLE SEISMICS  
LAND MAGNETOMETRY

## MAIN FEATURES

- Highest accuracy and sensitivity
- Up to 1 000 measurements per second
- Built-in GNSS receiver
- Affordable price and easy-to-use



**Quantum drone magnetometer with cesium sensor AeroQuantumMag** is designed to efficiently perform magnetic survey work using drone. The device is featuring a high measurement speed (up to 1 000 Hz) and a sensitivity of 0.002 nT/√Hz rms. Aerodynamic body with carbon fiber frame weighs only 1.3 kg with battery. The low weight increases the flight time of the drone. The magnetometer requires no data exchange with the UAV and uses its own battery, so it can be used with any UAV.

### Easy-to-use drone magnetometer

AeroQuantumMag is equipped with a user-friendly remote control - select the desired survey parameters and press Start. All measurements are saved to the built-in microSD card. Data is quickly downloaded to a PC or smartphone via USB. The remote control is equipped with an OLED display that operates in a wide temperature range ( $-40 \div +60$  °C), built-in multi-frequency GNSS receiver, with RAW GNSS data recording and backlit keypad.

### Metrology and noise protection - a guarantee of high accuracy

Every AeroQuantumMag is metrologically tested. We control the standard deviation of random error (noise), absolute accuracy and heading error. The robust algorithms allow to perform measurements at high level of industrial noise, in a city environment, or right under/up high-voltage powerlines.

### Built-in multi-band GNSS receiver with centimeter level accuracy

Time and coordinates are provided by the built-in multi-band GNSS receiver with PPK feature, which allows to achieve a centimeter level accuracy. AeroQuantumMag also has GNSS receiver mode and can be used as a GNSS base, rover or tracker without mag sensor connected during any geophysical applications. Stored RAW GNSS data could be easily converted to RINEX format.



## TECHNICAL SPECIFICATIONS

- Sensor type | Self-oscillation split-beam Cesium vapor (non-radioactive Cs-133) optical pumped
- Sensor sensitivity | 0.0006 nT /√Hz
- Heading error |  $<\pm 0.2$  nT in  $\pm 35^\circ$  range from optimum angle of  $45^\circ$ , operating zones 10-80° and 100-170°
- Sample rate | 1 280 Hz
- Dynamic range | 15 000 ÷ 110 000 nT
- Absolute accuracy |  $<2$  nT
- Resolution | 0.001 nT
- Optimal angle between the sensor axis and the field vector |  $45^\circ$
- Operating range of inclination relative to the optimum angle |  $\pm 30^\circ$
- Gradient tolerance | 20 000 nT/m
- Interfaces | USB
- GNSS receiver | GNSS signals: GPS L1C/A and L2C; GLONASS L1OF and L2OF; Galileo E1B/C and E5b; BeiDou B1I and B2I; QZSS L1C/A, L1S and L2C. SBAS: WAAS, EGNOS, MSAS, GAGAN.
- Connectors | XT60, USB, external GNSS antenna
- Display | 160 × 128, OLED
- Keypad | 6 buttons
- Built-in memory | up to 32 Gb (microSD)
- Power supply | 9.5-21 VDC, LiPo 3S/4S, Li-ion 3S/4S, LiFePo4 4S, or lead-acid battery
- Operating temperature |  $-40 \div +50$  °C
- Additional sensors | IMU, compass
- Dimensions |  $\varnothing 84 \times 115$  mm sensor, 172×63×108 mm console
- Weight | 1.2 kg - magnetometer, 0.17 kg - LiPo 4S 1550 mAh battery
- Delivery package size and weight | 119.7 × 48.7 × 17.5 cm, 11.5 kg

## PACKAGE CONTENTS

- Console with built-in multi-band GNSS receiver
- Portable Quantum (Cs) sensor on carbon rod
- Lightweight helical GNSS antenna
- Suspension rope
- USB cable
- Transportation case

## OPTIONAL

- Suspension bracket for DJI Matrice M300/M350/400
- Suspension bracket for customer drone
- LiPo 4S 14.8V 1550mAh battery (2 pcs) with charger
- Non-magnetic tripod with bracket for base station mode



## Reliability and warranty

Our R&D specialists have extensive experience in performing geophysical surveys. We are well aware that such equipment must be reliable, and the service must be fast and convenient. We give 3 years warranty on all our magnetometers, and our technical support will promptly answer any of your questions. If you are still working with outdated magnetometers - take advantage of our trade-in offer and protect your projects from potential problems.

## 3 YEARS WARRANTY

*Specifications are subject to change without prior notice.*

*This document was reviewed on January 28, 2026. For the latest specifications, please refer to: <https://geodevice.co/product/aeroquantummag/>*



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