



Conjunto de magnetómetros QuantumMag y AeroQuantumMag

Código: GD-QM-AQM

Marca: N/D

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Detalle

QuantumMag

and AeroQuantumMag set of optically pumped Cesium magnetometers offers unique flexibility in solving a wide range of tasks—from high-resolution ground archaeological surveys to UAV regional mapping. Both devices are fully independent, high-sensitivity magnetometers with sampling rate of up to 100 Hz, built-in high-precision GNSS receivers, consoles, and internal memory enabling various use scenarios.

AeroQuantumMag is designed for UAV operations but can also be used as a base magnetometer during ground surveys with walking QuantumMag. In addition to the standard components of the two units, the set includes mounting brackets and a tripod for base magnetometer set-up.

High-precision coordinate referencing

Both magnetometers are equipped with high-precision built-in dual-frequency GNSS receivers capable of recording RAW GNSS data. This allows to use any unit not only as a base magnetometer, but also as a GNSS base. At the same time, the second magnetometer operates as a rover to provide centimeter-level accuracy for measurement positioning. The RTK option is an indispensable tool for archaeological surveys where precise coordinates are critically important. Both magnetometers can be mounted on the dedicated non-magnetic MagCart .

Lightweight design

The aerodynamic carbon frame of AeroQuantumMag weighs only 1.2 kg and allows flight speeds up to 15 m/s. The complete QuantumMag set with battery weighs just 4.8 kg, making it the lightest in the World optically pumped walking magnetometer.

Attention to every detail

The developers behind our products are experienced geophysicists who have spent years working in the field. We actively test our instruments in a variety of climate zones from scorching sun to harsh winter conditions. This hands-on approach allows us to design reliable, user-friendly equipment that's been thought through down to the smallest detail.

Data format

The QuantumMag console features bright built-in LED flashlight and a heated LCD screen that ensures perfect readability day or night, in heat or cold. The dual-sided keypad is equally convenient for both right- and left-handed users, and particularly helpful on freezing days when you'd rather keep one hand warm in your pocket. A comfortable, lightweight harness doesn't restrict movement and is easy to carry,

while the attachable backpack lets you pack lunch and jacket. The AeroQuantumMag is equipped with an OLED display that operates without heating down to -40°C. We value user feedback and are always open to new ideas for improving functionality and ease of use. Many features were implemented thanks to user suggestions and easy remote firmware update. User can create project folders that can be used to divide survey sites or data collection days. All measurements are saved in a TXT file in the project folder. The file from each magnetometer has a name containing the serial number of the console, the code of the measurement mode and the number of connected sensors. The files have a homogeneous structure, i.e. every measurement in the file is a line that contains all necessary information: UTC date and time, time zone, base name or line# and station name, measured field, estimated error, sensor serial number, latitude and longitude in decimal degrees, altitude, UTM coordinates with automatic zone and hemisphere selection, horizontal and vertical accuracy. When working with a gradiometer, the line will contain measured field, estimated error, and sensor serial number for each of the connected sensors, and the file name will be different from the magnetometer mode, so the uniformity of the format will not be broken. Even if there are many operators working on a survey site at the same time, you will always be able to identify which instrument was used for each single measurement in the database. Metrology and noise protection - a guarantee of high accuracy All our magnetometers are metrologically tested. We control noise level, 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 high-voltage powerlines. Reliability and warranty Three-year warranty, reliability and fast technical support make your project seamless. You can also take advantage of our trade-in program and replace your old instruments with the new magnetometers from us. Trade in your outdated, unreliable, and heavy magnetometers from other manufacturers for our modern, lightweight, and high-performance solutions! Operating modes Mobile survey with walking or towed style and station measurements with line guidance UAV magnetometer Base magnetometer Search mode for UXO objects detection or evaluation for a base station location GNSS receiver mode with ability to collect RAW GNSS data for a centimeter level accuracy Application area Mineral exploration Regional geological surveys Engineering surveys Pipeline mapping UXO detection Archaeological studies Oil and gas exploration Basic delivery set: MaxiMag console with built-in multi-band GNSS receiver CMx sensor on rod Sensor electronics QuantumMag Counter QuantumMag Lithium battery with charger Sensor-to-console cable Battery power cable Non-magnetic rod Backpack harness Non-magnetic tripod AeroQuantumMag console with built-in multi-band GNSS receiver Portable Quantum (Cs) sensor on carbon rod Lightweight helical GNSS antenna Suspension rope USB cable – 2 pcs. Transportation case – 2 pcs. Optional: RTK option SmartManager software Suspension bracket for DJI Matrice M300/M350 Suspension bracket for customer drone LiPo 4S 14.8V 1550mAh battery (2 pcs.) with charger for AeroQuantumMag Lithium battery for QuantumMag Non-magnetic tripod with bracket for base station mode

Especificaciones técnicas

Ficha tecnica de la variante activa.

Especificación	GD-QM-AQM
Type	Optical pumped Cs magnetometers
Number of sensors	2
Dynamic range	15 000 to 110 000 nT
Absolute accuracy	<2 nT
Sensor sensitivity	0.002 nT / $\sqrt{\text{Hz}}$ rms
Resolution	0.001 nT
Optimal angle between the sensor axis and the field vector	45°
Operating range of inclination relative to the optimum angle	$\pm 30^\circ$
Gradient tolerance	20 000 nT / m
Sample rates	up to 100 Hz
Additional sensors	IMU; compass
Interfaces	AeroQuantumMag : USB QuantumMag built - in : USB; RS - 232; CAN FD
GNSS receiver	GNSS signals : GPS L1C / A и L2C; GLONASS L1OF и L2OF; Galileo E1B / C и E5b; BeiDou B1I и B2I; QZSS L1C / A; L1S и L2C. SBAS : WAAS; EGNOS; MSAS; GAGAN Additionally for QuantumMag : connection of external receiver via RS - 232
GNSS antenna	QuantumMag : built - in and optional external AeroSmartMag : external
Connectors	QuantumMag : 2 x CAN FD+12V / RS232+12V; USB; external GNSS antenna AeroQuantumMag : XT60; USB; external GNSS antenna
Display	QuantumMag : 240 x 128; LCD AeroSmartMag : 160 x 128; OLED
Keypad	QuantumMag : 32 buttons AeroQuantumMag : 6 buttons with backlight

Especificación	GD-QM-AQM
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 100 - 240 VAC; optional power supply required
Operating temperature	-40 to +50 °C
Dimensions with connectors	QuantumMag : Ø82×120 mm - CMx sensor 260×150×45 mm - console AeroQuantumMag : Ø 84×115 mm sensor 172×63×108 mm console
Item weight	QuantumMag : 1.1 kg - console 1.2 kg - sensor on rod with sensor electronics 0.4 kg - counter 1.3 kg - LiFePo4 battery AeroQuantumMag : 1.2 kg - magnetometer 0.15 kg - LiPo 4S 1550 mAh battery
Weight of a fully assembled set includes console, sensor, battery, harness, GNSS antenna, etc.	QuantumMag walking magnetometer : 4.8 kg AeroQuantumMag : 1.35 kg
Delivery package size and weight	QuantumMag : 62.9 × 39.3 × 20.9; 9 kg AeroQuantumMag : 119.7 × 48.7 × 17.5 cm; 11.5 kg

Galería de imágenes

Mostrando hasta 6 imágenes de la galería.



Imagen de galería 1



Imagen de galería 2



Imagen de galería 3

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