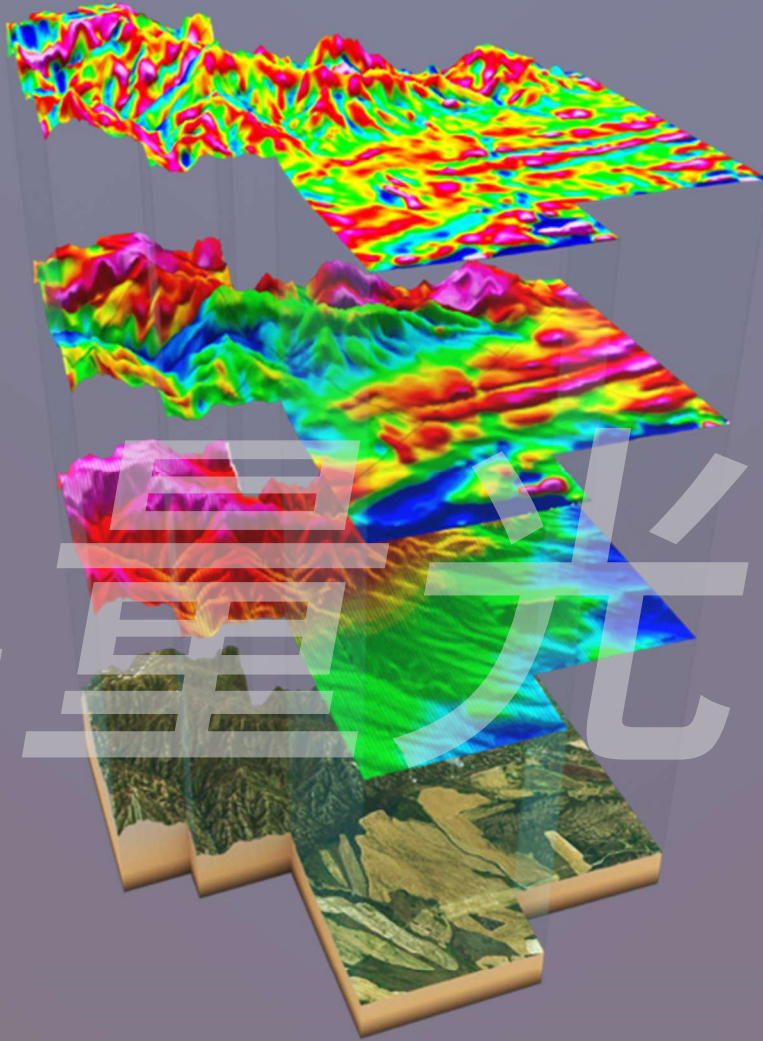


GEOSCAN



昊量光电

Geoscan technologies for geophysical survey

GEOSCAN

Overview

Geoscan Group is one of the leading Russian developers and producers of fixed wing and rotor unmanned aerial systems, as well as software for processing and analysis of aerial photography data.

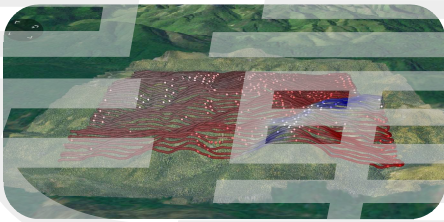
Advantages

Geoscan Group possess all the necessary components of UAV technology for aerial photography and geo exploration, including avionics, sensors, communication and ground control systems, fixed-wing UAVs and copters production facilities, software for data processing and visualization, services for mapping, cities modelling, drone light shows, etc.

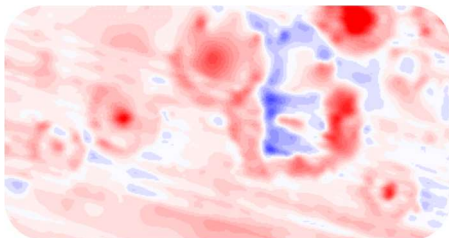
Features



Industries



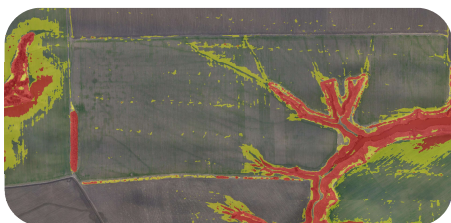
Geology management



Archaeological research



Mineral exploration

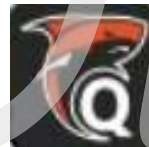


Enviro-engineering



Geoscan Planner

Flight management(or ground station) Software



QM Centre software

Data collection software

Geoshark MG3EU

Optically pumped quantum magnetometer


Complete with magnetic field sensor, optical fiber and GNSS L1/L2. Geoshark MG3EU can be installed on different devices, for example: manned aircrafts, drones, etc. Ethernet and Wi-Fi interface allows connecting with the device easily.




Components:

- Magnetic sensor
- Electronic unit
- Optical fiber
- Cables and connectors
- QMCentre software (for data collection)

 High sensitivity Mz-magnetometer

 GNSS for synchronization operations

 Ethernet/Wi-Fi

Performance:

Sensor	Rubidium 87 based Mz sensor
Sensitivity	0.1 - 0.5 pT/√Hz
Heading error	less than ± 0.3 nT
Sensor mass	120 g
Electronic unit mass	300 g
Power consumption	9-14V/12W (after warmup)
Sample rate	1 kHz

Geoshark MG30M

Airborne magnetometer


Geoshark MG30M is a complete high precision magnetometer system for towing under UAV. The standalone device does not require any integration with the UAV's navigation or electrical systems.




Components:

- Airborne magnetometer
- Battery (2 pcs)
- Charger
- Transportation case
- QMCentre software
- Special cord on bobbin
- Cables and connectors

 Aerodynamic design

 Post-processing software

 Lightweight

Performance:

Sensor	Rubidium 87 based Mz sensor
Sensitivity	0.1 - 0.5 pT/√Hz
Heading error	less than ± 0.5 nT
Magnetometer weight (with battery)	2 kg
Battery operation time	more than 2 hours
Interfaces	Ethernet, Wi-Fi 2.4 GHz
GNSS tracking	L1/L2/GPS/Galileo/Glonass/Beidou

Geoshark MG3EU

Unmanned aerial system for aeromagnetic survey

Unmanned aerial systems Geoscan 401 Geophysics is used for automatic completion of aeromagnetic survey. The complex is equipped with a high-precision quantum magnetometer, which can operate at low altitude as in flat terrain and complicated landscape conditions.

Components:

- Unmanned aerial system Geoscan 401 with Camera Sony DSC-RX1RMII.
- Geoscan Planner – Software
- Agisoft Metashape PRO - Software
- Digital communication channel for control and telemetry.
- 3 additional batteries with protection system.
- Spare parts and instruments.
- Quantum magnetometer in protective case
- Protected transportation case for UAV.
- Professional training in St. Petersburg



High sensitivity Mz-magnetometer



GNSS for synchronization operations



Fast and precise magnetic field mapping

Technical Specifications

General

Launch/Landing	Vertically, automatic mode platform 5x5
Take-off preparation	5 min
Engine	electric/4 engines
Flight time	Up to 1 hour
UAV overall dimensions	Flight position 150x150x56 cm
Wind resistance	10 m/s
Flight speed	0-50 km/h
Max take-off weight	9,5 kg
Maximal flight distance	60 km
Area coverage per 1 flight	0,5 km ²
Minimal safe altitude	25 m
Maximal flight altitude	500 m
Operating temperatures	from -20 to +40°C

Software to consider:

GeoScan Planner

For flight task managing - included in supply

QMCentre software

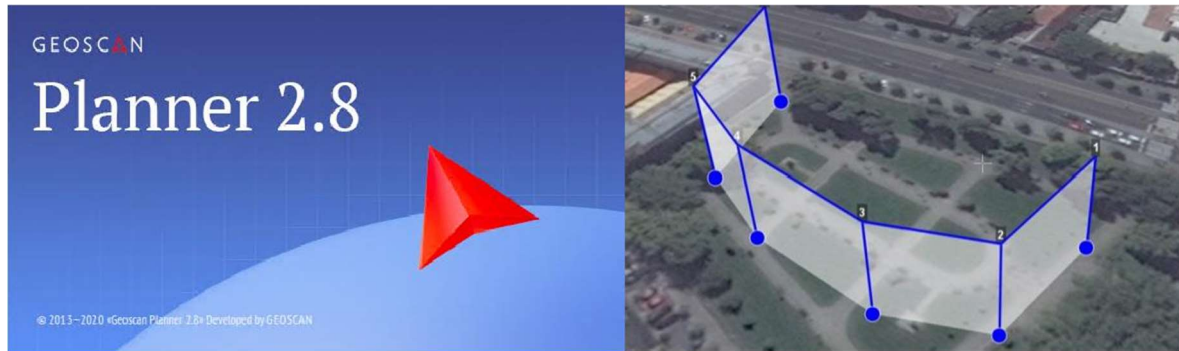
For data collection – included in supply

Agisoft Metashape PRO

For create DEM, DTM – included in supply

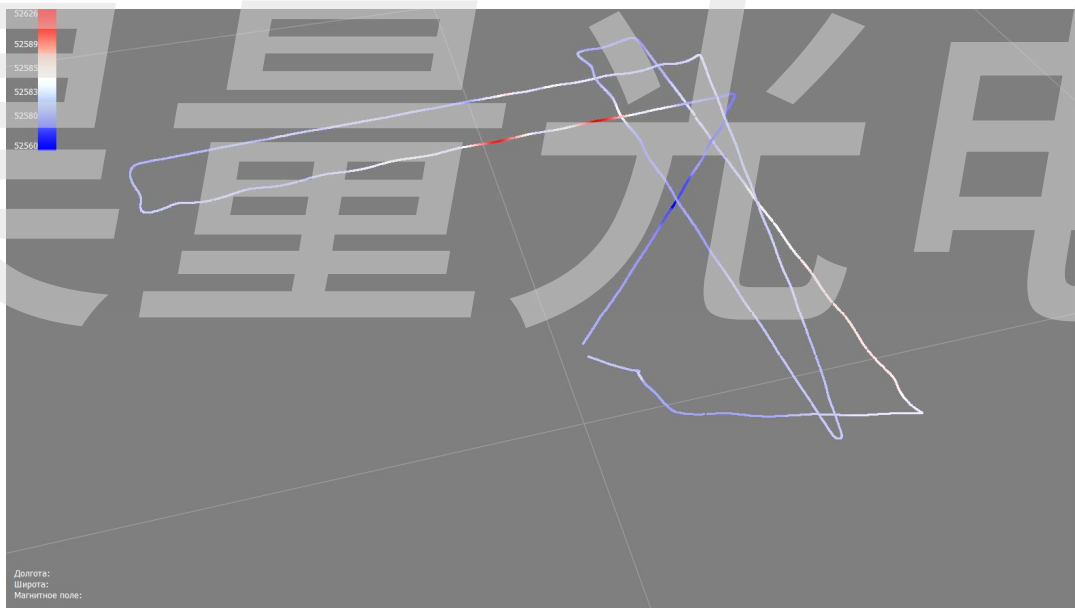


Geoscan Planner



Geoscan Planer is a flight management software that allow you to create your own flight task. During the flight you can monitor your flight mission, as well as cancel the mission if there are any emergencies.

QM Center



QM center software is a data collect software that allow you to upload data from Geoshark. This tool is usefull for control results of shooting, change parameters for work, and make visualization of data