



ROSOR
EXPLORATION

RECON LITE & ZEPHYR MAG

Integrated Aeromagnetic
Survey System



90 mins
Flight Time



Unlimited
Communication Range



Measurement Capability
Scalar + 3-axis
vector magnetic field



Sensitivity
Scalar: $< 0.003 \text{ nT}/\sqrt{\text{Hz}}$ |
Vector: $< 0.1 \text{ nT}/\sqrt{\text{Hz}}$



Sampling Frequency
Up to 1000 Hz (Scalar),
250 Hz (Triaxial)



Key Features & Benefits

1 Fully Integrated Aeromagnetic Platform

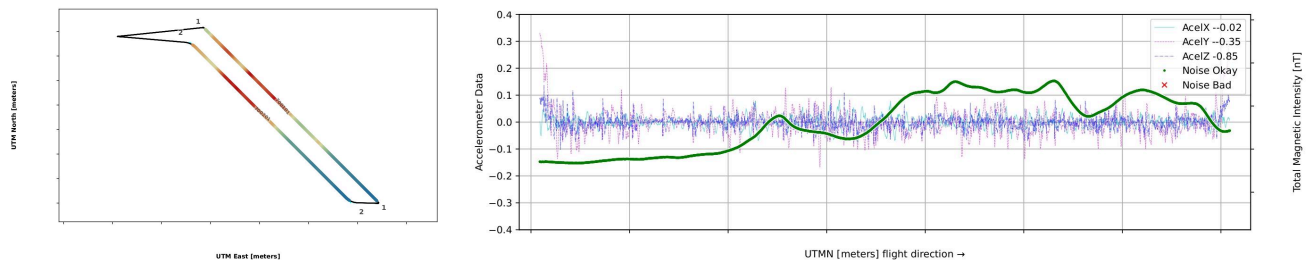
UAV, magnetometer, telemetry, and data systems engineered as a single platform, eliminating integration risk and ensuring consistent, survey-grade data.

2 Real-Time Data Streaming & Monitoring

Live magnetic data, telemetry, and system health streamed via Starlink, enabling immediate visibility into survey quality and reducing re-flights.

3 In-Flight QA/QC

Continuous monitoring of signal quality, noise, and coverage during acquisition, allowing issues to be identified and corrected in real time.



4 Real-Time Radar Measurement

Continuous radar-based altitude measurement for consistent sensor height above ground.

5 Ultra-High Sensitivity Magnetic Data

Zephyr sensor delivering $<0.003 \text{ nT}/\sqrt{\text{Hz}}$ sensitivity and up to 1000 Hz sampling for detection of subtle geological features.

6 Vector Magnetic Measurements (Bx, By, Bz)

Triaxial magnetic field acquisition enables directional analysis of anomalies, improving structural interpretation, target discrimination, and inversion accuracy.

7 Low-Altitude Precision Surveying

Stable, RTK-enabled platform capable of precision drape flight, maximizing anomaly resolution and data fidelity.

8 Extended Coverage & Efficiency

Up to 90-minute endurance with efficient cruise speeds, enabling more line-kilometers per flight and reduced operational costs.

9 Unlimited Communication Range

Starlink-enabled telemetry supports beyond-line-of-sight operations in remote and infrastructure-limited regions.

Technical Specifications (Recon Lite)

Operating Specifications

Maximum Speed	20 m/s
Cruise Speed	10-14 m/s
Maximum Payload Capacity	7 Kg
Maximum Endurance	90min @ 0Kg / 70min @ 1.5Kg
Typical Expected Range	27 - 41 Inline Km
Maximum Wind Speed	12 sustained, 18 m/s gusts
Allowable Temperature Range	-30 to + 45
Maximum Takeoff Weight	24 kg
Maximum Flight Altitude	6500m

Controls & Communication

Radio Frequency	2.4 Ghz & 5.8 Ghz
Communication Range	30km RC, Unlimited telem range
Radio Type	RC, Starlink
ADSB	Enabled at all times
DGPS	Dual RTK / PPM
Positioning Accuracy	0.01m + 1 ppm CEP
Flight Operation	Fully Autonomous Operation, Manually Piloted Operation
Data Transmitted	Radio Control Link, Full Telemetry, Camera HD Video, satellite GPS beacon tracked

Electronics & Ground Control

Autopilot	Pixhawk-based (firmware locked)
Flight Controller Power System	Dual redundant power system, 5v
Ground Control Software	Mission Planner
Ground Control Hardware	Windows 11 based Ground Station

Electric Power System

Power system	High power density batteries
Voltage monitoring	Enabled
Reserve Battery Time	15 minutes
Battery Type	80ah

Size Specifications

Size Fully Expanded	1500*1500*500mm
Size Fully Collapsed	700*700*300mm
UAV Type	Quad Rotor
Propeller Size	30 in

Supported Payload

Lidar	Greenvallley LiAir X3H
Magnetometer	Geometrics MagArrow, GEM Systems GSMP-35U

Technical Specifications (Zephyr Mag)

Physical & Electrical

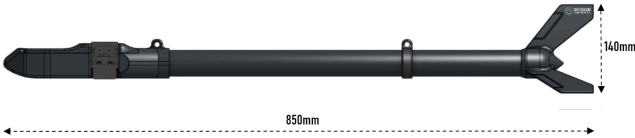
Dimensions	850mm x 160mm x 140mm
Weight	700g
Operating Voltage	+9 - 15 VDC (non-magnetic 3S LiPo recommended)
Average Power Consumption	4 W @ 11 V
Peak Power Consumption	5.5 W @ 11 V
Construction	Polycarbonate
Battery Life	6 hours

Sensor Head

Measurement	Scalar (total field) + three axis vector magnetic field
Sensitivity	Scalar: < 0.003 nT / $\sqrt{\text{Hz}}$ Vector: < 0.1 nT/ $\sqrt{\text{Hz}}$
Dynamic Range	1000 - 150,000 nT typ.
Heading Error	< 3nT uncompensated
Dead Zone	< $\pm 7^\circ$ cone (Triaxial only)
Max Gradient Field	300 nT/cm
Output Data Rate	Scalar: ≤ 1000 Hz Triaxial: ≤ 250 Hz
Operating Temperature	-15 $^\circ\text{C}$ to +55 $^\circ\text{C}$

Integrated Modules

Wireless Controller	Bluetooth and wifi enabled micro controller
GNSS	u-blox NEO-M9N
GPS Antenna	SRFG017-100
IMU Sensor	9 -axis accell/gyro/mag/temp: TDK InvenSense ICM-20948



*Specifications are preliminary and subject to change. Performance metrics are estimates based on pre-production systems and may vary with payload and operating conditions. Aircraft design, configuration, and appearance may differ from final production models.