DRONE MAGNETOMETER SOLUTIONS

High-Resolution Aeromagnetic Intelligence — Engineered for Exploration

Identify magnetic anomalies, basement structures, and mineralised zones across difficult terrain in a fraction of the time of ground-based methods — with the spatial fidelity your exploration team needs to convert targets into drill programmes.

Why operators switch to drone magnetometer solutions

Ground magnetic traverses in steep or vegetated terrain are slow, dangerous, and inconsistent — crews average 3–6 km/day with variable line-spacing. Helicopter-borne surveys are fast but costly, with long mobilisation windows and coarse resolution (sensor clearance is typically 30–60 m above terrain). Flybi's drone-based UAV magnetometer platform drapes the sensor 2–4 m above surface at tight line spacing, producing survey-grade data at exploration-grade turnaround.

Our three-tier solution stack

1. Reconnaissance Mapping

Broad-spectrum magnetic mapping across tenements and green-field blocks. Ideal for first-pass target generation and lease due-diligence.

2. Targeted Anomaly Definition

High-density acquisition over known anomalies. Drill-ready interpretation with depth-to-source modelling and structural overlays.

3. Brownfield Mine Support

Recurring surveys across operating mines to track mineralisation vectors, fault mapping, and near-mine exploration upside.

Platform specifications

Sensor	Optically-pumped caesium vapour (0.001 nT sensitivity)
UAV platform	Multi-rotor & VTOL; terrain-following guidance
Typical drape height	2–4 m AGL (ground survey equivalent fidelity)
Line spacing	5–25 m configurable to target size
Daily coverage	40–120 line-km (terrain-dependent)
Positioning	PPK GNSS + IMU (centimetre-grade)
Deliverables	TMI, RTP, analytic signal, 1VD, Euler depth, structural maps
Turnaround	Field to first-pass deliverable in 10–14 working days

> *"Drone magnetometer acquisition compresses a 6-week ground campaign into 8–10 operational days — without trading off resolution. For exploration teams under a quarterly drill-decision clock, that compression is the entire commercial case."*

WHERE WE DEPLOY

Sectors, geographies & commercial terms

Flybi operates across India and select international markets with a bias toward commodity-critical and infrastructure-adjacent mineral plays.

Mineral systems	Geographies
• Iron ore & manganese (banded iron formations) • Base metals — Cu, Pb, Zn, Ni • Gold (structural / orogenic) • Critical minerals — REE, Li pegmatites, graphite • Diamond (kimberlite / lamproite) • Basement and structural mapping at depth	• India — Karnataka, Odisha, Jharkhand, Chhattisgarh, Rajasthan, Andhra Pradesh • East Africa — Uganda (active) • West & Southern Africa — on request • Pacific & LatAm — via partner network • All programmes operated under local regulatory permissions

How a Flybi drone magnetometer solution runs

01	Scoping & Solution Design	Target definition, terrain and airspace review, line-spacing design, deliverable specification.
02	Permits & Mobilisation	DGCA permissions, state-level clearances, safety briefings, base-camp and crew mobilisation.
03	Field Acquisition	Terrain-draped UAV flights, sensor calibration, base-station logging, daily QA/QC.
04	Data Processing	Diurnal correction, heading correction, levelling, gridding, TMI→RTP→AS→1VD derivatives.
05	Interpretation & Delivery	Structural interpretation, depth modelling, target ranking, written report + GIS-ready datasets.

Commercial terms

Pricing model	Per line-kilometre for mapping; lump-sum for defined-area programmes; retainer + call-off for multi-site brownfield engagements.
Minimum engagement	No minimum for scoping. Field deployment from 50 line-km.
Data ownership	100% client-owned raw and processed data. Flybi retains no derivative rights beyond anonymised technical case studies (opt-in).
Confidentiality	Standard NDA issued at scoping stage. Dedicated secure transfer channel for deliverables.

Request a solution brief for your programme

30-minute scoping call — no obligation. We respond within 1 business day.

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