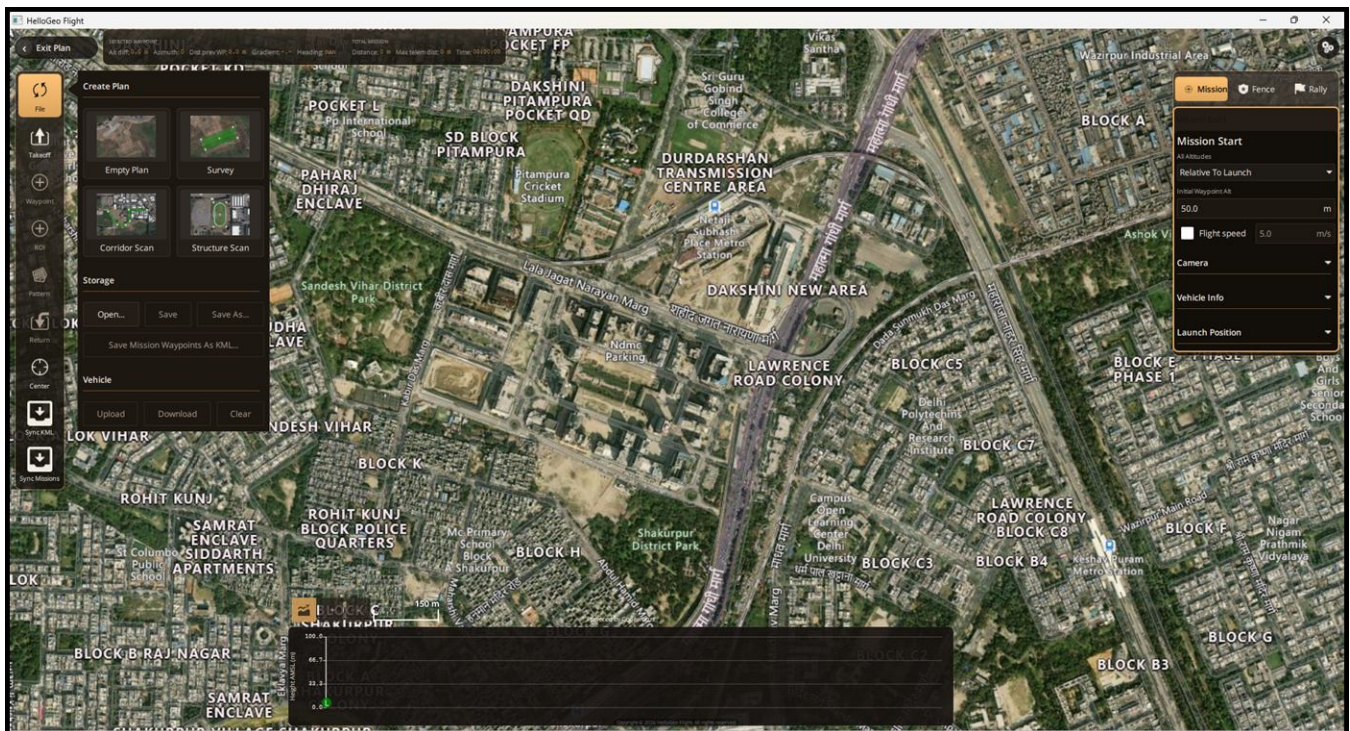




HELLOGEO FLIGHT PRODUCT PUBLICATION

HelloGeo Flight Complete Guide

The combined operator handbook and user guide: quick start, field workflows, system architecture and technical reference in one publication.



PLAN
Mission-ready

FLY
Live control

ANALYZE
Post-flight insight

Combined edition 1.0 / App baseline 1.0.0 | Pilots, survey teams, administrators and support engineers |
Published 30 August 2026

Say hello to every coordinate. [Google Play](#) | support@hellogeo.world

HOW TO USE THIS BOOK

One book, three reading paths

Start with the route that matches your role; each path ends at the same support and evidence standard.

Download HelloGeo Flight

Android package: com.hellogeo.gcs

[Open the official Google Play listing](#)

Need help? support@hellogeo.world



SCAN TO DOWNLOAD

READING PATH	RECOMMENDED FOCUS
Field operator	Read pages in Part I: download, readiness, Fly View, connection, planning, execution and post-flight.
Administrator	Add account, deployment, version-control and release-readiness sections.
Engineering / support	Use Part II for architecture, technology, source ownership, diagnostics and escalation evidence.

RULE

Single operational rule: Do not let a polished interface replace positive verification. Confirm the aircraft, the command and the resulting state before moving to the next action.

PART I / FIELD OPERATIONS

Product and safety baseline

HelloGeo Flight unifies mission planning, live flight awareness, safety boundaries and post-flight diagnostics.

The application supports Android and Windows workflows around a MAVLink-connected aircraft. Operators can prepare plans offline, but a live connection is required to upload a mission, use vehicle actions, read telemetry or access vehicle logs.

PLAN Waypoint + complex missions	FLY Map + live telemetry	PROTECT Fence + rally
ANALYZE Logs + diagnostics	ACCOUNT Identity + linking	SUPPORT Evidence-led escalation
ALWAYS CONFIRM	MINIMUM EVIDENCE	
Correct vehicle	Identity, controller/link and map position	
Safe mission	Route, altitude, energy, terrain, GeoFence and recovery plan	
Flight readiness	Home point, health, battery, payload and controlled operating area	
Recovery readiness	Return route, landing site, rally options and operator communication	

SAFETY	Compliance: Use trained personnel and follow the aircraft manual, organizational procedures, permissions and applicable local aviation rules.
---------------	--

Download and first launch

Use the official listing; record the app and aircraft baseline before field deployment.

Download HelloGeo Flight

Android package: com.hellogeo.gcs

[Open the official Google Play listing](#)

Need help? support@hellogeo.world



SCAN TO DOWNLOAD

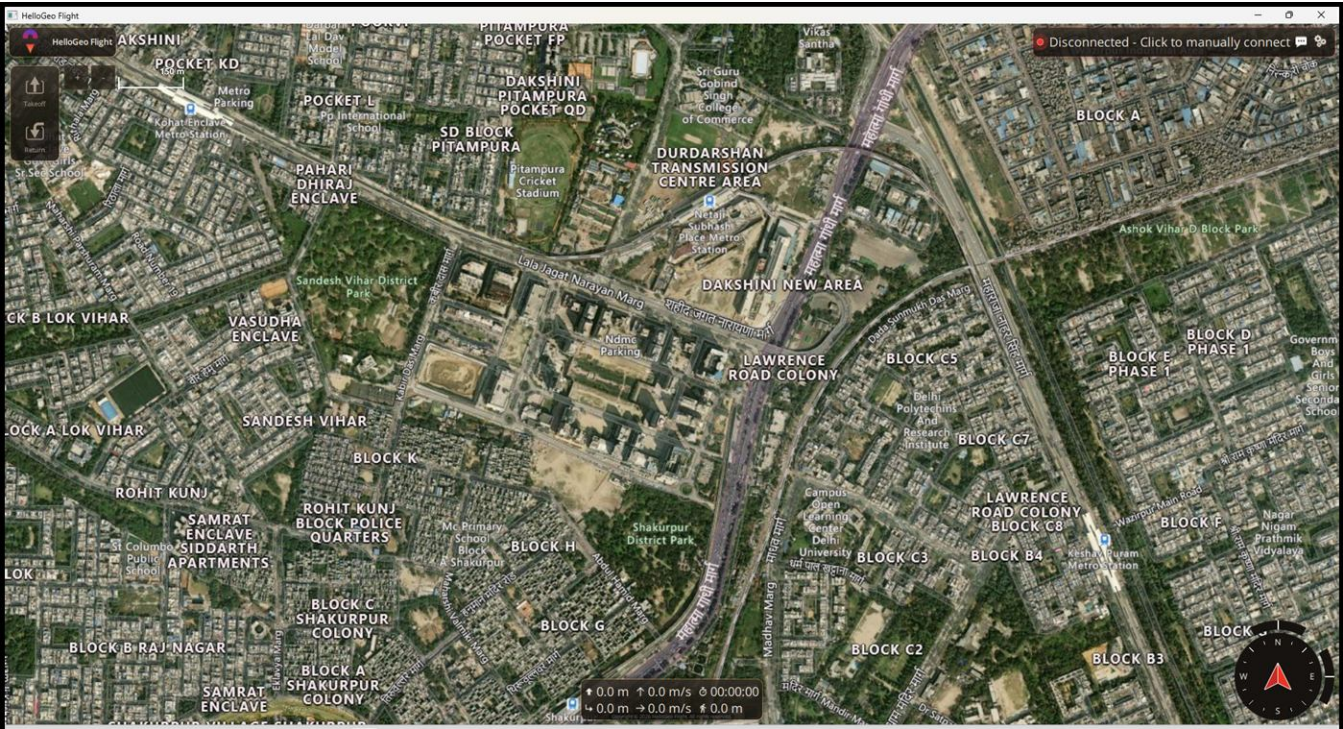
- 1. **Install** — Open the Google Play listing, confirm HelloGeo Flight and install the current compatible build.
- 2. **Review permissions** — Allow only what the approved connection, location and file workflow requires.
- 3. **Open offline** — Explore Plan Flight, Fence, Rally and Analyze Tools without an aircraft.
- 4. **Authenticate** — Log in or activate the product when required by the organization.
- 5. **Record** — Note app version, device/OS, controller, aircraft/autopilot and firmware baseline.

REFERENCE	VALUE
App ID	com.hellogeo.gcs
Android	Google Play / signed managed package
Windows	Controlled Qt deployment package
Support	support@hellogeo.world

02 / ORIENTATION

Fly View

The live map is the operating canvas; connection, controls, telemetry and orientation remain visible around it.



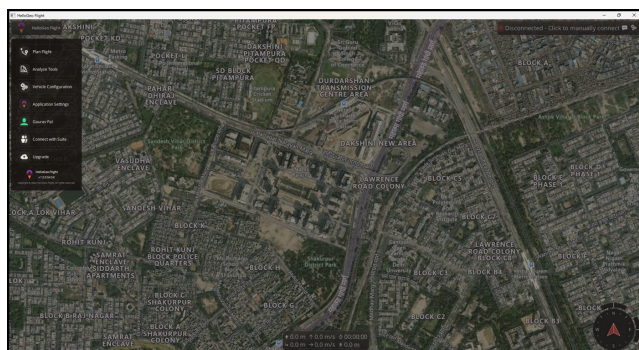
HelloGeo Flight Fly View shown offline.

ZONE	PURPOSE
Logo / menu	Move between Fly, Plan, Analyze, configuration, settings and account.
Connection	Confirm whether a vehicle session is active.
Flight actions	Use available guided actions for the current vehicle state.
Telemetry	Read altitude, speed, time and distance.
Compass	Read heading and orientation context.
Scale / zoom	Maintain distance awareness while navigating the map.

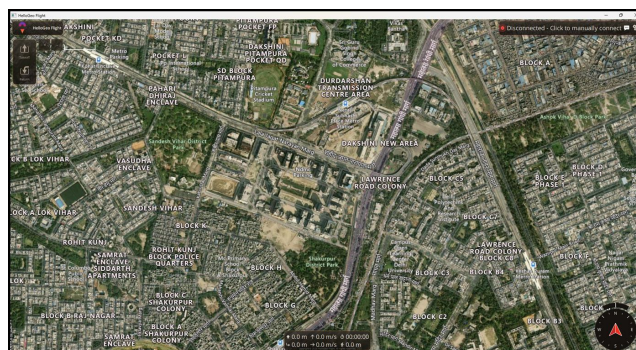
03 / CONNECT

Main menu and connection

Open the menu from the logo, then connect only to the intended aircraft using the approved profile.



Main navigation



Disconnected Fly View

6. **Prepare** — Power aircraft/controller in a safe setup; keep the aircraft disarmed.
7. **Connect** — Use the status banner or approved automatic workflow and the correct link profile.
8. **Identify** — Confirm aircraft map position, home point and heading.
9. **Validate** — Wait for stable battery, sensor, health and telemetry data.
10. **Proceed** — Open the reviewed mission only after the correct live session is clear.

MODE

Offline mode: Disconnected is acceptable for planning. It is not acceptable for mission upload, live flight actions, telemetry or vehicle-log retrieval.

04 / CHECK

Pre-flight readiness

Use a consistent checklist and make a clear go/no-go decision.

AREA	READY CONDITION	STOP IF
Site	Controlled area; obstacles, weather, people and airspace assessed	The recovery area or authority is uncertain
Aircraft	Airframe, propellers, payload and antennas are secure	Damage, looseness or heat is found
Energy	Batteries cover mission plus return reserve	Power margin or battery health is unclear
Position	GNSS/map position and home point are credible	Position jumps or home is missing
Health	No unresolved critical warning	Sensor/arming alert remains active
Mission	Route, altitude, terrain, speed and payload behavior reviewed	Any item or unit is ambiguous
Recovery	GeoFence, RTL/rally and landing plan confirmed	Alternate action cannot be executed safely

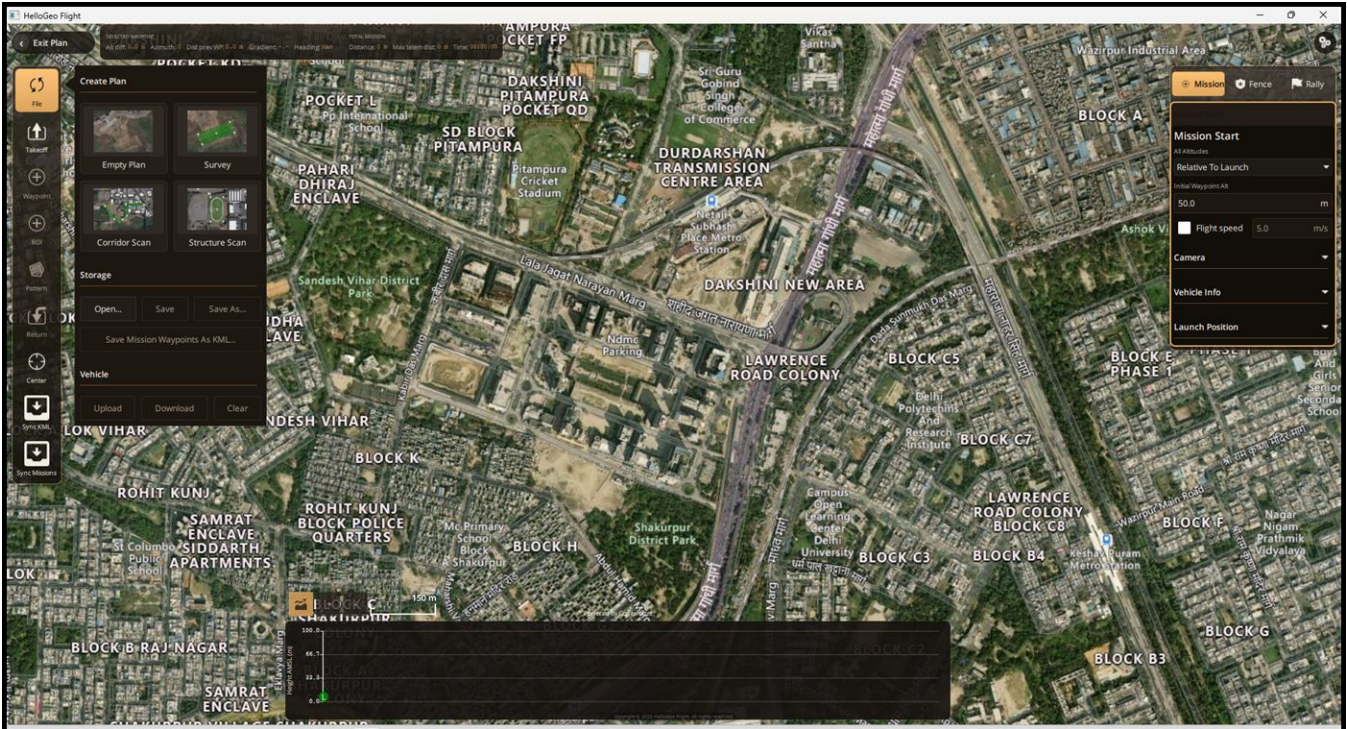
BRIEF

Final briefing: Name the pilot, observer, launch point, mission, expected duration, return trigger, emergency action and data owner before arming.

05 / MISSION

Choose a mission type

Match the plan to the asset and deliverable instead of adding unnecessary complexity.



Plan View with Empty, Survey, Corridor and Structure choices.

MISSION	BEST USE
Empty Plan	Manual waypoint sequence or a small custom route.
Survey	Repeated parallel coverage across a defined area.
Corridor Scan	Linear assets such as roads, pipelines, coastlines or transmission routes.
Structure Scan	Multi-angle coverage around a structure.

06 / PLAN WORKFLOW

Build, verify and synchronize

Review the plan on the map and in the item editor before it reaches the aircraft.

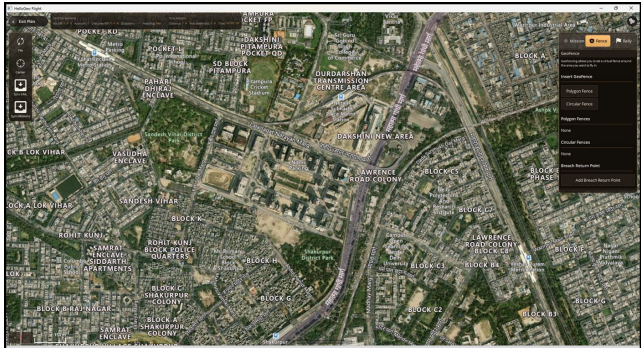
11. **Create** — Place takeoff/return, waypoints, ROI or pattern items.
12. **Configure** — Set altitude reference, initial waypoint altitude, speed and item actions.
13. **Inspect** — Select each item; review route, statistics and terrain profile.
14. **Save** — Save locally and export KML when the project requires an external reference.
15. **Connect and recheck** — Confirm the intended aircraft, units, home point and recovery plan.
16. **Upload** — Send the plan, verify acceptance and compare the aircraft plan if the workflow requires a download check.

CONTROL	MEANING
Save / Save As	Retain an editable local plan.
Upload	Send the current plan to the connected aircraft.
Download	Retrieve the aircraft's current plan.
Clear	Remove the plan currently being edited.
KML	Import/synchronize context or export mission waypoints as required.

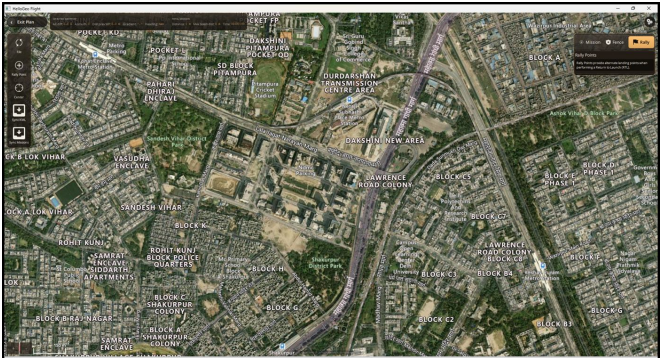
07 / SAFEGUARDS

GeoFence and rally recovery

Build boundary and recovery decisions into the plan, then confirm them at the real site.



Polygon / circular GeoFence



Rally point planning

FEATURE	SET	CHECK
Polygon	Custom boundary using editable corners	Complete shape and inclusion/exclusion intent
Circle	Center and radius	Units, radius and map scale
Breach return	Approved return reference when supported	Clear route and safe destination
Rally	Alternate return/landing reference	Physical site and approach suitability

FIELD

Field verification: Satellite imagery may be old or incomplete. Confirm obstacles, surface, access, people and temporary activity on site.

Execute and monitor the mission

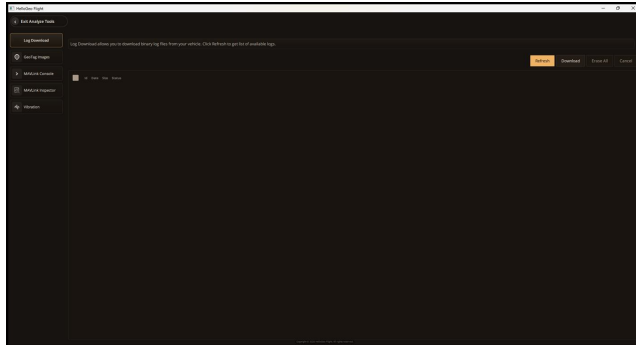
Run a continuous scan of position, intent, energy, link, payload and recovery margin.

PHASE	READ	ACT
Arm / takeoff	State, area, climb, link, altitude and position	Stop if actual behavior differs from the approved procedure
En route	Mission progress, map, speed, altitude and heading	Confirm each segment remains sensible
Survey	Coverage path, payload and battery trend	Protect data quality without consuming recovery reserve
Return	RTL/rally choice, route, descent and landing area	Keep recovery area controlled
After land	Disarm, aircraft condition, logs and media	Record anomalies before another flight

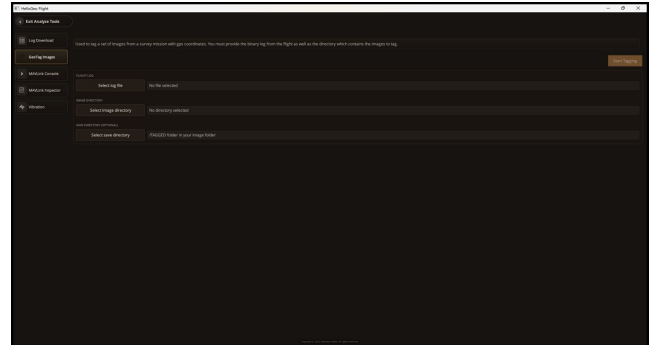
ACTION	Uncertain state: Stop non-essential commands and follow the aircraft-approved hold, pause, Return-to-Launch or landing procedure.
--------	--

Post-flight evidence

Download logs, preserve originals and create traceable geotagged copies for processing.



Vehicle log list and download actions



Flight log + image folder -> tagged output

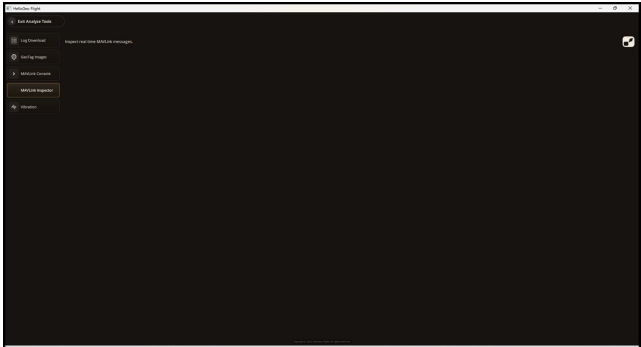
17. **Secure the flight** — Disarm, power down under the approved procedure and note any anomaly.
18. **Download logs** — Refresh, select the required flight and save the log using the project convention.
19. **Preserve media** — Copy the original photo/video set before processing.
20. **Geotag** — Select the matching log, image folder and output folder; run and verify completion.
21. **Register** — Store plan, log, media, tagged output and operator notes under the same mission identifier.

Analyze and diagnose

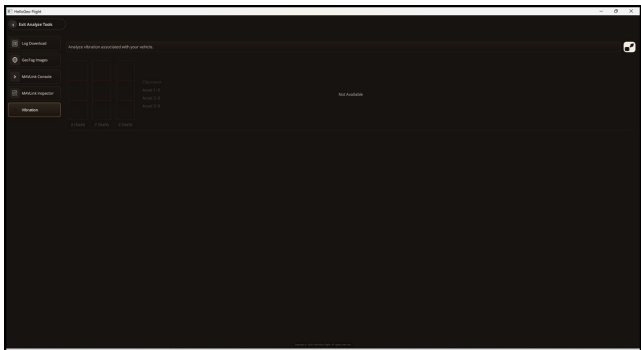
Use evidence-led tools; reserve the console for approved technical commands.



MAVLink Console



MAVLink Inspector

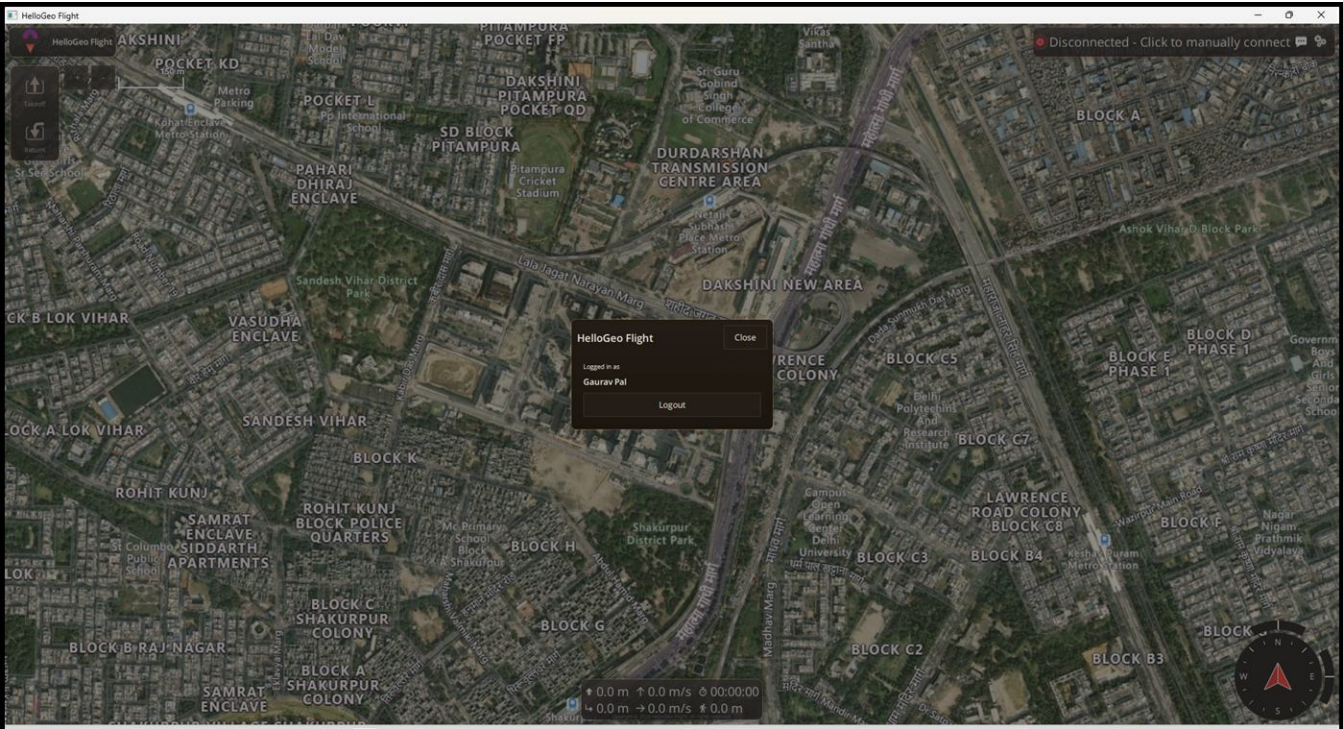


Vibration

TOOL	PURPOSE	CAUTION
Log Download	Retrieve vehicle flight logs	Retain required evidence before erasing
GeoTag	Apply log-derived coordinates to survey-image copies	Use the matching flight and preserve originals
Console	Access the vehicle system shell	Approved commands only
Inspector	Read messages, fields, rates and live plots	Interpret in vehicle/firmware context
Vibration	Review axes and clip counters	Investigate threshold crossings before reuse

Account and ecosystem

Identity, entitlement and project context should remain visible and intentional.



Account panel within HelloGeo Flight.

ACCOUNT ACTION	USE
Login / sign-up	Authenticate the operator where required.
Verification	Complete the enabled email/OTP process.
License	Activate the approved entitlement for the deployment.
Connect with Suite	Link compatible HelloGeo products in the correct organization/project context.
Logout	Remove the active account before transferring a shared device.

ACCESS	Data boundary: Do not move plans, logs or media across client/project contexts unless the organization has approved the transfer.
--------	--

PART II / TECHNICAL REFERENCE

System architecture

Functional modules keep vehicle, mission, communications, settings and analysis responsibilities clear.

VEHICLE State + health		COMMS Link transport	MISSION Plan + safety
UI Fly + Plan		ANALYZE Logs + diagnostics	API Brand + plugins
MODULE	RESPONSIBILITY	PRIMARY AREA	
UI	Application shell, tool drawer, messages and dialogs	src/UI	
FlightDisplay	Fly View, map overlays and guided actions	src/FlightDisplay	
QmlControls	Shared components, Plan View, fence and rally editors	src/QmlControls	
MissionManager	Mission, complex items, fence and rally controllers	src/MissionManager	
Vehicle / Comms	Vehicle state, links and telemetry transport	src/Vehicle + src/Comms	
AnalyzeView	Logs, geotag, console, inspector and vibration	src/AnalyzeView	

Technology and communication

The 1.0.0 baseline uses Qt 6, C++17, QML and MAVLink with platform-specific packaging.

LAYER	BASELINE	ROLE
UI	QML / Qt Quick Controls 2	Screen composition and shared interface components
Logic	C++17 / Qt 6.8.3	Vehicle, mission, settings and connection back ends
Protocol	MAVLink	Vehicle messages, commands and telemetry
Build	CMake 3.25+ / Ninja	Cross-platform configuration and modules
Android	Gradle + androiddeployqt	APK/AAB packaging and signing
Windows	MSVC 2022 + windeployqt6	Executable build and Qt/QML runtime deployment
Maps	Qt Location / custom tile plugin	Map context and location services

LINK	PURPOSE
UDP / TCP	IP network transports used by approved vehicle/controller integrations.
Serial	Direct serial transport for compatible configurations.
Bluetooth	Supported wireless serial-style connection when approved.
Log replay	Offline playback path for recorded telemetry analysis.

13 / DEPLOY

Distribution and update control

A field build is complete only after identity, install, connection, mission and evidence gates pass.

AREA	CONTROLLED REQUIREMENT
Android	Build the android_arm64_v8a target, package APK/AAB, verify signing and test clean install/update.
Windows	Configure in an MSVC x64 environment, build with Ninja and deploy required Qt DLL/QML modules.
Secrets	Keep signing keystores/passwords outside version control and approved release packages.
Version	Update product identity and release notes; record compatible device, OS and aircraft baselines.

RELEASE GATE	PASS EVIDENCE
Install	Clean install and update on supported target
Link	Connection and controlled reconnect
Map / UI	Tiles, layout, scaling and orientation
Mission	Create/save/open/upload/download round-trip
Safety	Fence/rally/return visibility and persistence
Analyze	Log, GeoTag and diagnostic page availability

Warm Command interface system

Operational hierarchy is consistent across Fly View, Plan View, Analyze pages and dialogs.

171310	F0B366	F3ECE3	241D17	1C1611
Window	Amber	Text	Card top	Card base
PATTERN	USE			
Floating HUDFrame	Telemetry, toolbars, mission panels and map controls without obscuring context			
Pill tabs	Mission / Fence / Rally and Analyze tool selection			
Content-sized cards	Keep forms compact while preserving the map			
Shared dialogs	Consistent account, confirmation and settings interaction			
Brand separation	HelloGeo gradient for identity; warm amber for operational state			

Engineering ownership map

Route defects to the functional domain that owns the behavior.

AREA	PATH	TYPICAL ISSUE
Startup	src/main.cc	Initialization and platform diagnostics
Shell	src/UI/MainWindow.qml	Navigation, dialogs and global messages
Fly	src/FlightDisplay/	Toolbar, map overlays and live actions
Plan	src/QmlControls/PlanView.qml	Mission editor, fence, rally and terrain
Analyze	src/AnalyzeView/	Logs, geotag, console, inspector and vibration
Vehicle	src/Vehicle/	State, health and arming information
Communications	src/Comms/	UDP/TCP/Serial/Bluetooth/replay
Identity	resources/ + cmake/CustomOptions.cmake	Logo, name, package and version

TRIAGE

Triage rule: Start from the visible symptom, reproduce it with a known baseline, capture the exact state and logs, then assign ownership. Avoid diagnosing from a cropped screenshot alone.

Troubleshooting and escalation

A complete evidence package turns a field report into an actionable engineering issue.

SYMPTOM	FIRST CHECK	EVIDENCE
Disconnected	Power, approved link, endpoint and controller/network	Full screen, link profile, device and time
No map	Internet, tile source, location permission and region	Map setting, network, OS and app version
Upload fails	Correct vehicle, item validity, state and stable link	Plan, firmware and exact error
Stale data	Message rate, selected vehicle and sensor health	Inspector capture and timestamps
Log missing	Connection, vehicle list and storage state	Flight time, vehicle and log-list capture
Layout defect	Resolution, scaling, orientation and clean restart	Full uncropped screen and device model

Official download and support

Android package: com.hellogeo.gcs

[Open the official Google Play listing](#)

Need help? support@hellogeo.world



SCAN TO DOWNLOAD

SECURE

Do not send secrets: Never include passwords, private keys, signing credentials or unrelated client data in a support request.

Quick reference and glossary

Use consistent terms in mission briefings, logs and support requests.

TERM	MEANING
GCS	Ground Control Station; the application used to plan, monitor and manage the vehicle session.
MAVLink	Message protocol used for vehicle commands and telemetry.
Home point	Primary return reference established for the flight.
RTL	Return to Launch; behavior is determined by aircraft configuration and mission state.
GeoFence	Virtual inclusion or exclusion boundary in the mission plan.
Rally point	Alternate recovery/return reference when supported.
ROI	Region of Interest used to direct payload attention.
KML	Geospatial file format used for compatible map or mission exchange.
Geotagging	Writing location information to image copies using a matching flight log.

HelloGeo Flight — keep this reference current

Android package: com.hellogeo.gcs

[Open the official Google Play listing](#)

Need help? support@hellogeo.world



SCAN TO DOWNLOAD