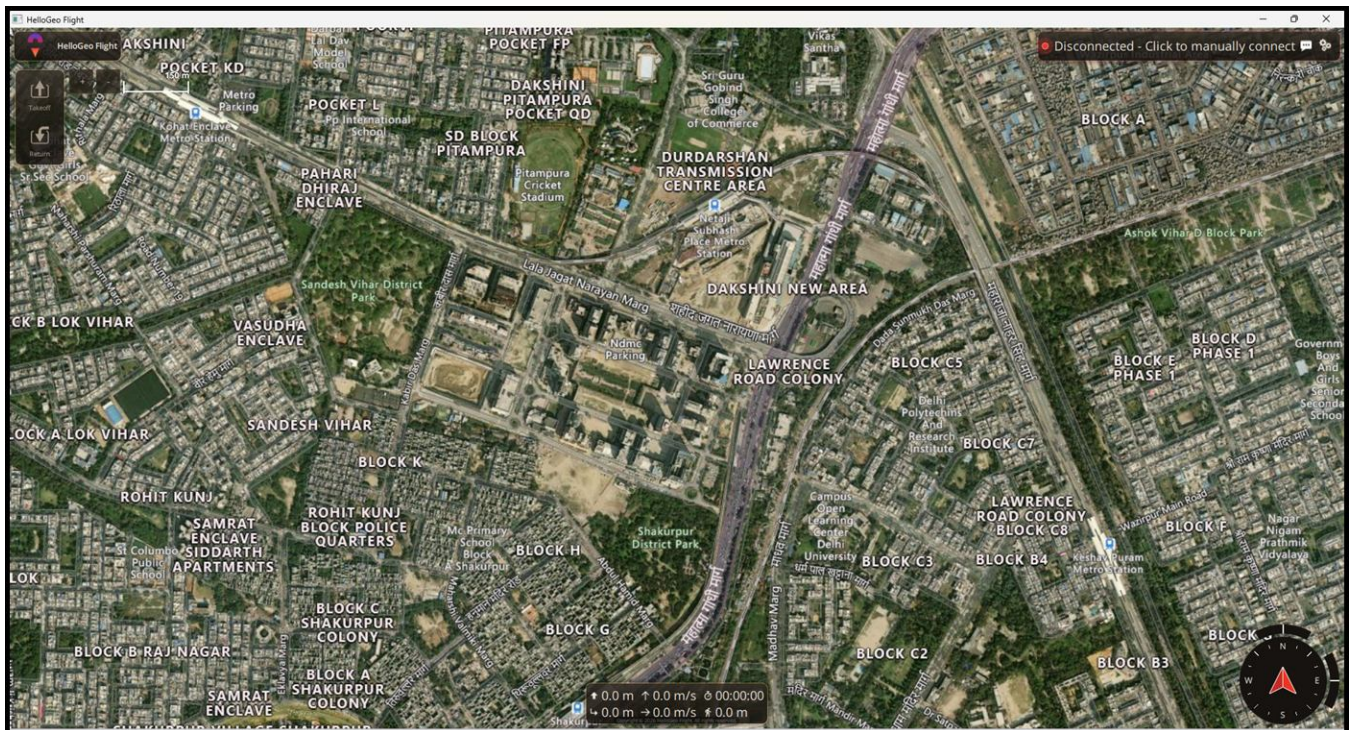




HELLOGEO FLIGHT PRODUCT PUBLICATION

HelloGeo Flight Handbook

A clear product, operations and engineering reference for the HelloGeo ground control station.



PLAN
Mission-ready

FLY
Live control

ANALYZE
Post-flight insight

Edition 1.0 / App baseline 1.0.0 | Operators, administrators and engineering teams | Published 30 August 2026
Say hello to every coordinate. [Google Play](#) | support@hellogeo.world

START HERE

Publication guide

Use this handbook as the controlled reference for product capability, operational setup, release preparation and technical support.

Download HelloGeo Flight

Android package: com.hellogeo.gcs

[Open the official Google Play listing](#)

Need help? support@hellogeo.world



SCAN TO DOWNLOAD

CONTROL	CURRENT PUBLICATION VALUE
Document ID	HGF-HBK-1.0
Product	HelloGeo Flight ground control station
Application ID	com.hellogeo.gcs
Baseline	App version 1.0.0; always check Google Play for the latest available build
Owner	HelloGeo Technologies Private Limited

SAFETY

Operational authority: This handbook supports trained operators. It does not replace the aircraft manual, approved operating procedures, airspace permissions or applicable local aviation rules.

01 / PRODUCT

Product at a glance

One interface for planning, live flight awareness, safety boundaries and post-flight diagnostics.

HelloGeo Flight is the desktop and Android ground control station for the HelloGeo drone platform. It combines a MAVLink-based vehicle connection, mission planning, GeoFence and rally management, live telemetry, log handling and survey-image geotagging in one session.

PLATFORM Android + Windows		FRAMEWORK Qt 6 / QGroundControl	PROTOCOL MAVLink
AREA	WHAT IT PROVIDES		
Plan	Build waypoint, survey, corridor and structure-scan missions; save, import, export, upload and download plans.		
Fly	Monitor connection state, map position, heading, altitude, speed, flight time, distance and guided actions.		
Protect	Define polygon/circular GeoFences, breach-return behavior and alternate rally locations.		
Analyze	Download logs, geotag images, inspect MAVLink messages, use the system console and review vibration.		
Connect	Sign in to a HelloGeo account and link compatible HelloGeo products where enabled.		

MODE	Offline planning: Mission planning, GeoFence creation and rally-point preparation remain available without a live aircraft. A connection is required for upload, live telemetry, flight actions and vehicle data.
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Operating architecture

The application keeps vehicle control, map context, mission data and post-flight evidence within one operator workflow.

1 / AIRCRAFT PX4 or ArduPilot		2 / LINK UDP, TCP, Serial, BT	3 / FLIGHT Plan, fly, analyze
4 / DATA Telemetry, video, logs		5 / OUTPUT Mission + tagged imagery	6 / ECOSYSTEM HelloGeo account / Suite
LAYER	PRIMARY RESPONSIBILITY	OPERATOR CHECK	
Vehicle	Autopilot state, sensors, arming checks, camera/gimbal and payload availability.	Confirm firmware, health and home position.	
Communications	Transport and MAVLink traffic between aircraft/controller and the application.	Verify stable link and expected update rate.	
Mission	Waypoints, complex items, altitude, speed, terrain profile, GeoFence and rally logic.	Review route, clearance and return behavior.	
Interface	Map, telemetry, guided actions, alerts and editable mission panels.	Keep the correct vehicle and active plan in view.	
Evidence	Logs, geotagged imagery and diagnostic inspection.	Retain files using the project naming standard.	

RULE	Design principle: A control action should always be supported by three visible facts: the connected vehicle, the intended command and the resulting aircraft state.
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Install, activate and update

Use the official app listing for Android distribution and a controlled deployment package for Windows.

Download HelloGeo Flight

Android package: com.hellogeo.gcs

[Open the official Google Play listing](#)

Need help? support@hellogeo.world



SCAN TO DOWNLOAD

- 1. **Install from Google Play** — Open the listing, verify the HelloGeo Flight identity and install the latest compatible Android build.
- 2. **Open and review permissions** — Allow only the location, storage, network or device access required by the connected workflow.
- 3. **Sign in** — Use the HelloGeo account flow when licensing or cross-product linking is enabled.
- 4. **Confirm the baseline** — Record app version, aircraft firmware, controller type and project before field use.

CHANNEL	DEPLOYMENT NOTE
Android	Signed APK for managed/direct deployment or AAB for store distribution. Package ID: com.hellogeo.gcs.
Windows	Qt 6 / MSVC build deployed with required DLLs and QML modules using windeployqt6.
Update control	Validate connectivity, mission round-trip, map loading, telemetry and log access before releasing a new field build.

04 / READINESS

Connect and prepare the aircraft

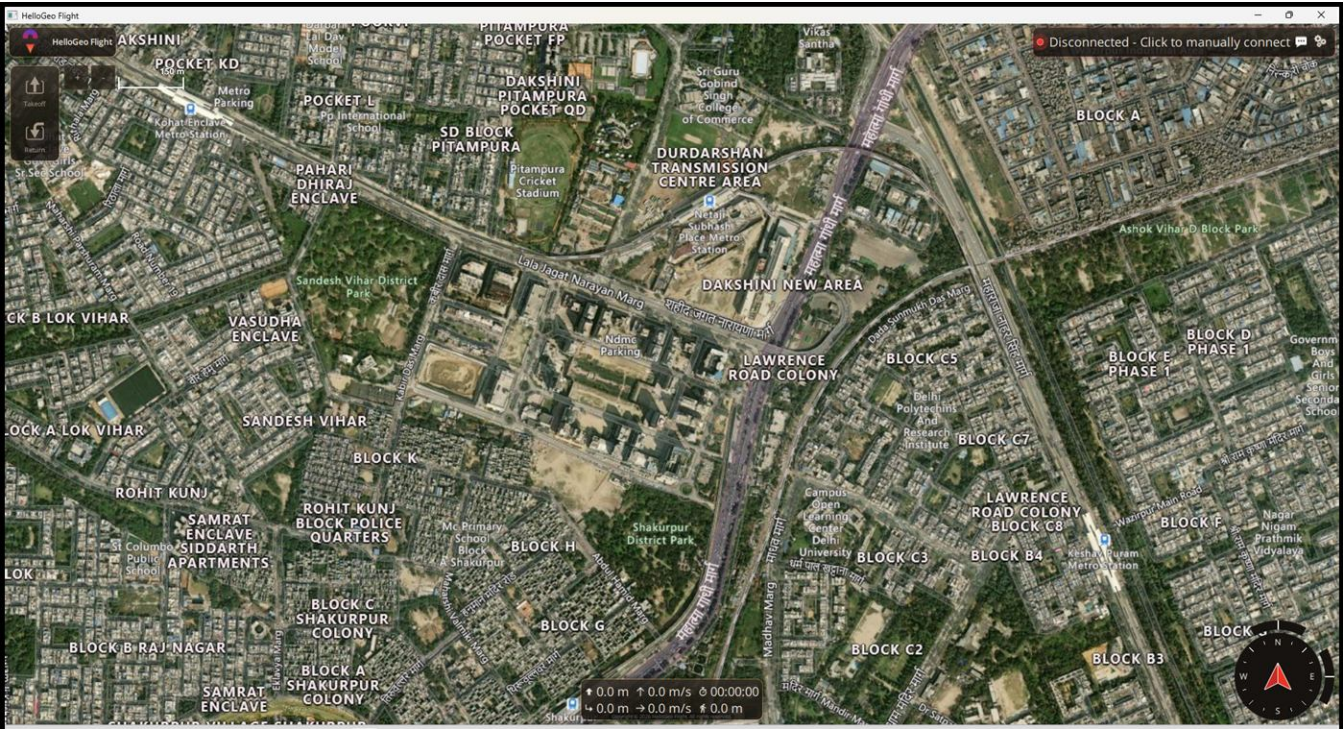
A deliberate connection sequence prevents the most common setup errors.

5. **Power and position** — Prepare the aircraft and controller in a safe area; keep propellers disarmed while configuring.
6. **Open HelloGeo Flight** — Confirm the map, selected vehicle context and connection banner.
7. **Choose the link** — Use the approved automatic or manual UDP, TCP, Serial or Bluetooth profile.
8. **Validate the state** — Wait for stable position, home point, battery, sensor and telemetry information.
9. **Review the mission** — Check altitude, route, GeoFence, rally point and Return-to-Launch behavior before upload.

CHECK	READY CONDITION	RECORD IF NOT READY
Link	Connected and updating consistently	Link type, endpoint and error message
GNSS / Home	Position is credible and home point is established	Satellite/fix state and map position
Power	Aircraft/controller batteries meet the mission requirement	Battery level and health warning
Sensors	No unresolved health or arming alert	Exact alert text and affected sensor
Mission	Correct plan is loaded, reviewed and accepted	Plan name, revision and upload result

Fly View reference

The primary flight screen keeps navigation, vehicle state and guided actions visible over the live map.



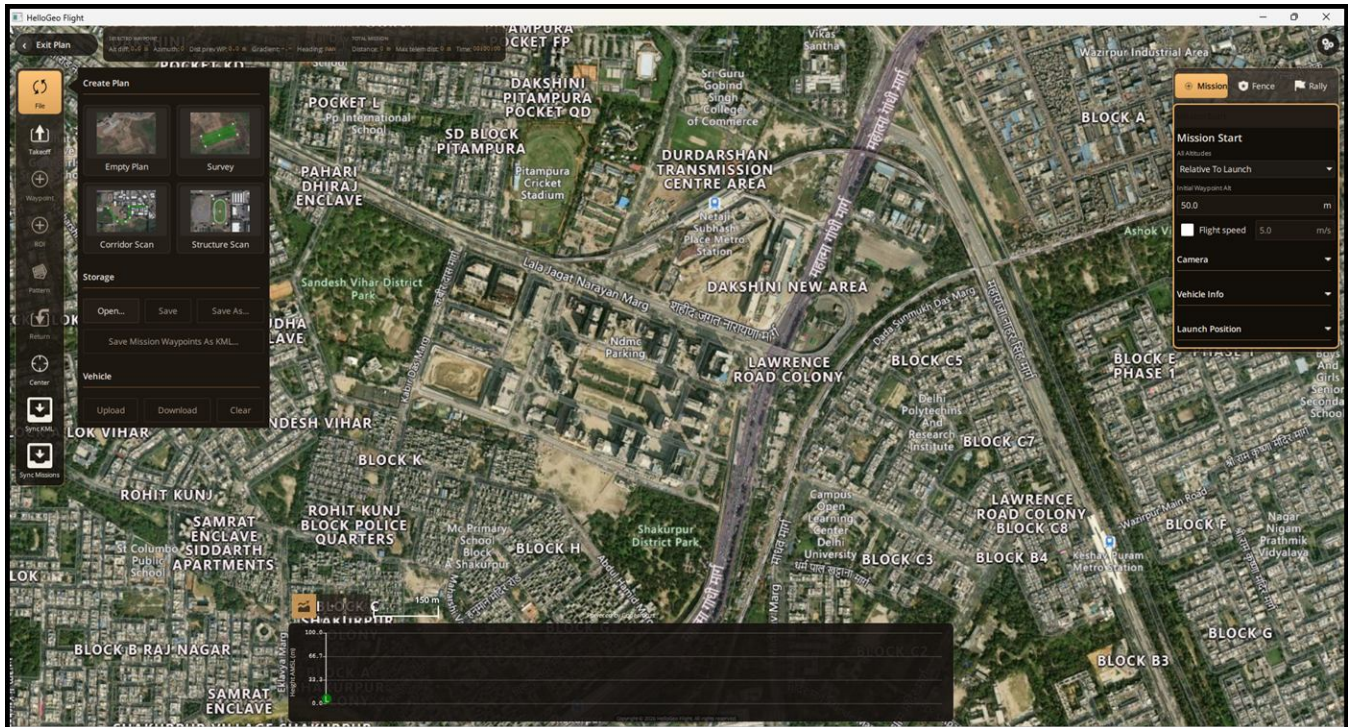
Authentic HelloGeo Flight Fly View shown without a connected vehicle.

ZONE	WHAT TO READ	WHY IT MATTERS
1	Logo / tool menu	Entry point to Plan Flight, Analyze Tools, configuration, settings and account.
2	Connection banner	Confirms whether the application has an active vehicle session.
3	Flight controls	Guided actions such as Takeoff and Return appear according to vehicle state.
4	Telemetry strip	Altitude, speed, flight time and distance update during a live flight.
5	Compass	Shows current vehicle heading and map orientation context.
6	Map scale / zoom	Supports distance judgment without losing the mission area.

06 / PLAN

Mission planning workflow

Create the route offline, validate the mission, then upload only after connecting the intended aircraft.



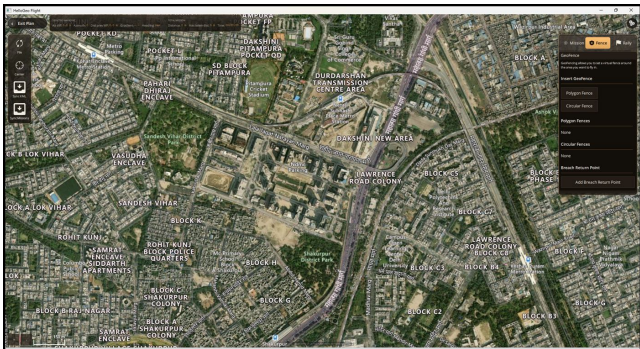
Plan View with the Create Plan panel and mission editor visible.

10. **Select a starting plan** — Choose Empty Plan, Survey, Corridor Scan or Structure Scan.
11. **Place and edit items** — Add takeoff/return points, waypoints, Regions of Interest or a pattern.
12. **Set global behavior** — Review altitude reference, initial waypoint altitude and optional flight speed.
13. **Inspect the route** — Use map scale, terrain profile and mission statistics to check feasibility.
14. **Save and synchronize** — Save locally, export KML if required, then upload to the connected aircraft.

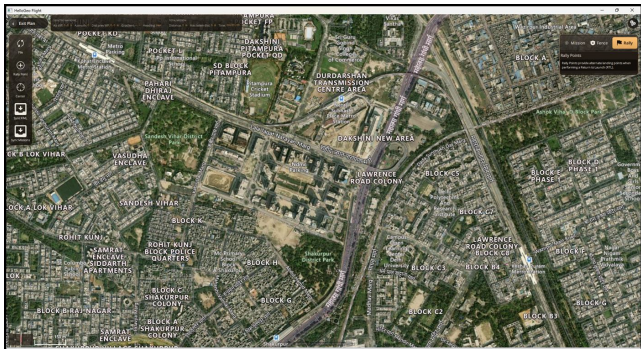
EMPTY Manual waypoints	SURVEY Area grid	CORRIDOR Linear scan	STRUCTURE Multi-angle orbit
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GeoFence and rally safeguards

Define where the aircraft may operate and where it can return if the primary launch location is unsuitable.



GeoFence editor with boundary controls



Rally editor for alternate return locations

FEATURE	CONFIGURATION	VERIFICATION
Polygon fence	Draw and adjust a custom operating boundary.	Confirm every corner and inclusion/exclusion intent.
Circular fence	Set a center and radius for a simple limit.	Confirm the radius unit and map scale.
Breach return	Set the point used after a boundary breach when supported.	Check that the return area is clear and reachable.
Rally point	Place one or more alternate return/landing references.	Inspect obstacle clearance and approach suitability.

CHECK

Final responsibility: The map is an aid. The operator remains responsible for confirming the physical site, obstacles, people, weather, airspace and safe recovery options.

Execute and monitor

Use a phase-based scan so the operator always knows the vehicle state, mission intent and recovery option.

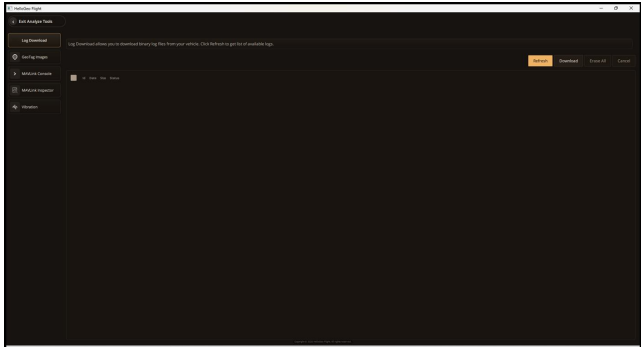
PHASE	PRIMARY SCAN	DECISION CUE
Before arm	Vehicle, home point, mission, fence, battery, payload and area	Do not arm while any critical state is unclear.
Takeoff	Climb behavior, link quality, altitude and position	Hold or return if the aircraft diverges from expectation.
Mission	Route progress, remaining energy, telemetry trend and payload status	Continue only while recovery margin remains adequate.
Return	RTL path, home/rally selection, descent area and obstacles	Take manual action only under the approved procedure.
After land	Disarm state, battery, aircraft condition, logs and media	Quarantine anomalies before the next flight.

TELEMETRY	OPERATOR INTERPRETATION
Altitude	Compare live altitude with mission target and local obstacle clearance.
Speed	Watch for unexpected changes or values inconsistent with the planned segment.
Heading	Confirm the aircraft orientation and movement direction make operational sense.
Flight time	Use elapsed time with battery state to preserve a safe recovery margin.
Distance	Track separation from home, operator and mission area.

ACTION	If control or state is uncertain: Stop non-essential inputs, maintain situational awareness and use the aircraft-approved hold, pause, Return-to-Launch or landing procedure.
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Analyze tools

Use post-flight and diagnostic tools to create traceable evidence and isolate system issues.



Log Download tool

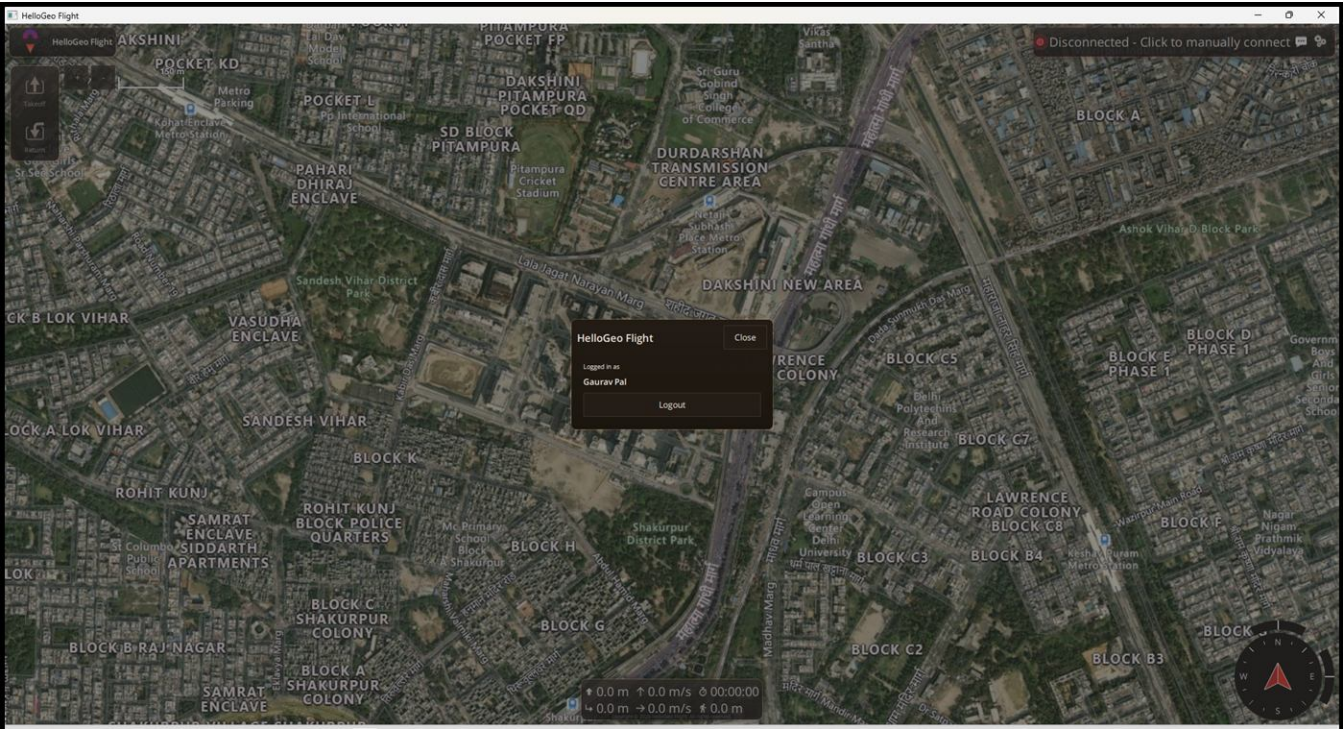


GeoTag Images workflow

TOOL	USE	INPUT / OUTPUT
Log Download	List, select, download or erase vehicle flight logs.	Vehicle connection -> local log files
GeoTag Images	Write GPS coordinates to survey photos using a flight log.	Log + image folder -> tagged copies
MAVLink Console	Run advanced system-shell commands provided by support or firmware documentation.	Live vehicle session -> console output
MAVLink Inspector	Read live message fields and update rates; chart selected values.	MAVLink stream -> fields and plots
Vibration	Review X/Y/Z vibration and accelerometer clip counts.	Live sensor messages -> thresholds

Account and HelloGeo ecosystem

The account dialog provides sign-in, verification, licensing and compatible cross-product linking in one place.



HelloGeo Flight account panel shown within the authentic application interface.

- 15. **Authenticate** — Log in or create an account using the enabled verification flow.
- 16. **Activate** — Apply the product license or entitlement when required by the deployment.
- 17. **Link** — Connect compatible HelloGeo products such as Suite, Connect or MetaSync when the option is enabled.
- 18. **Verify** — Confirm the correct user, organization and project context before synchronizing data.

ACCESS	Shared-device discipline: Log out or switch accounts before handing a field device to another organization or project team. Protect project files using the organization’s approved storage and retention process.
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Warm Command design system

A restrained dark interface keeps map and telemetry information readable in field conditions while preserving the HelloGeo brand.



The HelloGeo gradient remains the fixed brand mark. Warm Command is the separate operational palette used for map overlays, cards, active borders and controls.

COMPONENT	PURPOSE	IMPLEMENTATION AREA
HUDFrame	Reusable rounded card for floating controls and telemetry.	QmlControls/HUDFrame.qml
SectionHeader	Clear title and accent for grouped settings.	QmlControls/SectionHeader.qml
QGCTabBar	Mission / Fence / Rally and Analyze selection.	QmlControls/QGCTabBar.qml
AnalyzePage	Shared header and content shell for diagnostic tools.	QmlControls/AnalyzePage.qml
Auth dialog	Login, verification, licensing and account linking.	QmlControls/HelloGeoAuthDialog.qml

Engineering build reference

The application is organized by functional domain and packaged independently for Android and Windows.

LAYER	TECHNOLOGY	IMPLEMENTATION NOTE
UI	QML / Qt Quick Controls 2	Custom screens and shared components.
Application	C++17 / Qt 6.8.3 baseline	Vehicle, mission, settings and link back ends.
Build	CMake 3.25+ / Ninja	Module CMakeLists and CustomOptions.
Windows	MSVC 2022	Configure in a Visual Studio x64 developer environment.
Android	Gradle + androiddeployqt	Signed APK/AAB with protected keystore credentials.
Mapping	Qt Location / custom tile plugin	Map tiles and location services.
Charts	Qt Charts	Terrain, vibration and MAVLink plots.

PIPELINE	CONTROLLED SEQUENCE
Android path	Configure the android_arm64_v8a Qt kit -> build APK/AAB -> verify signing -> install/test on the approved device.
Windows path	Initialize MSVC x64 -> configure with qt-cmake and Ninja -> build -> deploy DLL/QML modules with windeployqt6.
Credential rule	Keep keystores and passwords outside version control; inject secrets only through the approved secure environment.

Source map and release gates

Use domain ownership and acceptance gates to keep field releases reproducible.

AREA	PRIMARY PATH	RELEASE OWNER CHECK
App entry	src/main.cc	Correct product identity and startup diagnostics
App shell	src/UI/MainWindow.qml	Navigation and critical-message behavior
Fly View	src/FlightDisplay/	Toolbar, map overlays, actions and insets
Plan View	src/QmlControls/PlanView.qml	Mission, fence, rally and terrain workflow
Analyze	src/AnalyzeView/	Logs, geotag, console, inspector and vibration
Vehicle / links	src/Vehicle/ and src/Comms/	Connection, arming state and transports
Brand / build	resources/ and cmake/CustomOptions.cmake	Assets, version and package identity

GATE	PASS CONDITION
Identity	Logo, name, package ID, version and support routes are correct.
Install	Clean install and update both succeed on the supported device/OS.
Connection	Approved transport connects and recovers after a controlled interruption.
Mission	Create/save/open/upload/download round-trip preserves mission intent.
Safety	GeoFence, rally and return settings remain visible and consistent.
Evidence	Logs download; geotag output and diagnostic tools open without layout failure.

14 / SUPPORT

Troubleshooting and support

Capture the visible symptom and the system context before escalating; this shortens diagnosis and protects traceability.

SYMPTOM	FIRST CHECK	COLLECT FOR SUPPORT
Disconnected	Power, approved link type, endpoint, controller and network path.	Screenshot, link profile, device model and time.
No map / tiles	Internet availability, map source and device location permission.	Map type, region, network and app version.
Mission will not upload	Correct vehicle, arming state, item validity and connection stability.	Plan file, exact error and aircraft firmware.
Telemetry stale	Link update rate, selected vehicle and sensor health.	Inspector view, timestamps and link configuration.
Log unavailable	Live connection, vehicle log list and storage state.	Vehicle type, log list screenshot and flight time.
Layout problem	Screen scaling, orientation and app restart.	Full screenshot, resolution, OS and device model.

Official app and product support

Android package: com.hellogeo.gcs

[Open the official Google Play listing](#)

Need help? support@hellogeo.world



SCAN TO DOWNLOAD

EMAIL

Support request format: Include your name, organization, project, app version, device/OS, aircraft/autopilot, time of issue, exact steps, screenshots and relevant logs. Never email passwords, private keys or signing credentials.