CUAV


**LGroundControl**

**V1.0.0**

# User Manual

CUAV Tech Inc., Ltd.

2026/06

# Software Usage Notice

The LGroundControl Ground Station (referred to as The LGC GCS) is a secondary development based on QGroundControl. It is intended for testing purposes only and shall not be bundled as an accessory with commercial products, nor used for commercial applications.

The LGC GCS is primarily designed for end users or beginners. It incorporates necessary safety restrictions to enhance flight safety. Its optimizations and new features are built upon the ArduPilot firmware and may not be fully compatible with PX4 firmware.

For general functionalities that are not described in detail, users are advised to refer to the QGroundControl user guide and documentation at: https://docs.qgroundcontrol.com/master/en/qgc-user-guide/

When operating unmanned aircraft systems with The LGC GCS, users must comply with all applicable local laws and regulations. The user bears sole responsibility for any violations.

We welcome your feedback on your user experience and any issues encountered. Please feel free to share them via this email: pm@cuav.net.

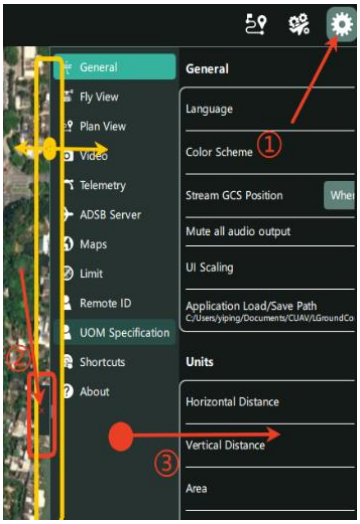
# 目录

# 1. Overall Layout Introduction


The main interface of The LGC GCS is the **flight view**. Click the route icon in the upper right corner to switch to the **plan view**. Click icon to open the **vehicle settings overview** sidebar, and click the "Analyze Tools" button inside it to bring up the **vehicle analysis** sidebar. Click the logo on the far right to open the **App Settings** sidebar. Click the aircraft icon in the upper left corner, then select the "Link Manager" button on the drop-down panel to open the **link management** sidebar.

After opening a sidebar, you can close it in multiple ways: ① Click the corresponding function icon; ② Click the close icon in the middle of the border; ③ Swipe right starting from the left menu area. To adjust the width of the sidebar, drag the border left or right. Note that dragging it too quickly to the right will be recognized as a close operation.

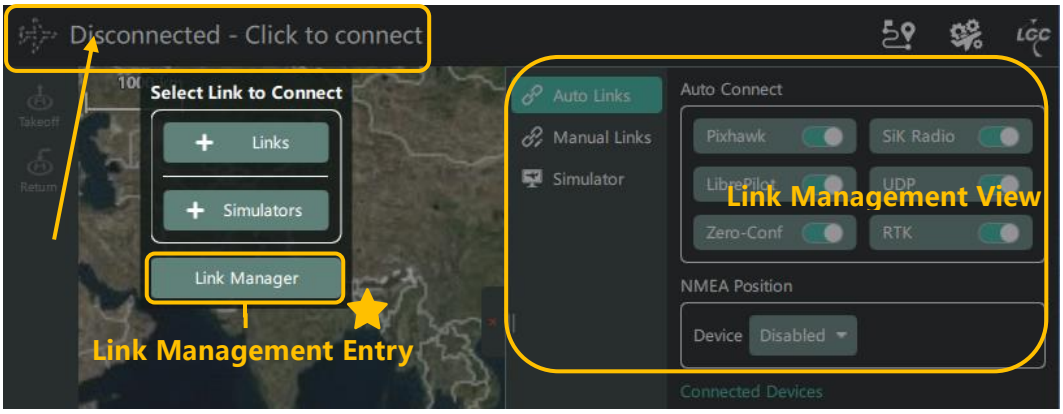
In the route planning view, you may collapse the right sidebar to gain more screen space. Click the corresponding button  to collapse it to the right, and click  to restore the sidebar.



# 2. Link Management

**Path: Aircraft icon > Link Manager**

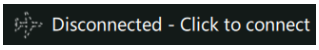
LGC offers both automatic and manual connection methods to help you connect vehicles or other devices. It also provides a simulator to help you learn and simulate flights.

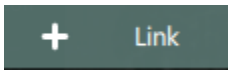



## 2.1. Quickly Connect to a Vehicle

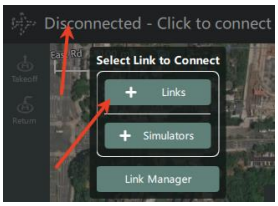
LGC enables multiple automatic connection methods by default (see the next section for details). Generally, if the device is already connected to a vehicle (via USB or UDP port 14550), The LGC GCS will automatically connect to the vehicle upon startup, allowing you to proceed directly with vehicle configuration, takeoff, and other operations. Once the connection is successful, the aircraft icon turns solid, and the vehicle ID, vehicle status, and other information appear (as shown below).


If the conditions for automatic connection described above are not

met, click the aircraft icon in the upper-left corner 

and then click the button 

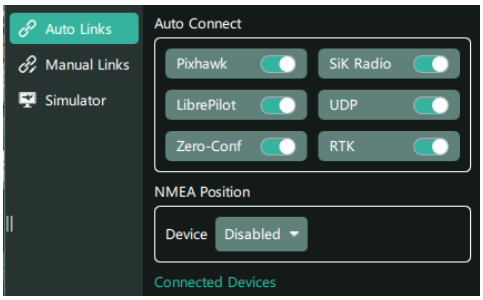
in the drop-down panel to access the link configuration interface. Set up the link according to your actual connection method and proceed.




## 2.2. Automatic Connection

**Path: Aircraft icon > Link Manager > Auto Links.**

The system supports the following methods of automatic connection.

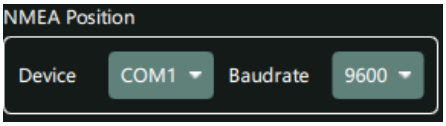



- **Connection of Positioning Devices**

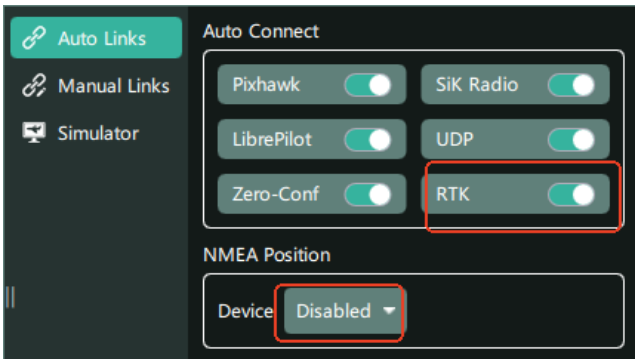
The LGC GCS' s positioning identifies the location of the vehicle operator and can be used for automatic vehicle return-to-home, broadcast transmission of vehicle operation identification information, and network-based transmission.

The LGC GCS supports positioning via standard NMEA protocol devices, as well as positioning using local RTK base station equipment.

- Connecting NMEA protocol devices requires configuring the connection port and related properties, as shown below.




- To connect an RTK base station, enable automatic RTK connection and **ensure that** the RTK module is not selected in the NMEA positioning settings, as shown in the figure below. (This module provides both RTK data to the vehicle and positioning data to the ground station.)

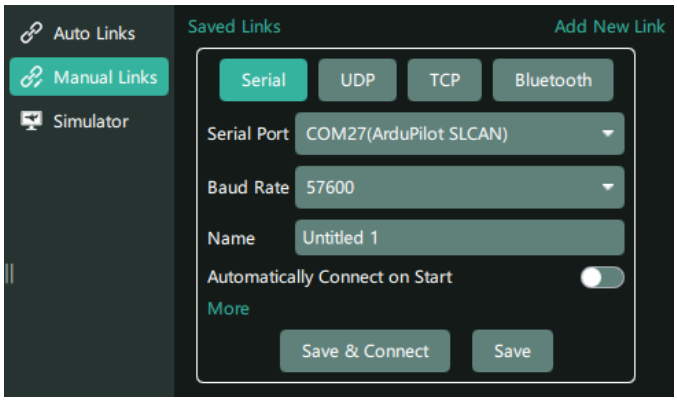



## 2.3. Manual Connection

**Path: Aircraft icon > Connection Management > Manual Connection.**

- Add New Connection

Click "Add New Link" in the upper-right corner to open the add interface.




LGC supports four connection methods: serial port, UDP, TCP, and Bluetooth. Select the desired type, fill in the corresponding properties (click the "More" button to configure advanced properties), and then save.

We recommend entering a short "Name," which will appear in the drop-down list under the aircraft icon in the top-left corner of the main interface. You can use the "Name" to distinguish between different devices and quickly select the desired connection. For more information, see Section 2.5. Multiple Vehicles, Multiple Connections

- Saved Links

Click "Saved Links" in the top-left corner to view and manage your saved links.

For unconnected devices, click the pencil icon to edit, the trash can icon to delete, or the connection icon to establish a connection. For connected devices, click the gear icon to access vehicle settings, or the disconnect icon to disconnect.

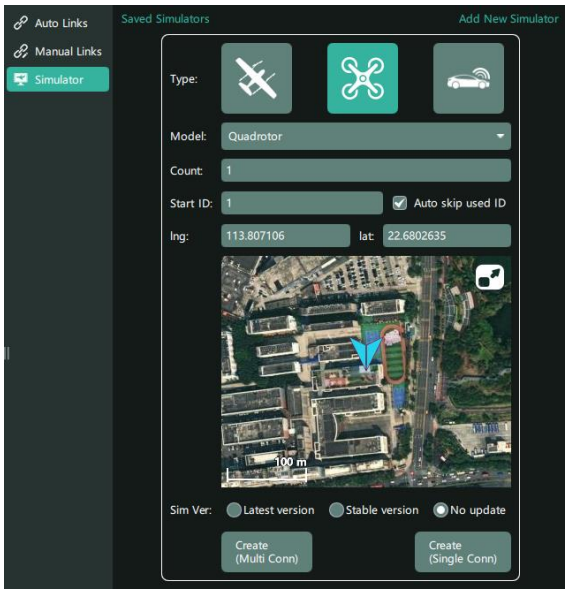
## 2.4. Simulator

The LGC GCS provides an ArduPilot software-in-the-loop simulator. You can create a simulator for learning, simulating mission flights, and other purposes.

**Path: Aircraft icon > Connection Management > Simulator.**

- Create a New Simulator

Click the "Create New Simulator" button in the upper-right corner to access the creation interface.

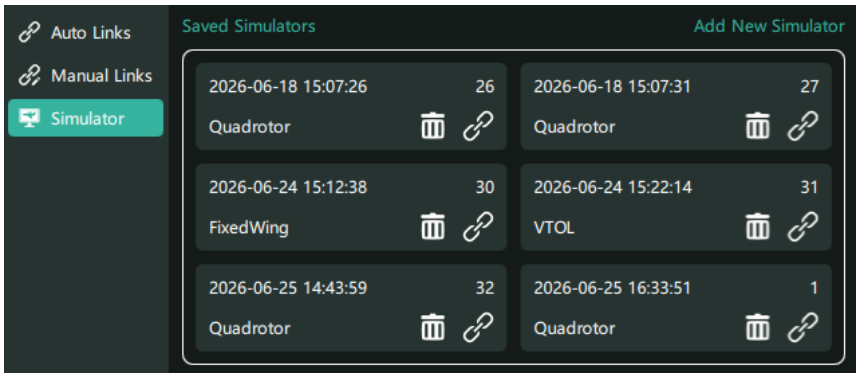



Supports fixed-wing, VTOL, quadrotors, helicopters, rover, boat, and more (please refer to the system display for specifics). Select the desired

model, enter the number of simulators, ID, and specify the simulator location. Choose whether to update the simulator version as needed, and finally click the "Create" button.

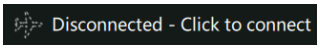
- Saved Simulators

Click "Saved Simulators" in the top-left corner to view the simulators you've created. For unconnected simulators, click the trash can icon to delete them, or click the connection icon to establish a connection; for connected simulators, click the gear icon to access vehicle settings, or click the disconnect icon to disconnect.




## 2.5. Multiple Vehicles, Multiple Connections

The LGC GCS supports simultaneous connections to multiple vehicles, and the same vehicle can support multiple links (such as UDP and TCP connections).

When no vehicles are connected, the interface displays as 

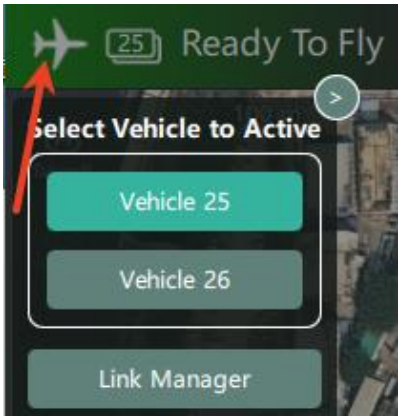
. Clicking this area reveals saved links and simulators, as shown right. Click the desired connection name or simulator to establish a connection.


When a vehicle is connected, the interface displays one of the following two states, where the number 25 represents the ID of the currently active vehicle. If one vehicle is connected, the ID appears as a single-card style: 

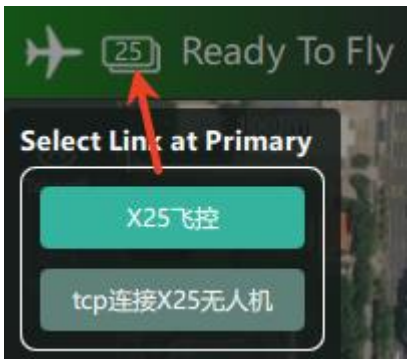
; if multiple vehicles are connected, it appears as a dual-card style: 

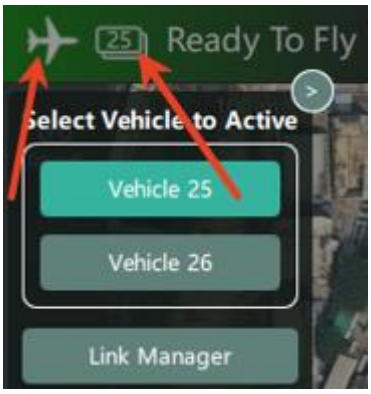
.


Click the aircraft icon 
. If multiple vehicles are currently connected, you can switch between them; click 
to connect more vehicles. If only one vehicle is currently connected, clicking the icon will directly connect more vehicles.

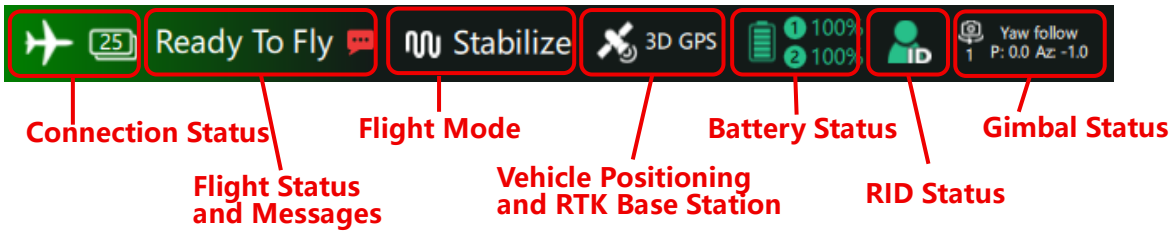



Tap the ID card  . If Vehicle 25 has multiple links, you can switch between primary links; otherwise, tapping it has the same effect as tapping the aircraft icon  , allowing you to switch vehicles or connect to more vehicles.



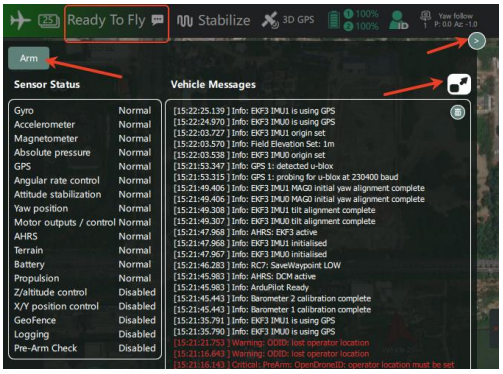

# 3. Status Bar

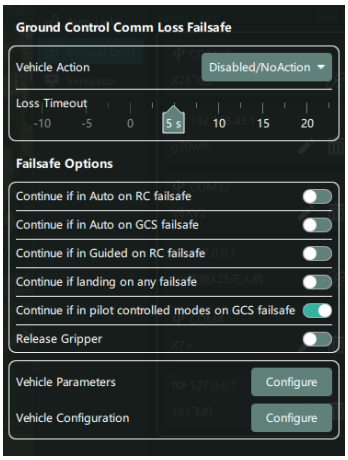



## 3.1. Flight Status

This section displays the vehicle’ s current overall status, such as “Not Ready,” “Ready to Fly,” “Unlocked,” “In Flight,” “Communication Lost,” and so on.

Clicking this area also allows you to view sensor status and aircraft messages, unlock the aircraft, and click the icon to display basic configuration information. You can quickly set up fault protection options, and access the detailed configuration page via the “Configure” button for more advanced settings. On Windows, aircraft messages can be displayed in a separate window by clicking the icon.

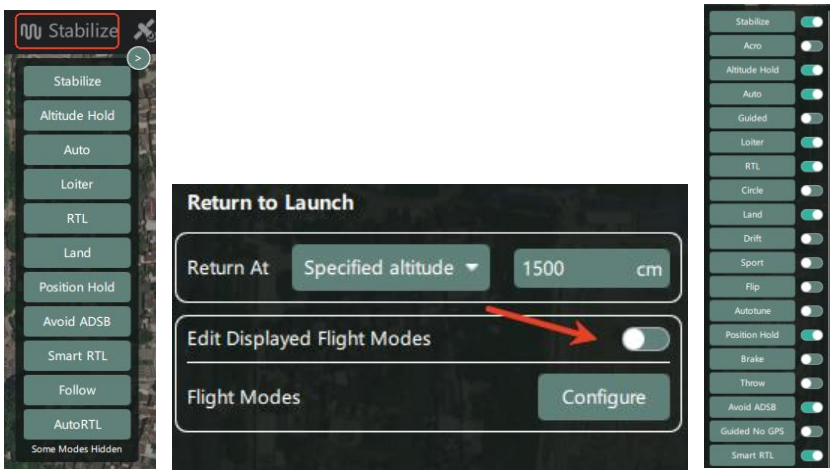



## 3.2. Flight Mode

This area displays the vehicle’ s current mode.

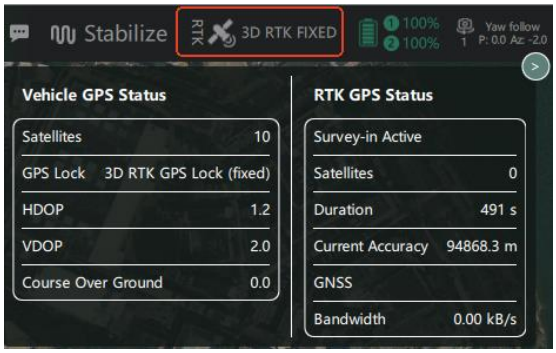
Clicking this area displays commonly used flight modes; click a mode to switch to it. Clicking the “ ” icon displays basic configuration information. Toggle the “Edit Displayed Flight Modes” switch to configure your frequently used flight modes based on your specific needs (and disable modes you rarely use).




## 3.3. Vehicle Positioning and RTK Base Station

This area displays the vehicle’ s positioning status, such as “No GPS” or “3D RTK Fix.” If the LGC is connected to a local RTK device or has acquired a network RTK service, the RTK icon will appear here.

Click this area to view the vehicle’ s positioning details and RTK positioning details. Tap the icon to view the product name of the positioning module and the RTK configuration. If the



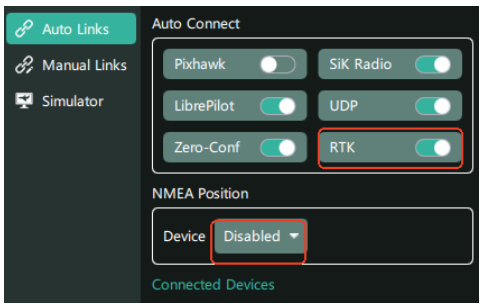
configuration is missing or needs adjustment, click Setup button to access the detailed configuration interface.

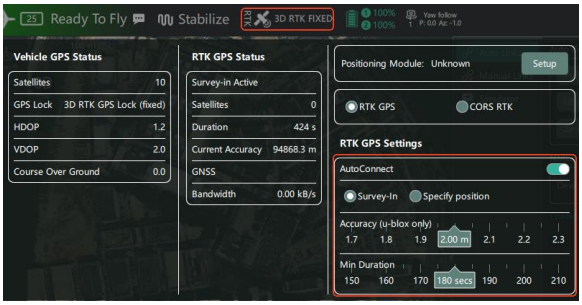
➢ **RTK Base Station Configuration**

The LGC GCS supports both local RTK GPS devices and network-based CORS RTK; you can select the appropriate option and configure it as needed.

- RTK GPS

If you are using local RTK devices, turn on the RTK Auto-Connect switch and ensure that the RTK module port is not selected in the NMEA positioning device configuration. Then, connect the RTK module to the ground station device (physical connection); LGC will automatically recognize the module. Once successfully recognized, you can configure the RTK-related properties.



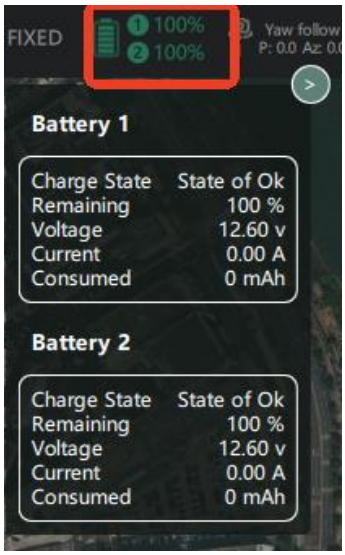
- CORS RTK

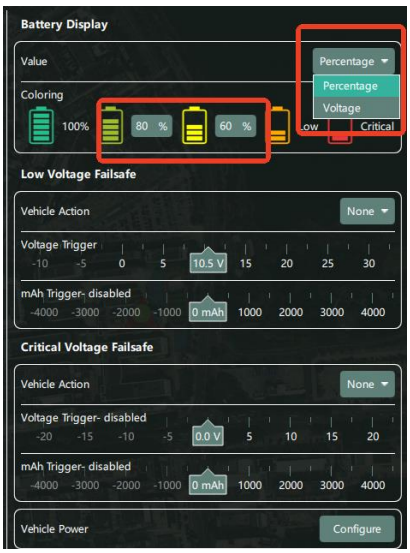

If you are using the CORS RTK service, please obtain an account from the CORS RTK service platform, configure the platform and account information in LGC, and then click "Mount."

## 3.4. Power Status

This section displays the power status of the vehicle. When the vehicle is configured with multiple power sources, the system will display their statuses sequentially by number. Each power source is color-coded based on its charge level, and the color of the power source with the lowest charge level is used as the battery icon color.

Click this area to view more status information about the power sources. Click "  " to configure basic battery display settings and main power failure protection. Click the "Configure" button in the lower-right corner to access the battery configuration page and set additional options.

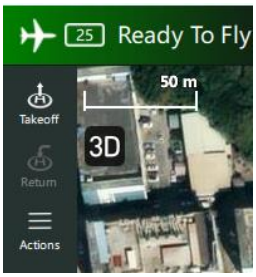

FIXED
1 100%
2 100%
Yaw follow
P: 0.0 Az: 0.0
Battery 1
Charge State State of Ok
Remaining 100 %
Voltage 12.60 v
Current 0.00 A
Consumed 0 mAh
Battery 2
Charge State State of Ok
Remaining 100 %
Voltage 12.60 v
Current 0.00 A
Consumed 0 mAh

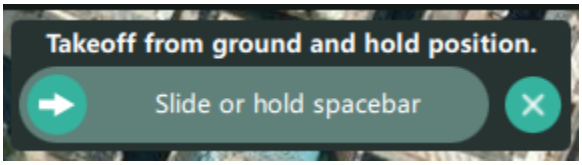

Battery Display
Value
Percentage
Percentage
Voltage
Coloring
100%
80 %
60 %
Critical
Low Voltage Failsafe
Vehicle Action
None
Voltage Trigger
-10 -5 0 5 10.5 V 15 20 25 30
mAh Trigger- disabled
-4000 -3000 -2000 -1000 0 mAh 1000 2000 3000 4000
Critical Voltage Failsafe
Vehicle Action
None
Voltage Trigger- disabled
-20 -15 -10 -5 0.0 V 5 10 15 20
mAh Trigger- disabled
-4000 -3000 -2000 -1000 0 mAh 1000 2000 3000 4000
Vehicle Power
Configure

# 4. Flight View

## 4.1. Flight Tools

Depending on the vehicle type and its current status, different tools will be displayed here. When you click an icon, a confirmation slider will appear; slide the arrow to the right, and LGC will send a command to the vehicle. On Windows, you can also press and hold the spacebar to confirm.

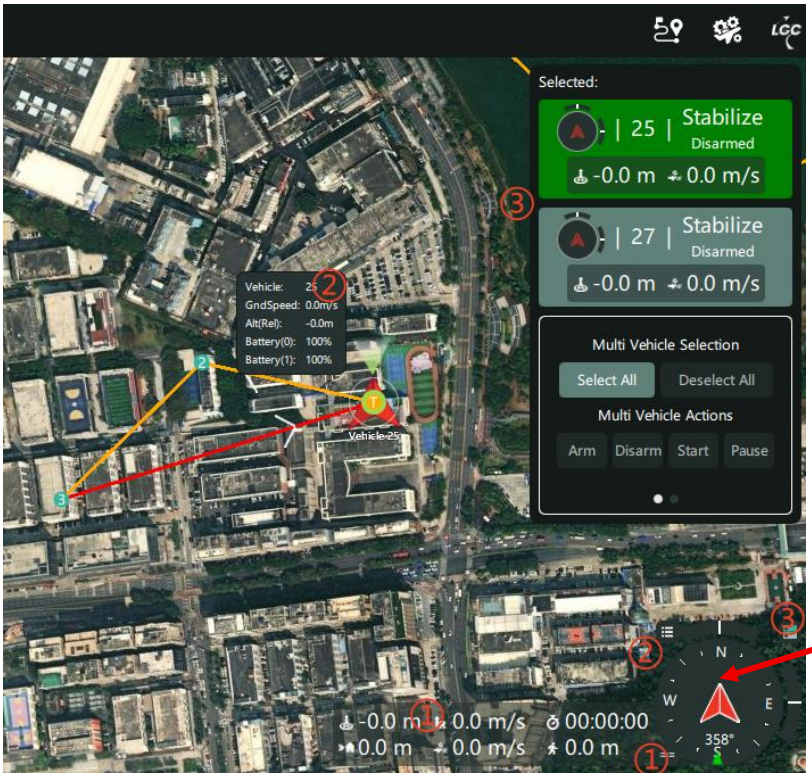



## 4.2. Dashboard

LGC provides 1 attitude sphere and 3 data panels to view the vehicle's status metrics. The three data panels are: ① the data dashboard next to the attitude sphere, ② the flight data next to the vehicle icon on the map, and ③ the multi-vehicle panel in the upper-right corner of the map.

You can choose whether to display these three sets of data based on your needs; long-press the attitude sphere to reveal the corresponding toggle switches.



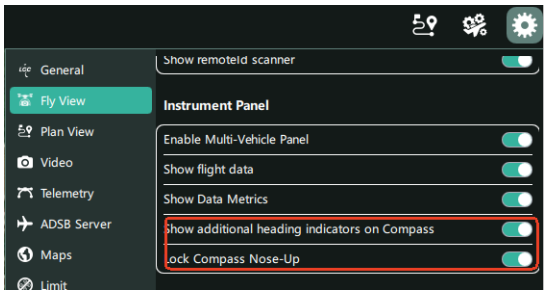

- **Attitude Ball**

The attitude sphere is located in the lower-right corner of the flight view.The main element is a compass dial; the scale indicated by the central arrow represents the nose-up direction (the vehicle’ s yaw angle). The area to the right of the compass indicates the vehicle’ s pitch angle; the area above indicates the vehicle’ s roll angle; and the darker portion of the central arrow indicates that the vehicle is tilted in that direction (for example, when the vehicle is in a dive, the area in front of the arrow will be darker; if the vehicle is tilted to the left, the area to the left of the arrow will be darker).


**Path: App Settings > Fly View > Instrument Panel.**

You can choose whether to lock the arrow (nose) in the compass to point upward. Locking means the compass dial rotates when the vehicle turns; unlocking means the compass dial remains stationary while the arrow rotates with the vehicle.

You can also configure whether to display additional heading indicators. The L icon represents the direction home, the dashed line represents the direction to the next waypoint, and the blue triangle represents the direction the vehicle is moving.



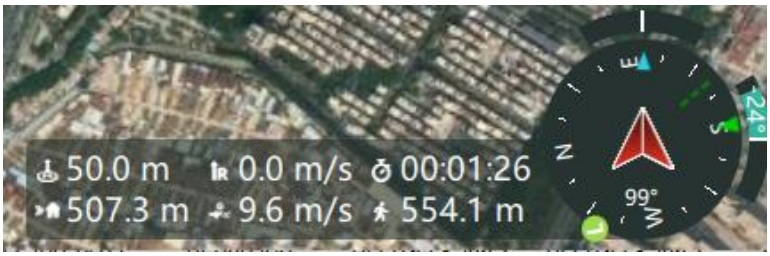


➢ **Data Dashboard**

The data dashboard is located next to the compass.

For multirotors, the system provides six data points by default: altitude relative to the takeoff point, climb rate, flight time, distance from home, airspeed (ground speed), and flight distance. For fixed-wing and

VTOL aircraft, the system provides eight data points by default, adding airspeed and throttle percentage to the multirotor set.

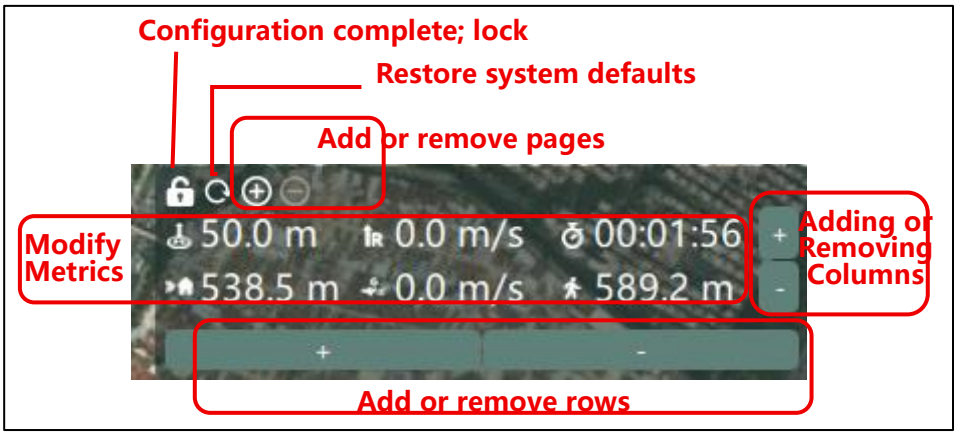



The data dashboard supports user customization. Users can freely add or remove rows and columns; freely select which metrics to display in each position; choose the display style (icons or text); adjust the size of the displayed content; set display styles (such as colors or icons) based on metric ranges; and add pages to categorize and display content , placing frequently used metrics on the first page.

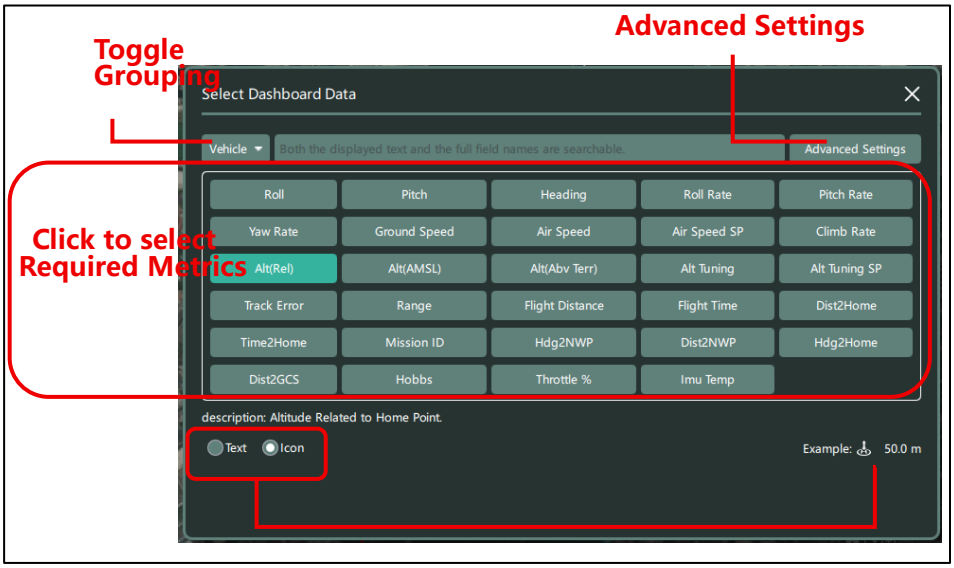
Here’ s how to do it:

1) Long-press the data dashboard to bring up the screen shown below;

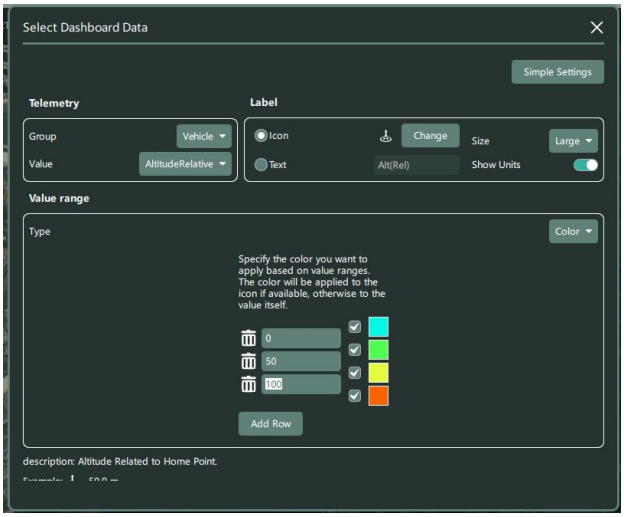
2) Follow the instructions in the image below to add or remove rows and columns, as well as pages;



3) Click the metric in the middle to edit it. You can select the desired metric and customize the display style, as shown in the figure below (Simple Configuration);




4) If the configuration in (3) has already been completed, skip this step. Click the "Advanced Configuration" button to enter the advanced configuration interface. You can customize icons, text, metric size, unit of measurement, and set styles for different value ranges ;



5) After completing the above configuration, click to close the window, then repeat steps (3) and (4). Once all indicators are configured, click the button to lock the area.

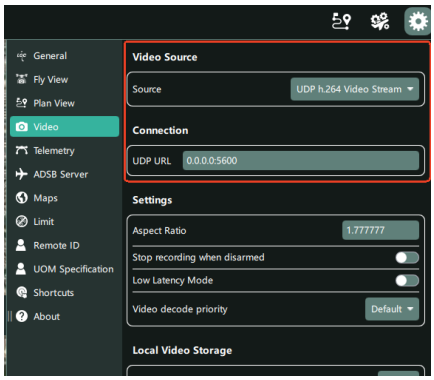
## 4.3. Video Feed

If you need to view video footage captured while the vehicle is in operation, please configure the video source first. Once configuration is complete, the video feed will appear in the lower-left corner of the flight view. You can control the gimbal to adjust the camera angle as needed. If necessary, you can also forward the video stream to other platforms for viewing;

- **Video Source Configuration**

  **Path: App Settings > Video.**

  Select the video source type and configure the connection path, and the video feed will appear in the lower-left corner of the flight view. Configure other settings and local video storage options as needed.

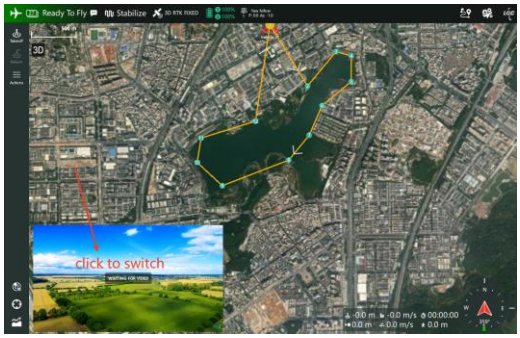




- **Video Feed Control (Gimbal Control)**

- Video Switching Controls

Tap the video feed in the lower-left corner to switch between the map view and the video feed; tap “ ” to detach the video feed into a separate window; tap “ ” to adjust the size of the video feed; tap “ ” to collapse and hide the video feed;






- Gimbal Control

**Path: Status Bar > Gimbal Status**

LGC supports configuring primary and secondary camera sources to achieve various types of picture-in-picture effects, including color video , infrared spectra, and remote sensing imagery (provided the camera

supports multiple spectral bands).

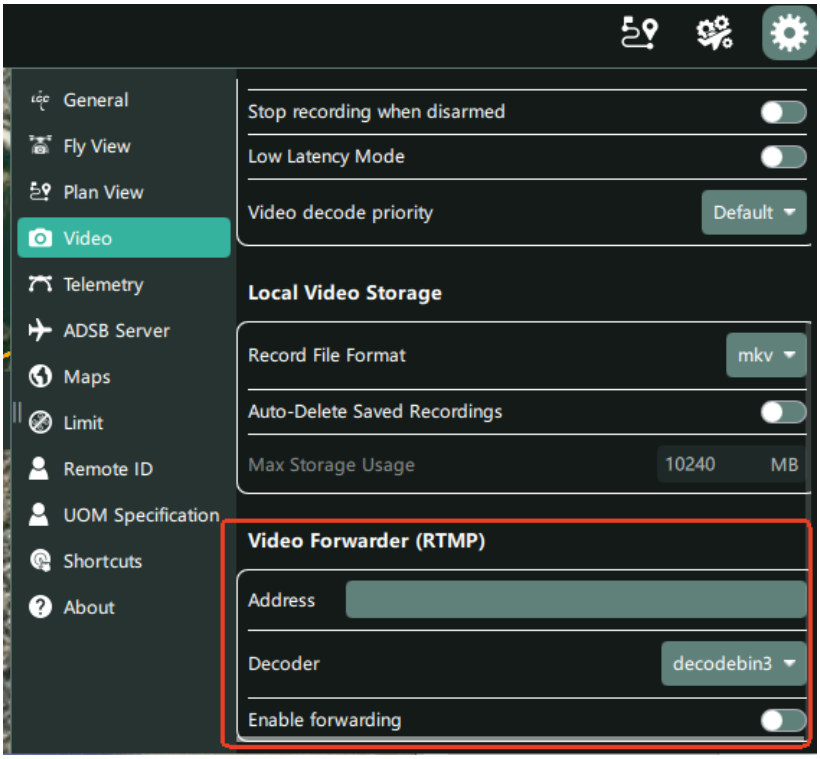
Supports controlling the gimbal via commands, such as yaw lock and return-to-center; it also supports controlling the gimbal ' s orientation by tapping different locations on the video screen (screen control must be enabled);


- **Video Forwarding**

**Path: App Settings > Video.**

Video streams received by LGC can be forwarded to other platforms for viewing via RTMP. You need to enter the target platform' s address (if a streaming code is available, enter it after the address in the format:

server address/streaming code), then enable “Enable Forwarding”;

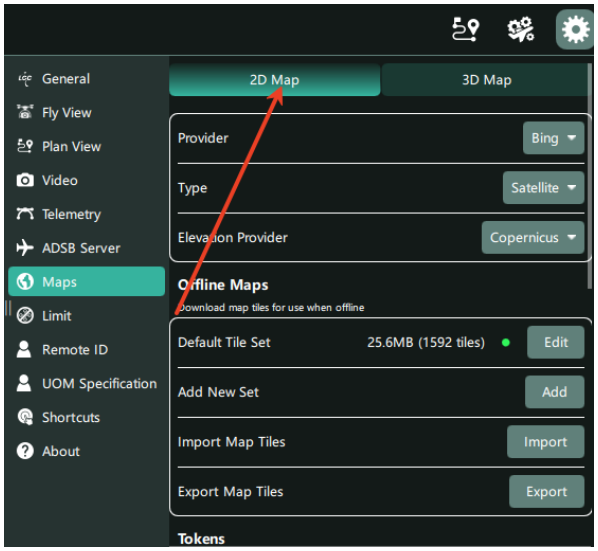



## 4.4. Map

- **2D Maps**

Supports multiple map providers; please configure the relevant provider information as needed. For more 2D map-related configurations, refer to QGroundControl.

**Path: App Settings > Maps > 2D.**

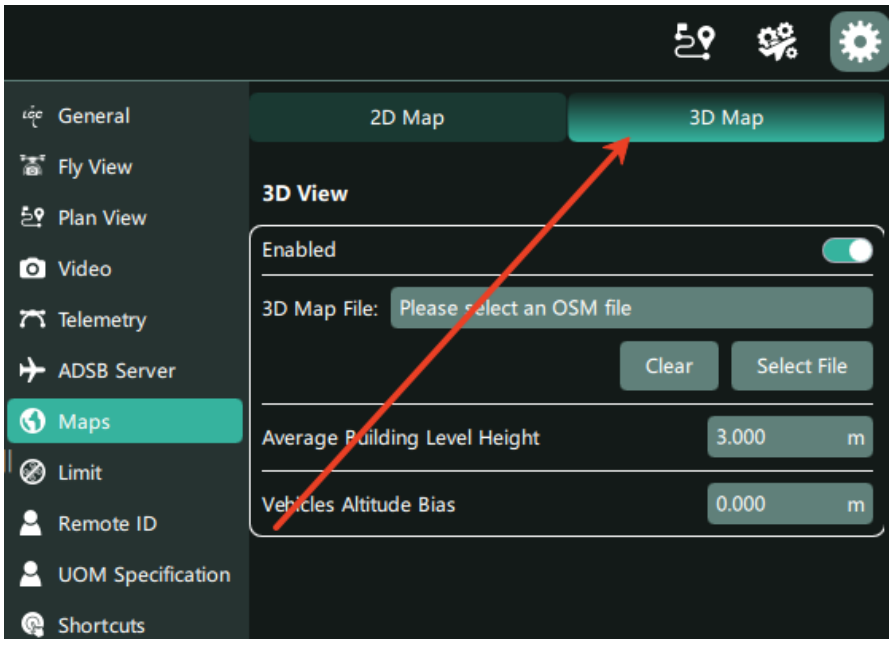



## ➢ 3D Maps

- 3D Map Configuration

**Path: App Settings > Maps > 3D.**

3D maps are supported. To use them, users must obtain the resource files (.osm) for the target area, import them into the ground station, and then enable the 3D view feature. Resource files can be downloaded from the OpenStreetMap website or other platforms;



You can click the “Select File” button to upload an .osm file. To clear the 3D view of a previously loaded .osm file, click the “Clear” button.

Average Floor Height of Buildings: This parameter determines the height of each floor of a building, as building heights in .osm files are sometimes specified on a per-floor basis.

Vehicle Height Offset: Refers to the deviation in the height of the vehicle and its mission relative to the ground. This is useful when there is a discrepancy in the height estimated by the vehicle controller, as the 3D view currently uses relative height.

- Navigating the 3D Map

Click the 3D icon on the flight map to enter the 3D view. You can use your mouse or touchscreen to navigate the 3D environment.

Mouse:

Horizontal and vertical movement: Hold down the left mouse button and move.

Rotate: Hold down the right mouse button and move.

Zoom: Use the mouse wheel or middle button.

Touchscreen:

Horizontal and vertical movement: Touch the screen with one finger and move.

Rotate: Touch the screen with two fingers and move them (both

fingers moving in the same direction).

Zoom: Touch the screen with two fingers, then spread or pinch them together.

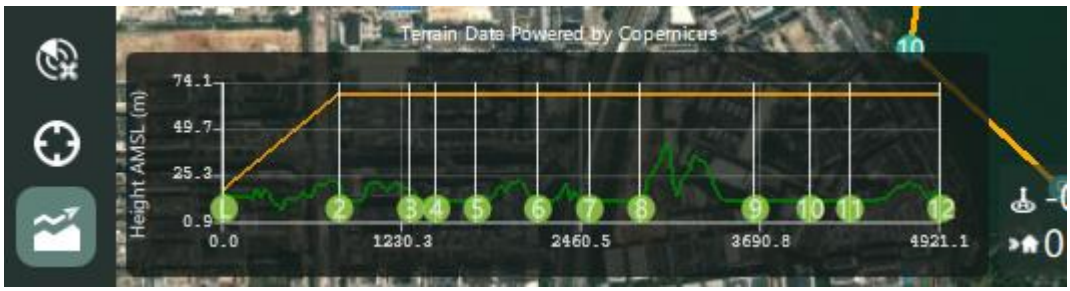
## 4.5. Other Tools

In the lower-left corner of the flight view is the Other Tools toolbar.

1) Remote ID Scanner. Used to scan for drones in the vicinity (relies on remote broadcast signals). For details, see the section on "Remote ID Scanner" below.

2) Map positioning tool. Allows you to position the map on a desired target, such as the current vehicle, the ground station's current location, or a mission being planned. If you want the map to always stay centered on the current vehicle no matter where it goes, tap "Lock Current Vehicle" to highlight it in green.

3) Elevation Tool. Allows you to view elevation data for the current vehicle's flight path and the corresponding terrain differences.

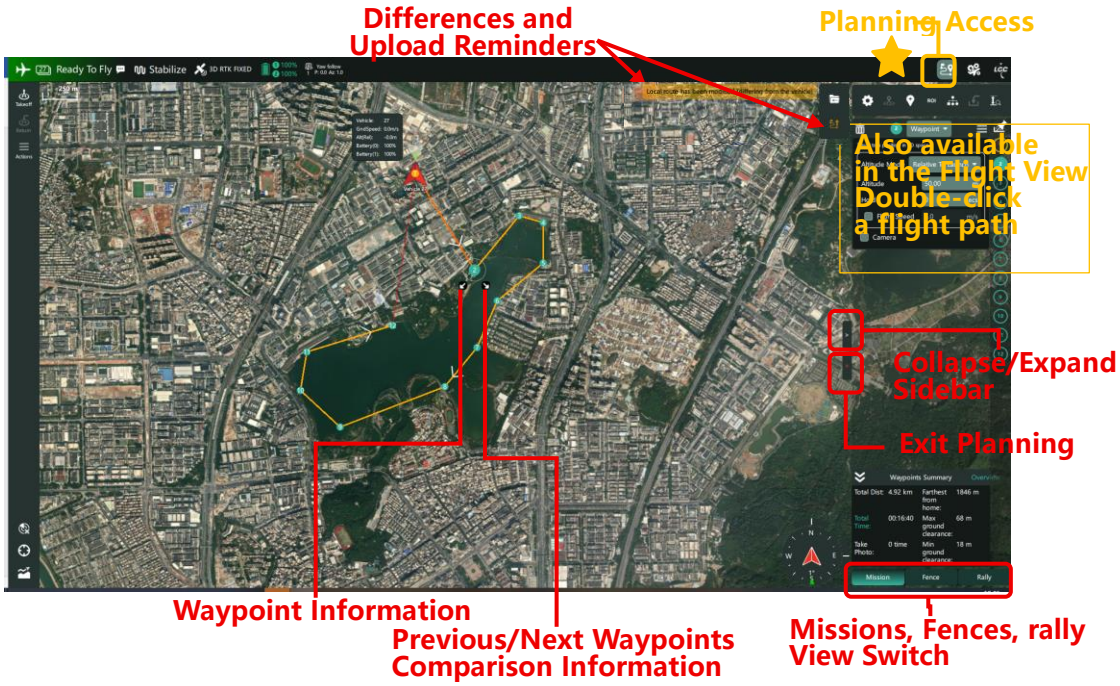


# 5. Planning View

**Path: Plan view (top right)**

**Shortcut: Double-click a route directly on the flight map**

In the flight path planning view, users can plan automated missions, fences, and assembly points for the vehicle. LGC offers a flexible layout, providing you with a larger and more convenient workspace for planning operations. In addition to directly editing and uploading vehicle mission files, LGC also provides convenient features for managing and editing local mission files.

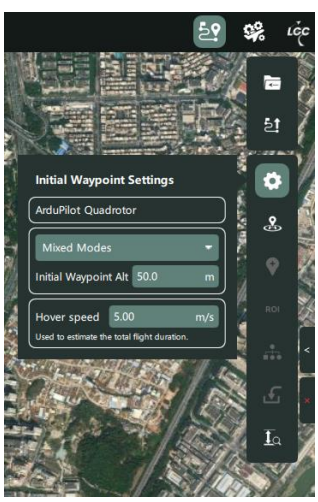


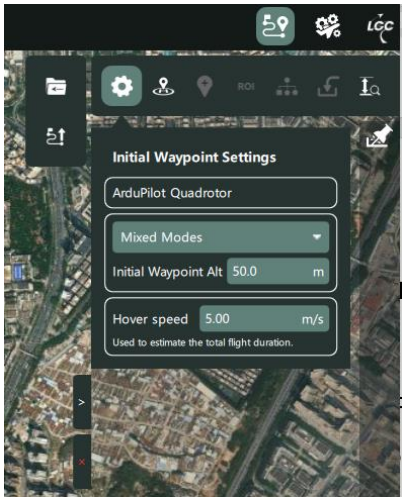

➢ **Steps to Create a Flight Plan (Using a Multirotor as an Example)**

If you are new to ground stations and have not used QGroundControl before, this section will walk you through the most basic workflow.

1) Make sure LGC is connected to the aircraft. (The aircraft icon in the top-left corner should be solid and display an ID number.)


2) Click the route planning icon in the upper-right corner to enter the planning view. (Either of the following two options works.)




3) Set the desired initial waypoint altitude in "Initial Waypoint Settings." (If you're learning using a simulator, you can skip this step.)

4) Click the takeoff icon ; a "1 Takeoff" waypoint will appear on the map next to the aircraft icon.

5) Click the waypoint icon (it will appear highlighted), then click on the map to create a waypoint. Click wherever you want to fly to; you can click multiple times to create multiple waypoints.

6) Click the "Return to Start" icon .

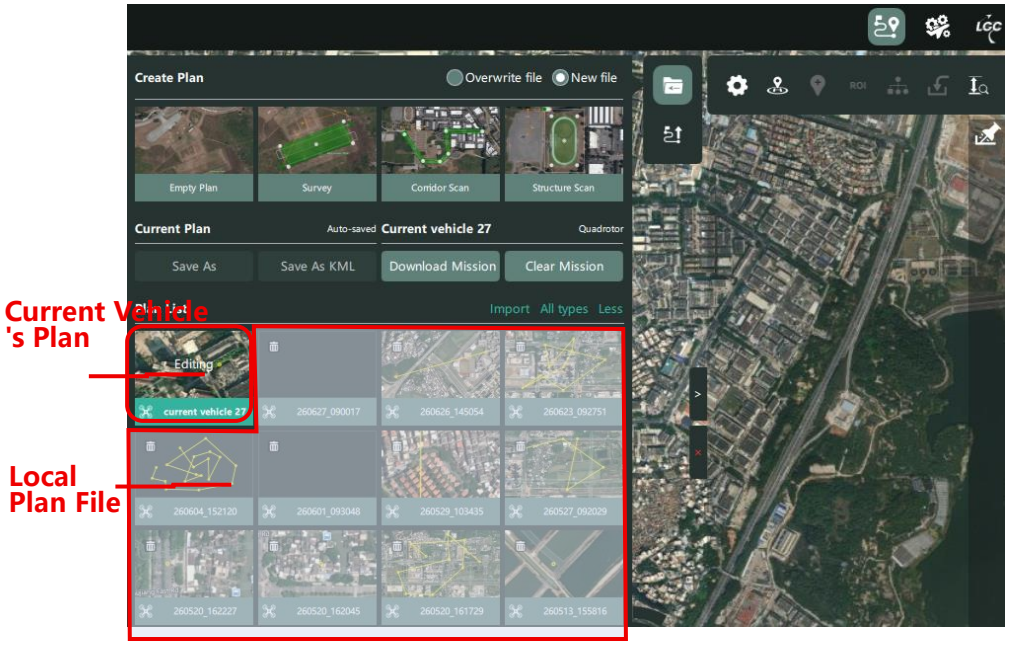
7) Tap the "Upload Flight Path" icon .

8) Tap the close icon on the right side of the screen , or the route planning icon in the top-right corner , to exit the planning view.

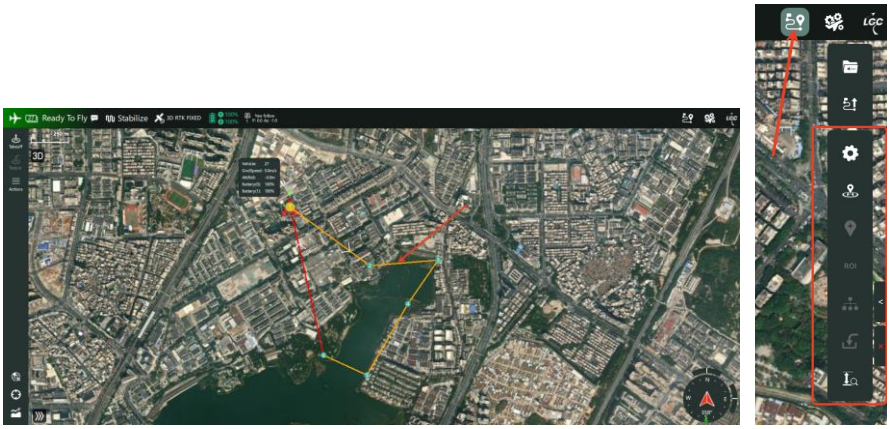
## 5.1. File Management

LGC’ s route file management feature supports real-time saving of plan files to the local system, preventing the loss of unsaved modifications; it makes viewing and maintaining local plan files more convenient; it provides a route preview function; and it supports restoring configuration information for complex surveying nodes;

**Path: Plan View > Waypoints Files**

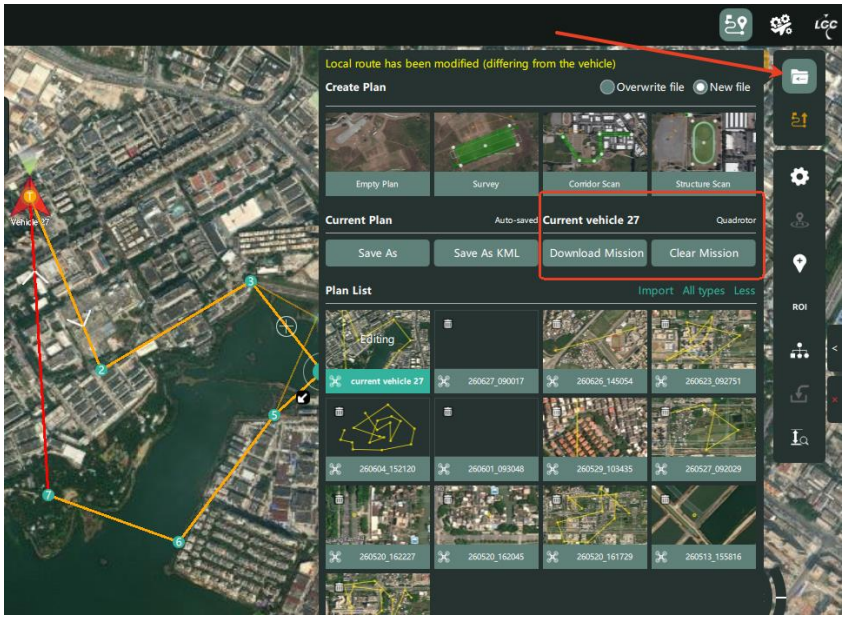



➢ **Edit the current vehicle's flight plan**



If the current vehicle already has a plan, simply double-click the flight path in the flight view to enter the planning interface. Once there, you can modify or add waypoints directly. Otherwise, click the flight planning icon in the upper-right corner to enter the view, then click the mission toolbar on the right to start creating waypoints.

If the current vehicle’ s flight plan was not uploaded after the last modification (due to a disconnection or closing LGC), the planning interface will display the version as it was last modified. If you wish to discard the modified content and continue editing based on the flight plan stored on the vehicle, click the “Download Flight Plan” button; you can make changes once the download is complete.

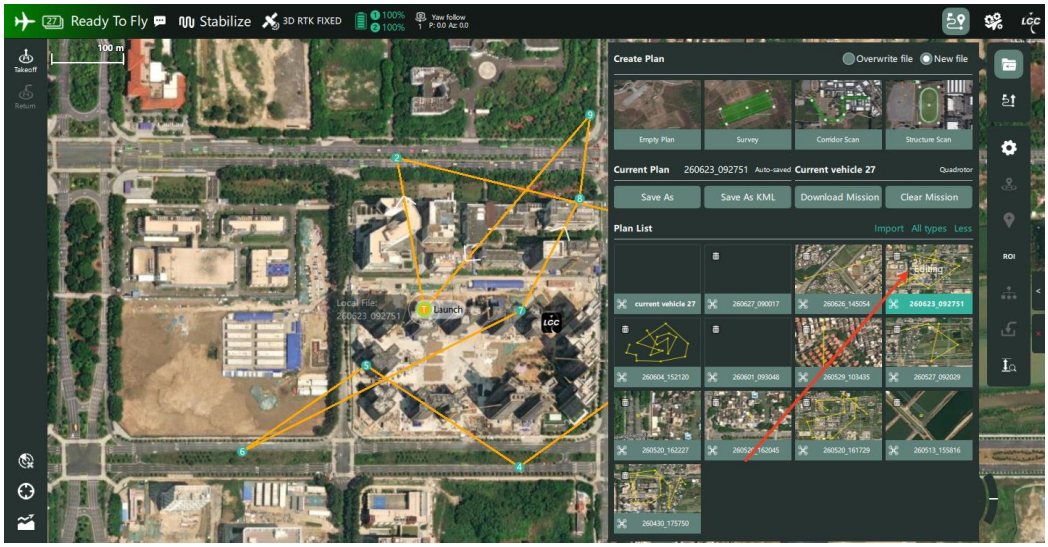



If your vehicle no longer requires any information from the plan, click "Clear Plan." The system will then clear the plan content from both the vehicle and LGC.

- **Local Plan Editing and Management**

In the plan list, except for the first file labeled "Current Vehicle x," all remaining files come from a specific directory on your local system (the LGC program's dedicated directory, which can be modified in App Settings > General).

**To edit a file**: Click on any of the plans to begin editing it.




By default, the system displays local files for the current vehicle's model. To view files for other models, click "All types" By default, the system displays 8 or 7 local files; to view all of them, click "More" If the file you need to edit was not created by this program, click "Import" to import it.

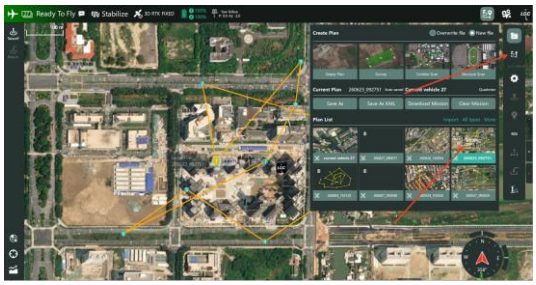
**Deleting files:** Click the trash can icon to delete a file.

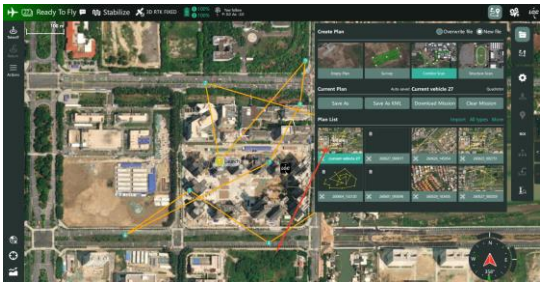
- **Uploading the Plan to the Vehicle**

After modifying the current vehicle's plan, a yellow prompt will appear, and the upload button will turn yellow and flash continuously. Please click "Upload" promptly once you have finished making changes.


If you wish to upload a local plan file to the current vehicle, first

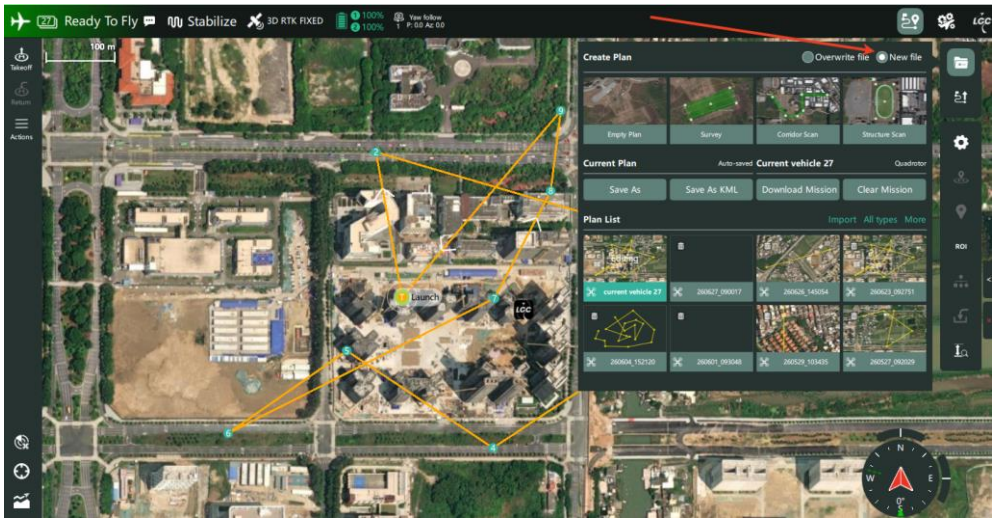
select and edit the desired file, then click the Upload button. After uploading, the file you are editing will switch to the current vehicle.





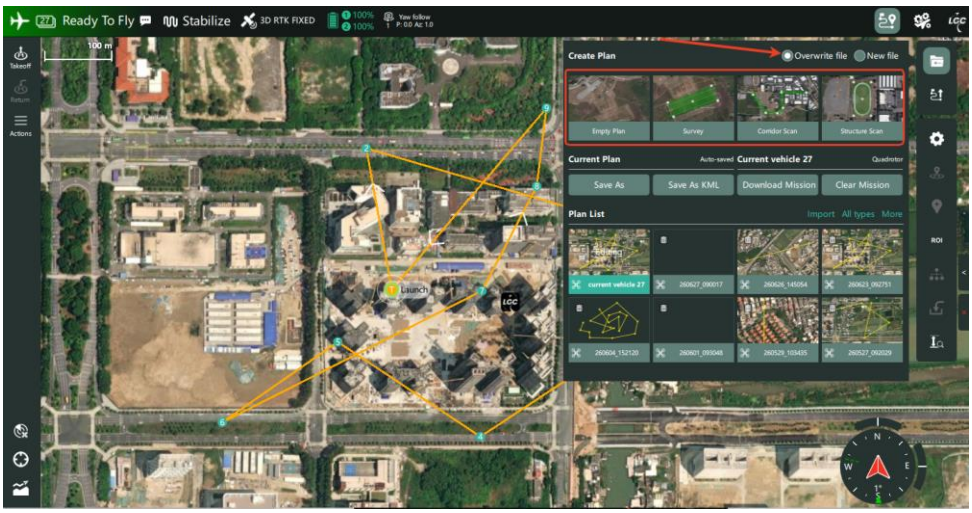
- **Create a Plan**

If you want to create a new plan file and store it separately—without associating it with any vehicle for the time being and without affecting other local files—select "New file" in the upper-right corner, then click any template below. The created file will be named using the current date and time.



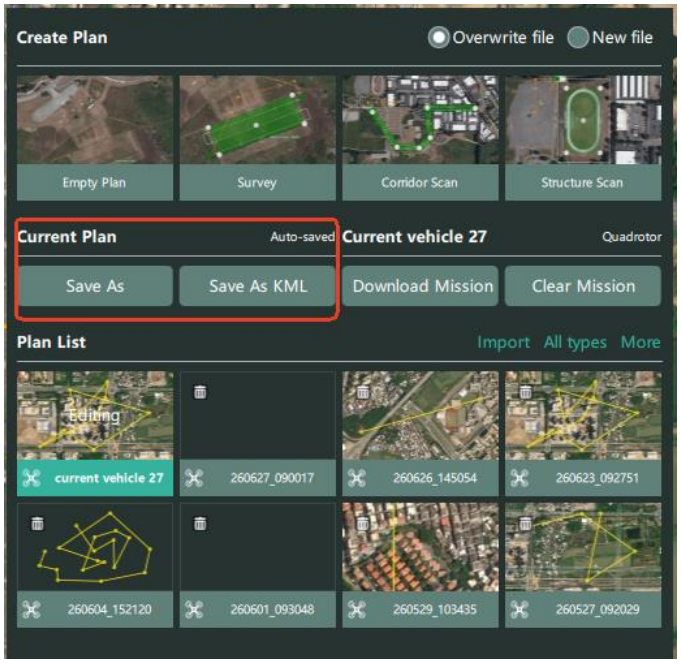

If you want to discard the contents of the plan you're currently editing (whether it's on a vehicle or another local plan) and start planning from scratch, select "Overwrite Current Plan" in the top-right corner

and then click any template below to begin anew.




➢ **Plan Backup**

If you want to back up the plan file you are currently editing, click the "Save As" or "Save as KML" button.

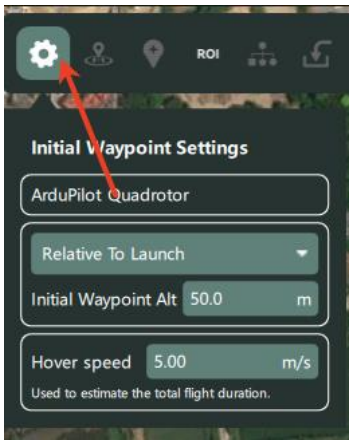



## 5.2. Mission

➢ **Initial Waypoint Configuration**

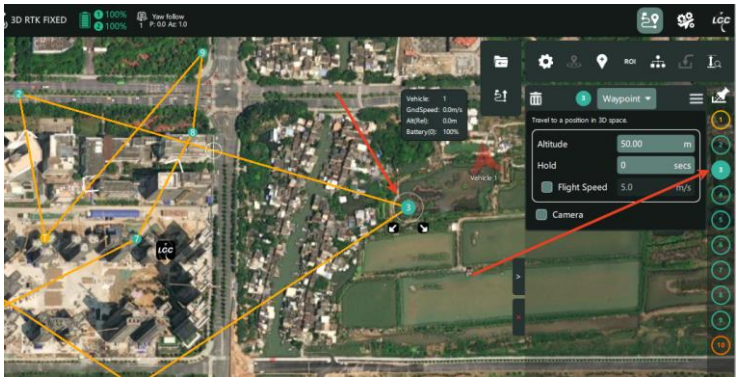
Before you start creating takeoff nodes/waypoints, please set up the

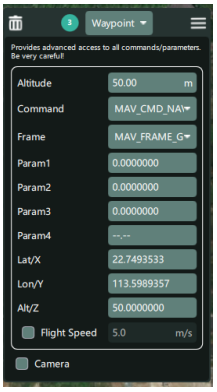
initial information first; this information will be applied to subsequent waypoints.




➢ **Waypoint Operations**

Select a node on the route, or select the node number on the far right, to display the corresponding node details and modify the node's configuration. To modify the details of waypoint commands, click the "☰" icon in the upper-right corner, then select "Show All Values" to view and edit them.




- Deleting a Waypoint

There are three ways to delete a waypoint:

① After selecting a waypoint, click the trash can icon 🗑 in the

top-left corner of the waypoint details;

② You can also delete a waypoint by pressing the Delete key on your keyboard after selecting it;

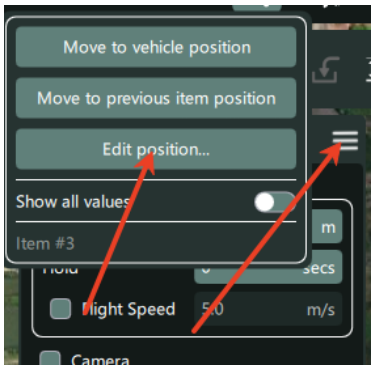
③ Long-press the waypoint on the map, then tap the "Delete" button in the pop-up window;

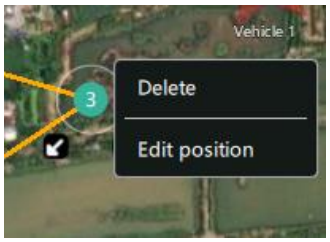
- Move a Node

① Drag the waypoint directly on the map

② After selecting a waypoint, tap the icon in the details panel on the right, then tap the relevant button in the pop-up window;

③ Long-press a waypoint on the map, then tap “Edit position” in the pop-up window;

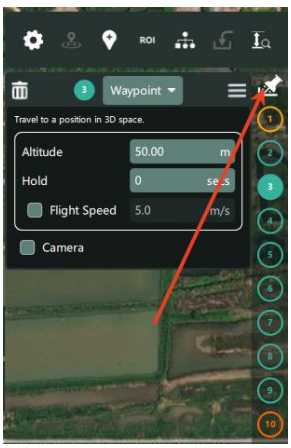


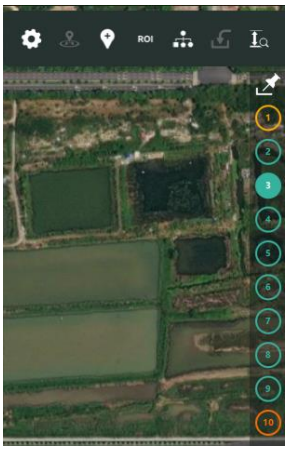




- Hide the Waypoint Information Editing Area

If you don’t need to frequently edit waypoint details but don’t want to fully collapse the planning sidebar, you can hide the waypoint editing area separately to free up valuable screen space (especially on

smaller screens).Tap the pushpin icon at the top of the " " number column on the right, switch to "Unpinned" status , and the editing area will hide 5 seconds after you finish your action. Once hidden, if you occasionally need to edit a specific node, simply select the waypoint number on the right, and the editing area will reappear.



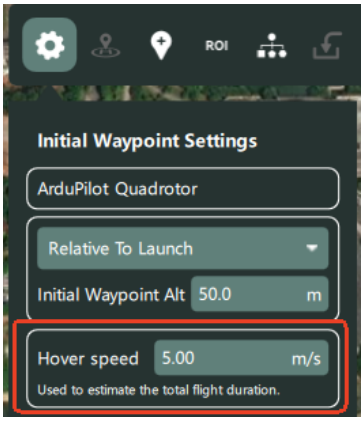
- Waypoint View

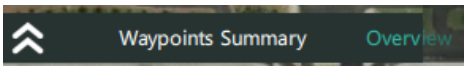
Below the waypoint on the map, click to view the waypoint's basic information and its relationship to other waypoints or your home location.

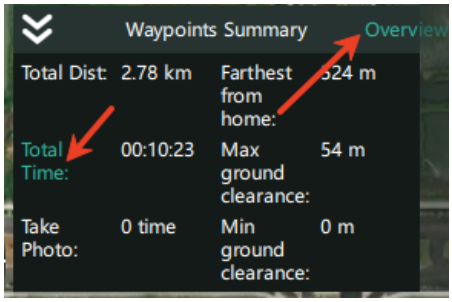


➢ **Route Summary**

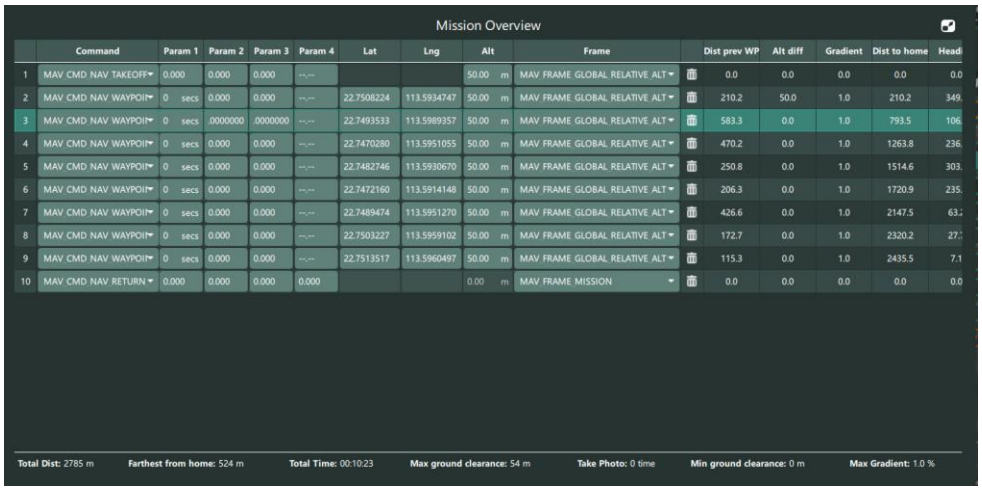
Below the waypoint information, you can view a summary of the entire route. You can collapse or expand this view by clicking . The "Total Duration" is estimated based on the "Hover Speed" set in "Initial Waypoint Settings." Click "Total Duration" to adjust the estimated speed.



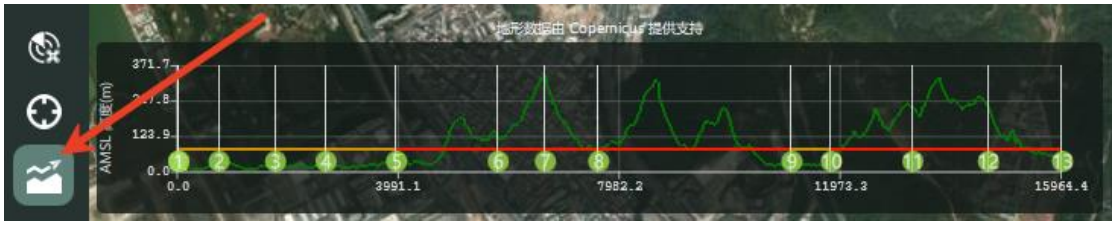

Click "Overview" to view the route summary table, where you can quickly perform actions on specific fields.



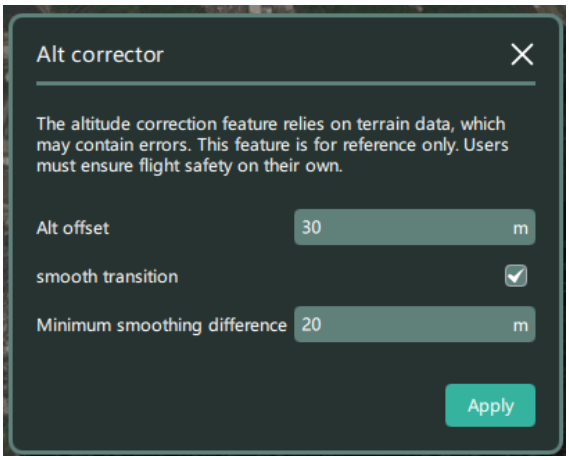

- **Elevation View**

Click the icon in the lower-left corner to view elevation data for all waypoints. The green curve represents terrain elevation, the yellow line

represents the flight path elevation , and the red line also represents flight path elevation but indicates that the flight path is below terrain elevation (for example, in mountainous terrain, there may be a risk of collision with mountains, requiring adjustment of the flight path elevation).




You should verify the terrain conditions along the flight route and adjust the waypoint altitudes. Click the Altitude Correction icon  to configure correction rules, then click the "Apply" button; the system will batch-update the waypoint altitudes for you. The result after modification is shown below.





Please note that this feature is for reference only. You are responsible for verifying that the terrain data is accurate and valid, and for ensuring flight safety.

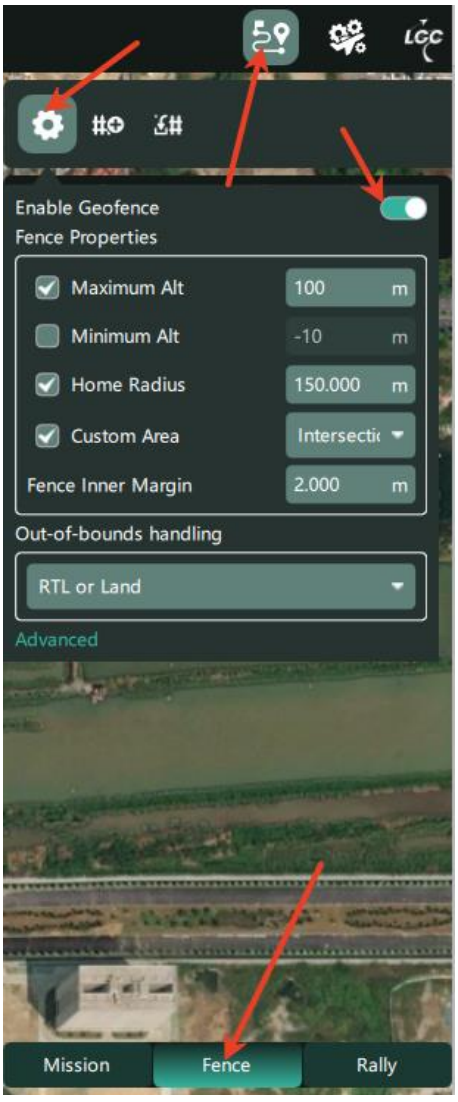
## 5.3. Geofencing

Setting up a geofence allows you to restrict the vehicle’ s operating range, preventing it from entering or leaving specific areas.

**Path: Plan View > Fence**

- **Geofence Parameter Settings**

To use geofencing, ensure that the geofencing feature is enabled in the vehicle’ s firmware settings. Follow the steps shown in the figure on the right.




After enabling geofencing, configure the relevant parameters according to your actual needs. If you need to specify a particular area, be sure to check the “Custom Area” box. If you need to set multiple restricted areas that overlap, the default setting requires the vehicle to operate only within the overlapping area, i.e., “Restricted Intersection.” If you want the vehicle to operate normally within all of these areas, change the setting to “Restricted Union.”

- **Custom Geofence**

  - Basic Geofence

Click the “Add Fence” icon (a selection indicator will appear), then click on the desired location on the map to create a basic geofence. You can create multiple geofences consecutively; once you’re finished, click the “ ” icon again to complete the process.

The default shape is a rectangle. You can drag the center icon to move the geofence, or drag the outer vertices and add vertices to change its shape and scope. Click a vertex to remove it or adjust its position precisely.


- Circular Fence

First, create a basic fence, then click the “Round” button to change its shape. You can drag the outer vertices to adjust its size, or enter the radius value directly into the input box next to a vertex.

- Generating a Fence via Tracing

You can also draw the desired shape entirely by hand. First, create a basic fence, then click the “Trace” button. Next, click continuously on the map until you’ve completed the desired shape, and finally click the “Finish Tracing” button at the top.

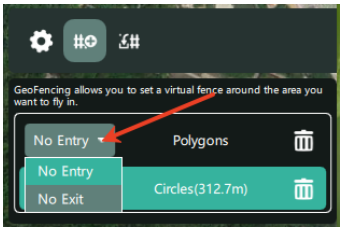


- Load KML/SHP Files

You can also import area data in KML or SHP format to generate a fence.

- Restricted Entry/Exit Fences

In the fence details area, you can modify the fence' s restriction type.

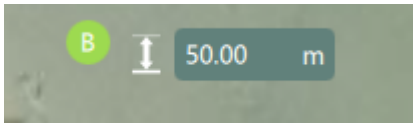



- Delete a Fence

Click the trash can icon in the fence details area to delete it, or select the fence and press the Delete key to delete it.

➢ **Boundary Return Point**

Setting a boundary return point allows the vehicle to promptly return to a specified location once it detects that it has crossed the boundary. Click the icon , then click on the map to create a boundary return point. You can set its altitude.



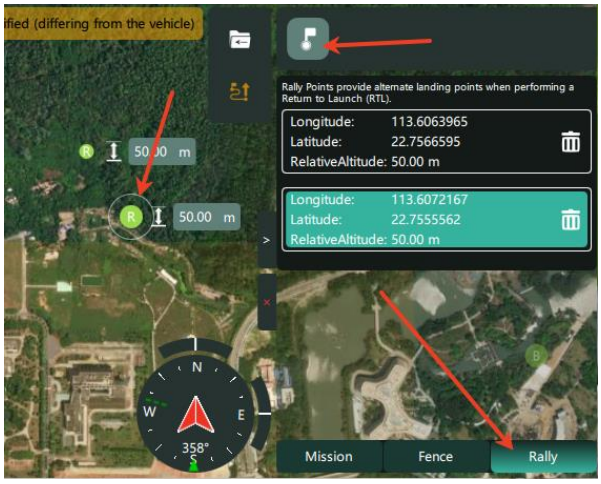

## 5.4. Rally Point

A rendezvous point serves as an alternative return or landing point for the vehicle. It has various applications, such as a temporary stop in emergencies, an energy refueling point, or a waiting area for mission coordination...

**Path: Plan view > Rally**

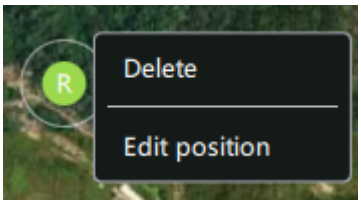
- Creating a Rally Point

Select the rally point icon , then tap the target location on the map. You can create multiple rally points in succession. Once creation is complete, deselect the rally point to finish.




- Modify a Rally Point

You can drag the rally point on the map to adjust its position, or long-press it and tap "Edit Location" to set its precise latitude and longitude. To modify the rally point's altitude, select it (by tapping it in the list or on the map) and enter the value in the input field that appears on the map.





- Deleting a Rally Point

Tap the trash can icon in the rally point list to delete it; you can

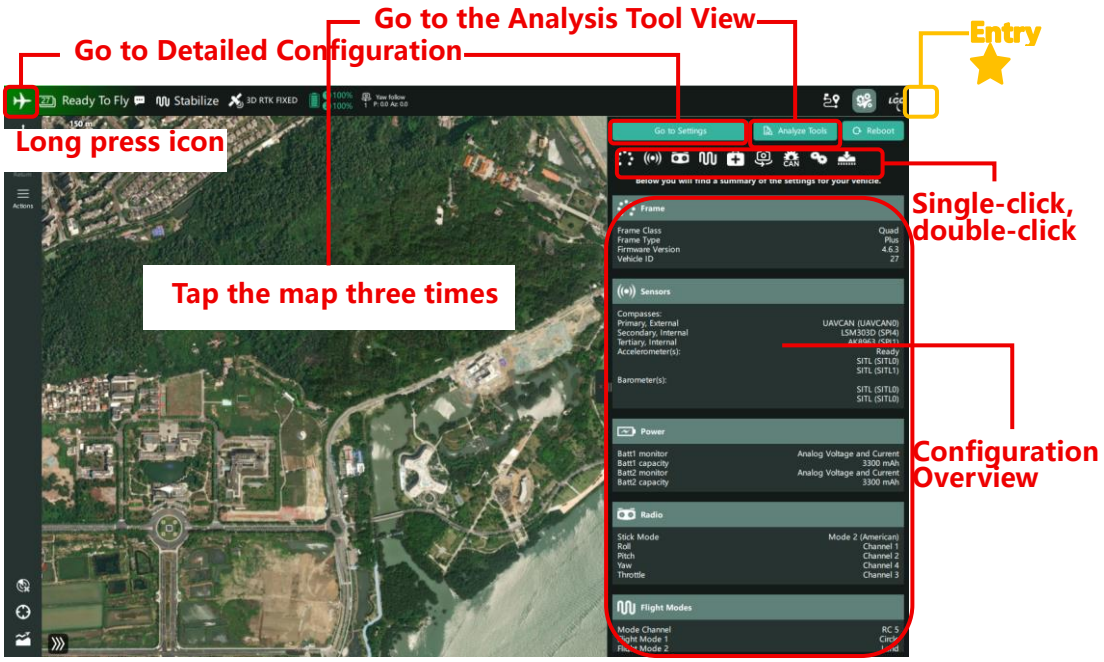
also long-press the rally point on the map and then tap “Delete.”

# 6. Vehicle Settings and Analysis

After connecting a vehicle, tap the  icon in the top-right corner to access the vehicle settings and analysis feature. The home screen of this feature provides an overview of the vehicle’ s configuration. (Note: If multiple vehicles are currently connected, this section corresponds to the currently selected vehicle.)

## 6.1. Vehicle Overview

Tap the “Analysis Tools” button at the top of the overview page to access the analysis tools view. Tap “Go to Settings” to view the vehicle’ s full configuration settings. Tap the “Restart” button to restart the vehicle. The icons at the top serve as index icons for various vehicle configurations; tap an icon to quickly navigate to the overview for that category, or double-tap an icon to access the detailed configuration page for that category.




## 6.2. Vehicle Settings

**Path: Vehicle Setup and Analysis > Go to Settings**

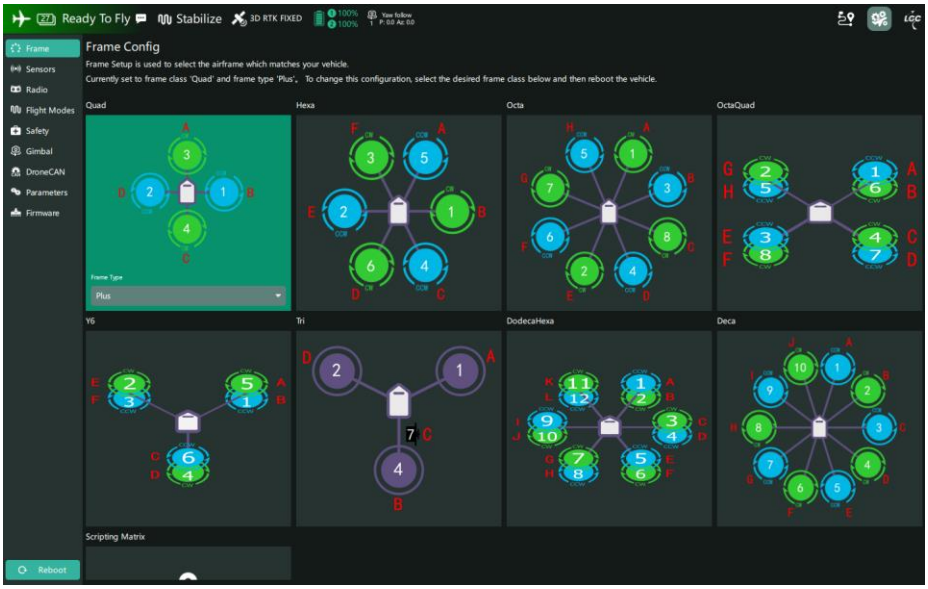
**Shortcut: Long-press the Aircraft icon in the top-left corner**

Vehicle Settings are used for configuration and debugging during the vehicle assembly process.

### 6.2.1. Frame

**Path: Vehicle Setup and Analysis > Go to Settings > Frame**

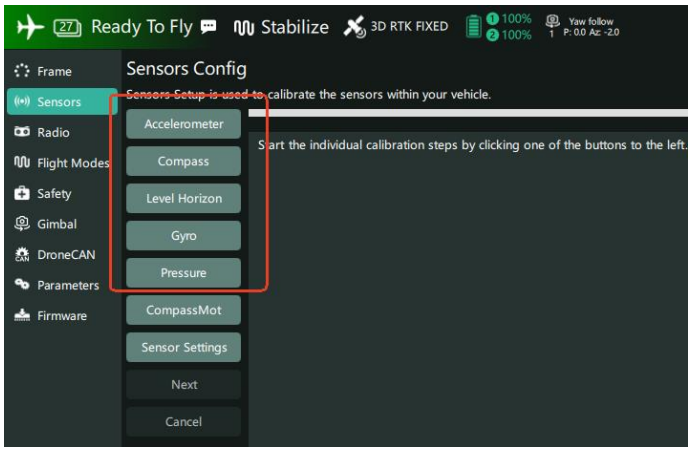
Simply click to select the frame type you need, then click the drop-down menu below it to choose your specific sub-frame type. Finally, restart the vehicle for the changes to take effect.




## 6.2.2. Sensors

**Path: Vehicle Setup and Analysis > Go to Settings > Sensors**

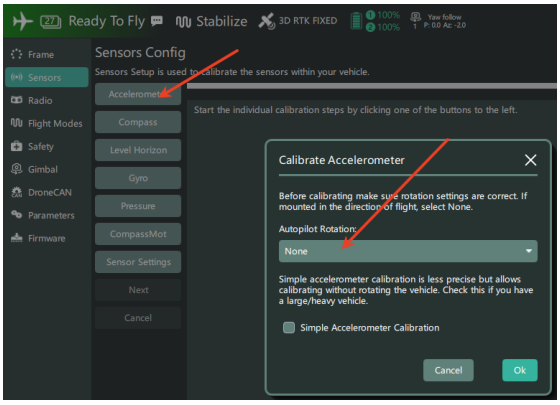
Click the sensor name on the left to begin the sensor calibration process. After clicking, a pop-up window will typically appear for you to configure basic information. Once configuration is complete, calibration will begin. Please follow the on-screen prompts until you see a message indicating that calibration is complete.




- **Accelerometer Calibration:**

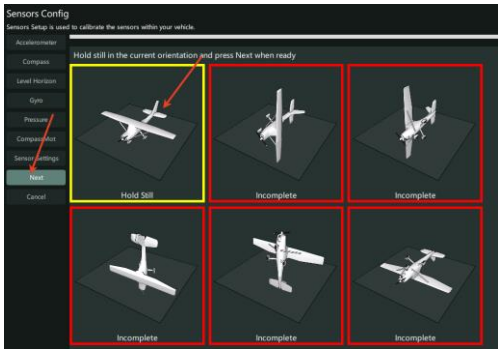
1) Click the “Accelerometer” button

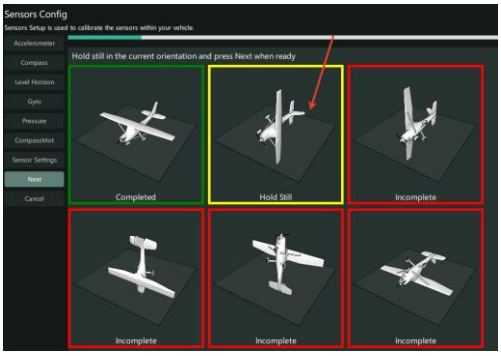
2) In the pop-up window, select the mounting orientation of your smart controller. If the mounting orientation is aligned with the flight direction, select “None,” then click the “OK” button to start calibration.




3) Once the process begins, the screen shown below will appear. An image will be highlighted in yellow. Please hold the vehicle stationary in the orientation shown in the image, then click the “Next” button on the left.

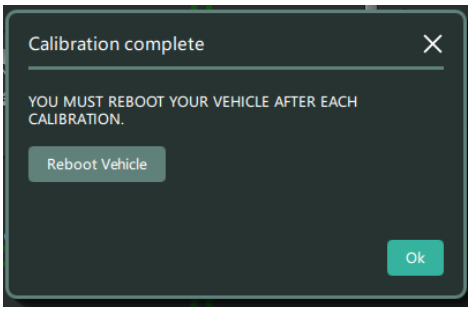
4) Continue following the steps in 3) to complete the remaining attitudes.

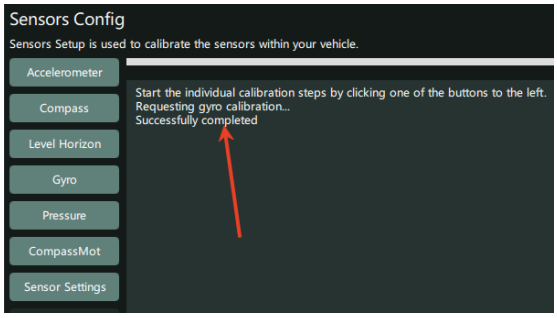



5) Continue until a success message appears (this may be a pop-up

window or a notification in the right-hand panel). Please restart the vehicle as prompted.

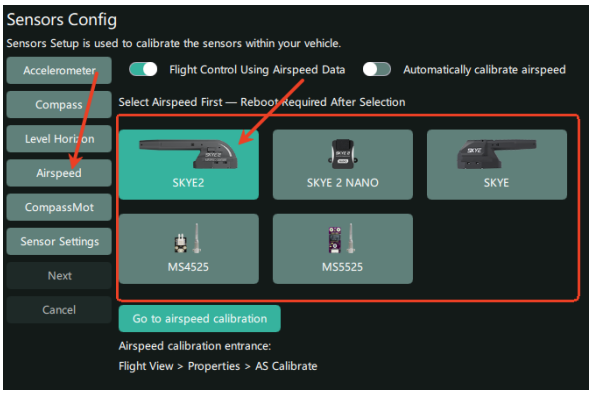


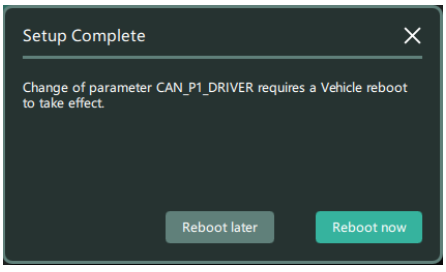

- **Airspeed Indicator (Fixed-Wing)**

1) Click the "Airspeed" button

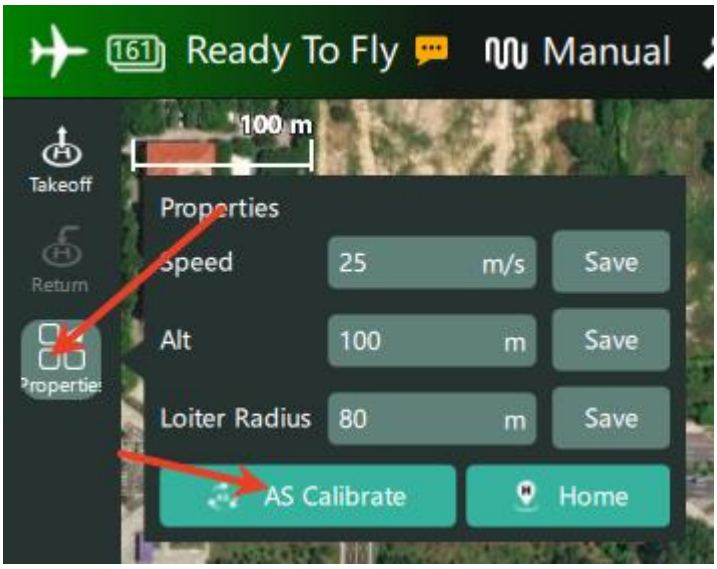
2) Click to select the product you are using (the toggle button at the top can be configured as needed; generally, leave the default setting unchanged)




3) If a restart prompt appears, restart the vehicle.




4) In the flight view, click "Properties," then click the "AS Calibrate" button to calibrate. A Sensor calibration succeed message will appear.



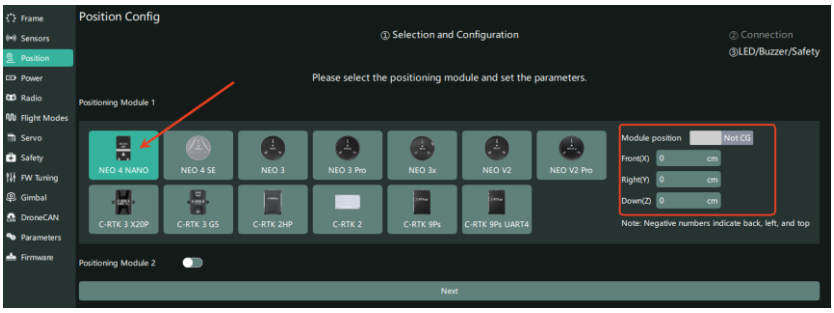

## 6.2.3. Position

**Path: Vehicle Setup and Analysis > Go to Settings > Position**

If you are using a CUAV positioning module, you can quickly select the product in LGC and connect the wires according to the instructions; the system will automatically configure the relevant positioning parameters on the smart controller for you.

- **Using a single module (standard single-antenna)**

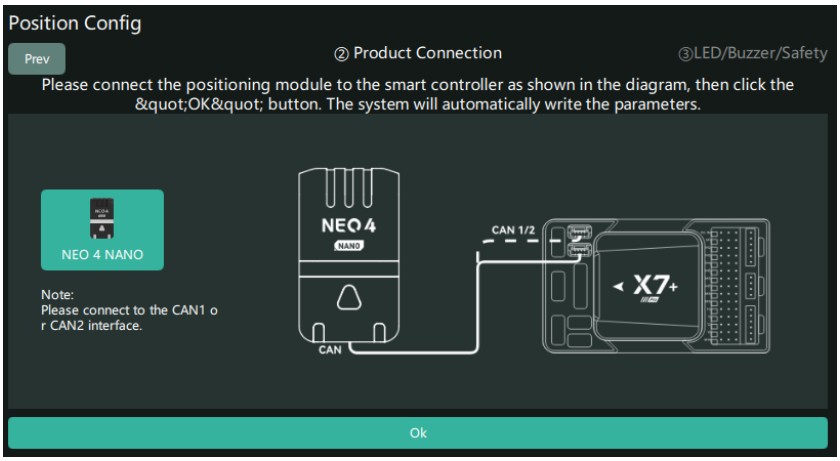
1) Click to select the positioning module you are using




2) Set the installation position of your module on the right. Click the "Module Position" slider to switch to "Not CG" then configure the relevant parameters.

If the module is mounted at the vehicle’ s center of gravity, please ignore this step and leave the setting as “CG”;

3) Click “Next” and follow the system prompts to complete the module connection.



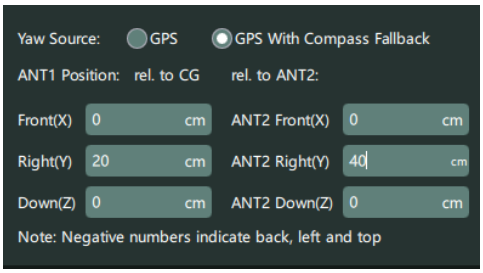

4) Click the “OK” button. If prompted to restart, please do so. (Be sure to click the “OK” button.)

➢ **Using a single module (dual-antenna type, such as C-RTK 2HP or C-RTK 3 G5)**

The procedure is similar to that for a standard single-antenna module, with only a slight difference in Step 2—specifically, two variations.

① Since the positioning module supports orientation functions, you need to set the vehicle’ s orientation reference. You can choose either “GPS” (relying entirely on GPS) or “GPS with Compass Backup” (i.e., using the compass to determine direction in abnormal situations).

② In addition to setting the position of the primary antenna (Antenna 1), you must also define the relative position between Antenna 1 and Antenna 2. For example, if Antenna 1 is mounted 20 cm to the right of the center of gravity and Antenna 2 is mounted 20 cm to the left of the center of gravity, this means Antenna 1 is located 40 cm to the right of Antenna 2; please enter 40. The front-to-back orientation is similar to the up-to-down orientation.



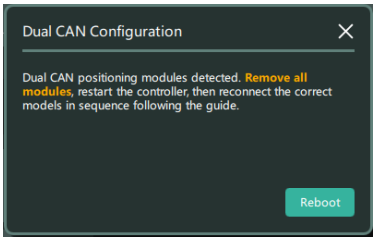

➢ **Using Two Modules**

1) Please turn on the switch for Module 2. 

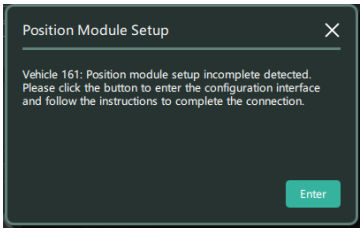

2) Then configure Positioning Module 1 and Positioning Module 2 by following steps 1) and 2) above;

3) Click "Next." If your system has no CAN devices or only one, proceed to step 6).

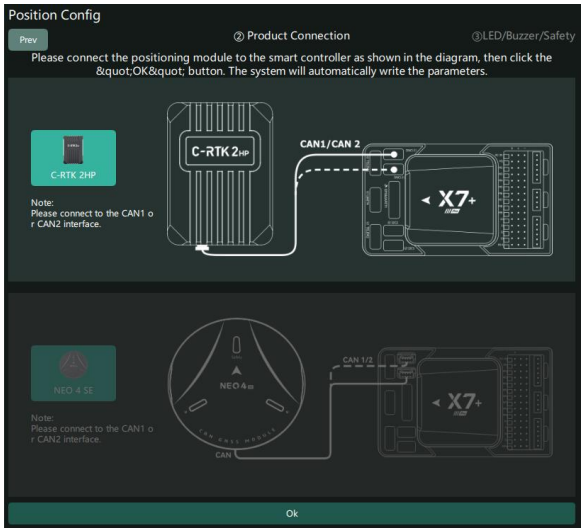
4) If you selected two CAN devices, the following prompt will appear. If positioning modules are already connected, please unplug all positioning modules as instructed and restart the system.




5) After restarting and reconnecting, the system will display this window; click the "Enter" button.



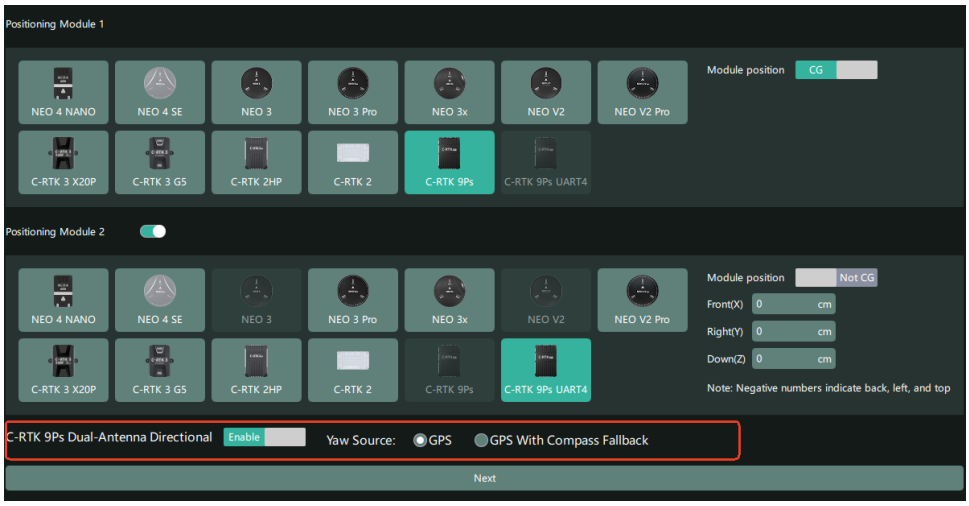

6) Connect the modules one by one according to the instructions. (Wait until the second image lights up before connecting the second module.)




7) Click the "Finish" button. If prompted to restart, please do so. (Be sure to click the "Finish" button.)

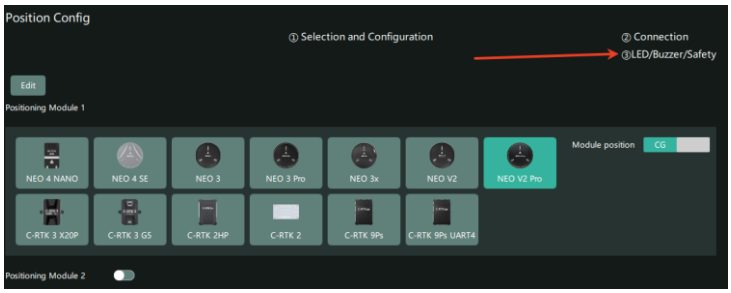
- **Dual-Module Orientation (2 C-RTK 9Ps or 2 C-RTK 3 G5s)**

Before beginning the connection process, please confirm whether dual-module positioning is enabled. If enabled, please select the positioning reference.




## ➢ LED/Buzzer/Safety Switch

Some positioning modules feature LEDs, buzzers, and safety switches. If you need to adjust the corresponding switches and settings, please do so after completing the connections described above. For subsequent adjustments, click "③ LED/Buzzer/Safety Switch."


## ➢ Modify Positioning Configuration

Once configuration is complete, if you need to adjust the product module or installation location, click the "Edit" button in the upper-left

corner, then begin making adjustments.

### 6.2.4. Power

**Path: Vehicle Setup and Analysis > Go to Settings > Power**

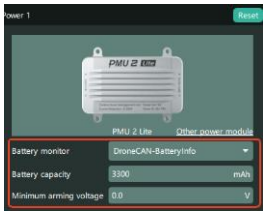
➢ **Initial Configuration**

- Using CUAV Power Modules

1) Drag the product image from above to the corresponding interface configuration area;

2) Configure the relevant parameters;

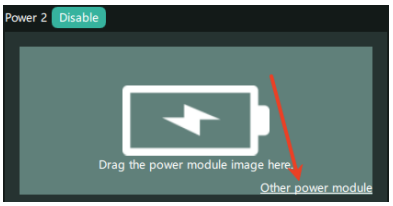
3) If prompted to restart, please restart the vehicle;

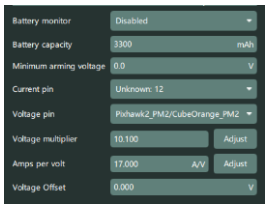




- Using Power Modules from Other Brands

1) Click “Other Power Modules”

2) Configure all parameters




➢ **Modify the power supply module**

Simply drag and drop the new product module into the configuration area; the subsequent steps are the same as for the initial configuration.

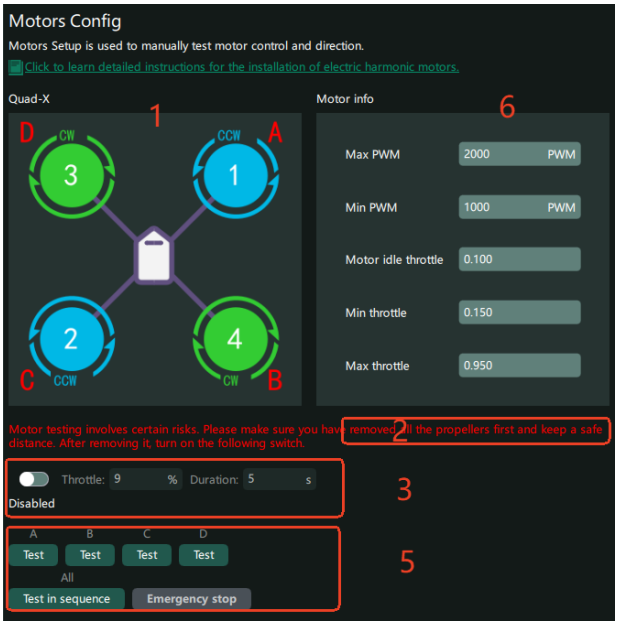
- **Cancel power supply configuration**

Click the "Reset" or "Disable" button to clear the parameters.

### 6.2.5. Motor

**Path: Vehicle Setup and Analysis > Go to Settings > Motor**

1) Please install the motors according to the frame diagram;
2) Ensure the propellers are not installed (for safety);
3) Turn on the switch, enter the throttle ratio and the duration of each output;
4) Press the safety switch;
5) Click the "Test" button sequentially, or click the "Test in sequence" button directly, to check that the motors are rotating and that their rotation directions are correct; In case of an emergency, click the "Emergency Stop" button. If the installation is incorrect, adjust it and test again.
6) After confirming that the motors are installed correctly, please calibrate and verify the motor parameters.



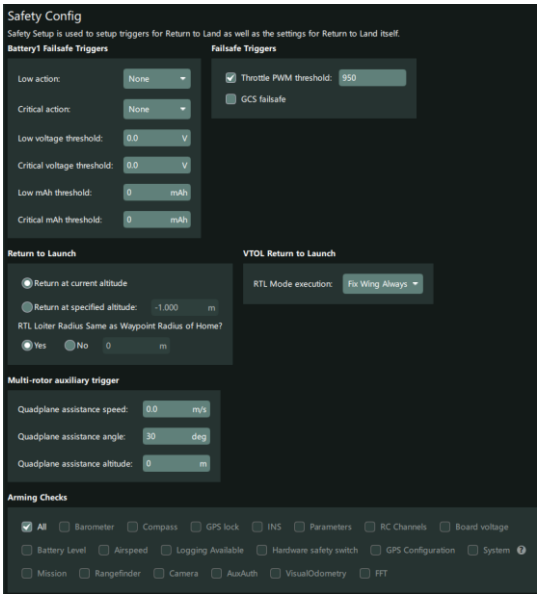

## 6.2.6. Servo

**Path: Vehicle Setup and Analysis > Go to Settings > Servo**


## 6.2.7. Safety

**Path: Vehicle Setup and Analysis > Go to Settings > Safety**

After completing the vehicle configuration, be sure to check safety-related settings, such as fault protection, geofence return-to-home rules, landing rules, and unlock checks.



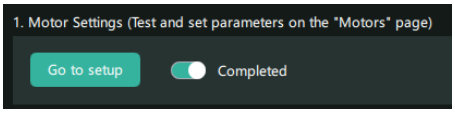

## 6.2.8. Tuning (Multirotor/VTOL)

**Path: Vehicle Setup and Analysis > Go to Settings > Tuning**

After assembling the vehicle, you need to perform a first-flight calibration, also known as the tuning process. The procedure is divided into three stages: Initial Params, Start Tune, and Other Settings.

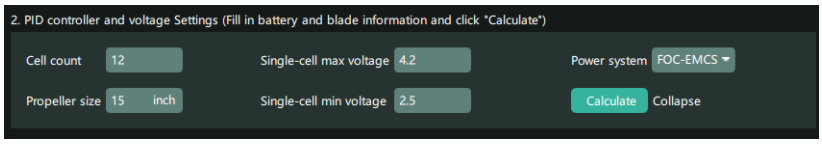
- **Initial Params**

1) Confirm that motor calibration and related parameter settings have been completed. Once finished, slide the toggle switch to "Completed" ; if not completed, click the "Go to Setup" button to perform calibration and configuration.

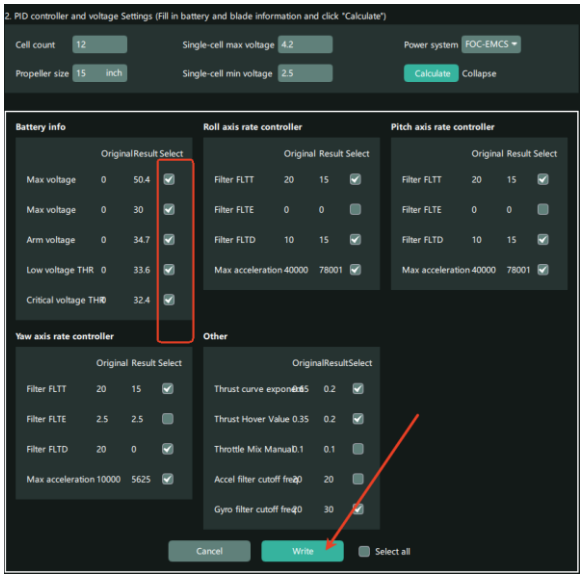



2) Enter the battery and propeller information, then click the "Calculat" button. The system will calculate voltage-related

parameters and basic PID controller parameters.

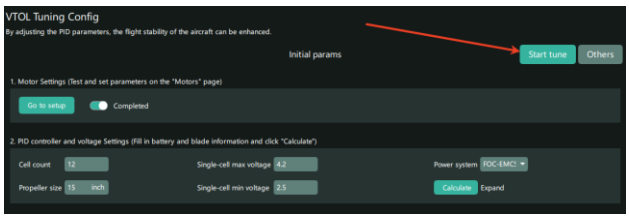



3) Review the parameters displayed in the pop-up window, check the boxes for the parameters you wish to write, and then click the "Write Parameters" button.



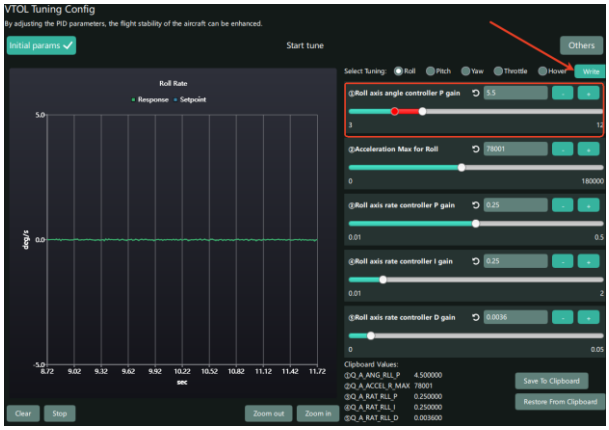

## ➢ Start Parameter Tuning

1) Click the "Start Parameter Tuning" button to enter the interface



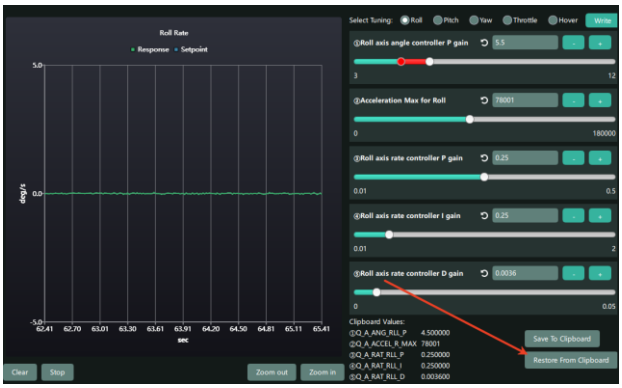

2) Select the group you want to adjust, enter the parameter value directly, or click the "+" or "-" buttons to fine-tune the value (press and hold to adjust continuously), then click the "Write"

button in the upper-right corner. (The red line indicates the amount of adjustment made this time.)

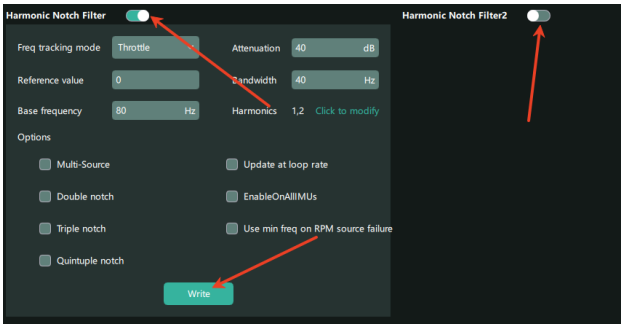



3) Observe the flight results and continue adjusting the parameters until you are satisfied.

Tip: Without switching groups, you can click the "Restore from Clipboard" button to restore all parameter values for the current group, or click the undo icon to revert a specific parameter value.



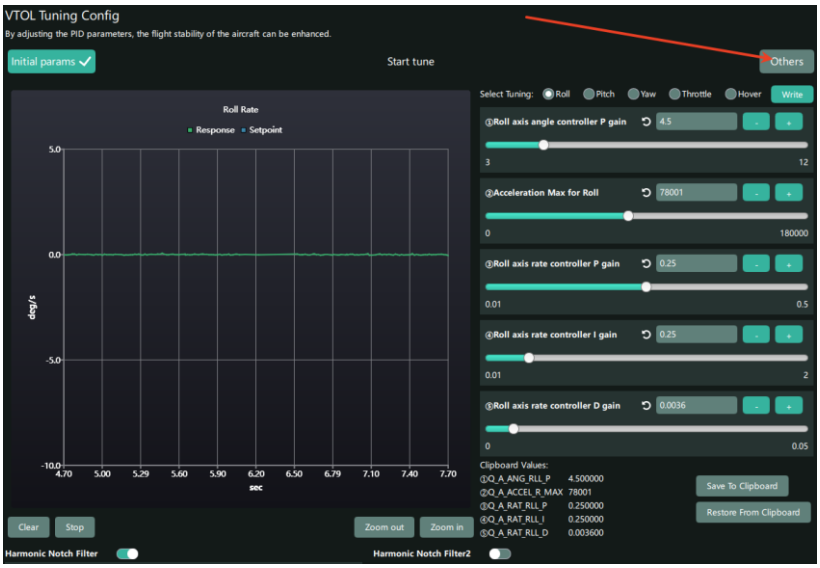

4) Enable the sinusoidal filter as needed, then configure the parameters and click the "Write" button.



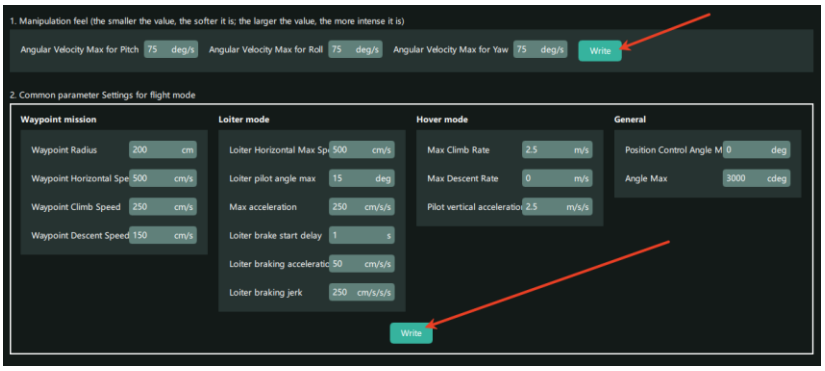

In addition to the method for modifying PID parameters shown above, ArduPilot offers additional tuning options. LGC provides configurations for automatic tuning and transmitter-based tuning; please refer to "More Tuning Methods."

## ➢ Other Flight Parameter Settings

1) Click the "Other Flight Parameters" button;



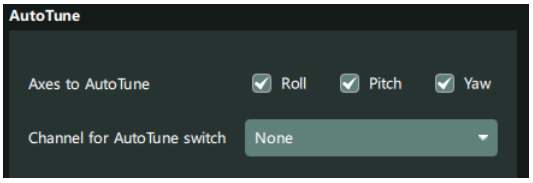

2) Configure parameters related to control feel and other commonly used settings, then click the "Write" button;




## ➢ More Tuning Methods

- Automatic Tuning

Supports configuring the axes to be automatically tuned and the switch channels for automatic tuning.




Additional Notes:

For multirotors, ArduPilot provides two ways to enable or disable auto-tuning:

① Assign a channel in the flight mode settings to the AUTOTUNE mode;

② Set up a separate RC channel specifically for auto-tuning (as configured here)

For VTOL, ArduPilot currently only supports method ① above.

- Remote Control Tuning

Please note that RC tuning is a complex and potentially dangerous

procedure and is not suitable for novice pilots.

✧ For multirotors, the procedure is as follows:

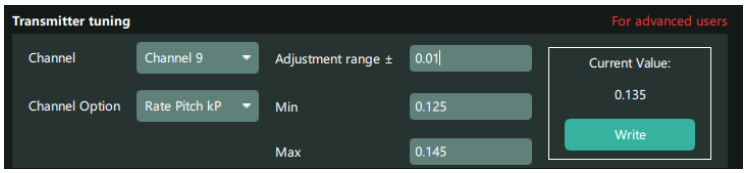
1) Parameter Adjustment Knob Channel

2) Select Target Parameter

3) You can set the adjustment range; LGC will automatically calculate and set the maximum and minimum values, or you can enter the maximum and minimum values directly.

4) Adjust the corresponding channel values on the remote control and observe the effect on the aircraft until you are satisfied with the results.

5) Once parameter tuning is complete, click the **"Write"** button on the right.




✧ For VTOLs, follow these steps:

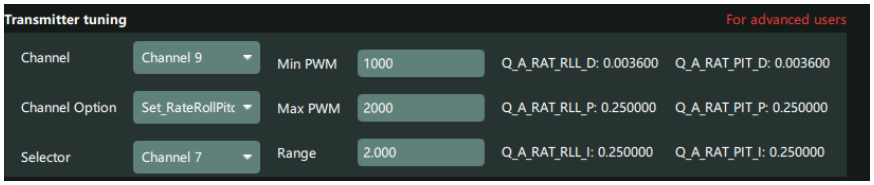
1) Specify the channel for the tuning knob

2) Select the target parameter or parameter set

3) Specify the parameter switching channel (can also be used to trigger parameter writing or parameter value centering)

4) Set the maximum and minimum PWM values and the scaling ratio

5) Perform parameter tuning; when satisfied with the results, trigger parameter writing via a specific operation on the remote control channel.




## 6.2.9. Parameter Tuning (Fixed-Wing)

**Path: Vehicle Setup and Analysis > Go to Settings > Fixed-Wing Parameter Tuning**

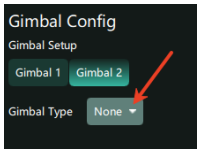
You can set fixed-wing flight speed, flight throttle, attitude, climb/descent speed, performance tuning parameters, and more

## 6.2.10. Gimbal

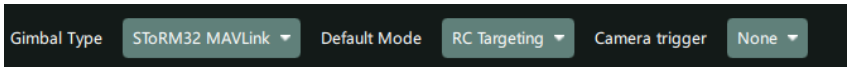
**path: Vehicle Setup and Analysis > Go to Settings > Gimbal**

1) Select Gimbal Type

2) Restart the UAV

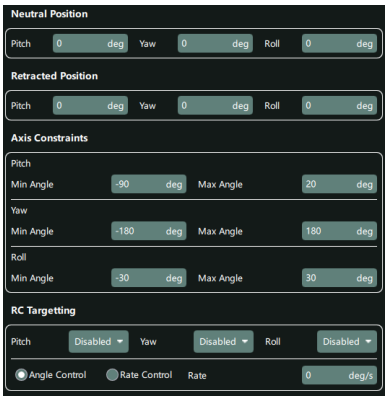



3) Set the gimbal’ s default mode and camera trigger method




4) Select the serial port to which the device is connected, then configure parameters related to the serial protocol and baud rate

5) Set the gimbal’ s neutral position, retraction position, axial constraints, RC target positioning, etc.




## 6.2.11. DroneCAN

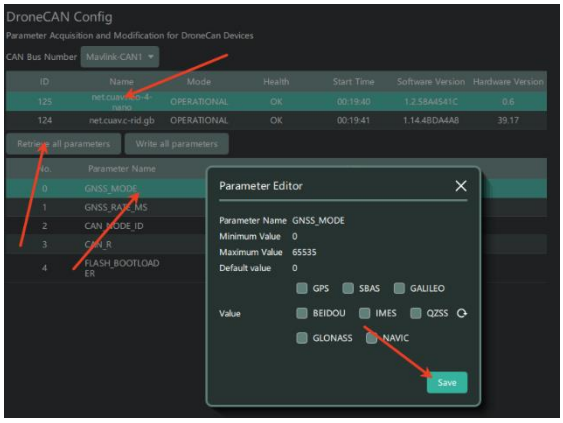
**Path: Vehicle Setup and Analysis > Go to Settings > DroneCAN**

1) Select the CAN bus

2) Select the CAN module

3) Click the “Retrieve All Parameters” button

4) Double-click the desired parameter to edit it




5) Click the “Write All Parameters” button (for some modules, you must click this button for the settings to be saved to the device; if you do not click it, the settings will be lost after power is cycled)

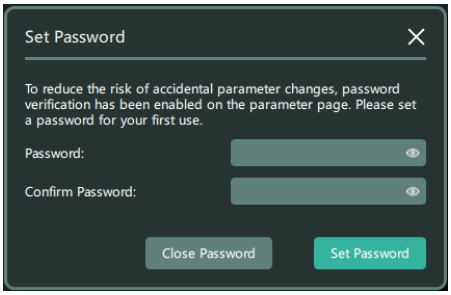
## 6.2.12. Parameters

**Path: Vehicle Setup and Analysis > Go to Settings > Parameters**

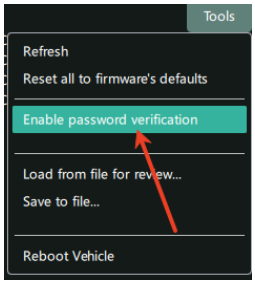
## Shortcut: Double-click the flight map

- **Parameter Password**

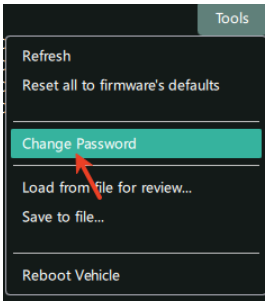
LGC has added a parameter verification feature to the parameter list page. When using this feature for the first time, please set a password yourself; if you do not need this feature, click "Close Password."




If you disable the password feature and later need to re-enable it, click the "Tools" button in the upper-right corner of the Parameters page, then click "Enable Password Verification."



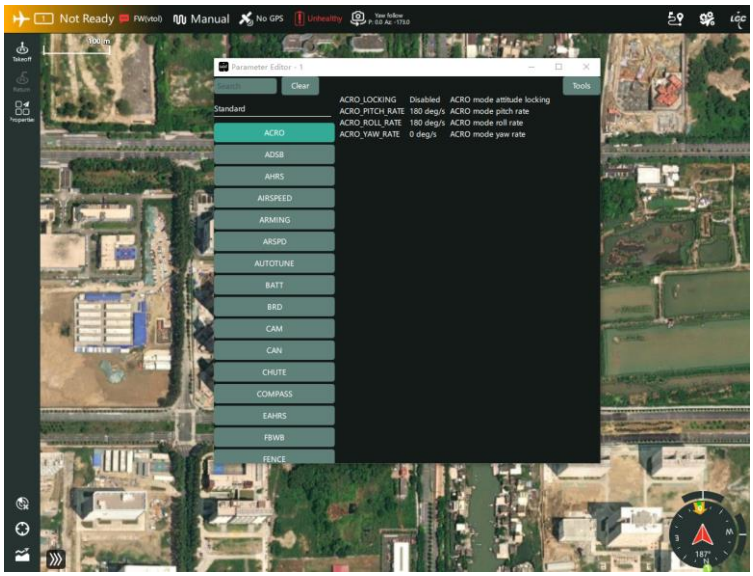

After setting a password, if you need to change it later, click the "Tools" button in the upper-right corner of the Settings page, then click "Change Password."




After setting a password, please keep it safe. If you lose your password, please uninstall and reinstall the ground station.

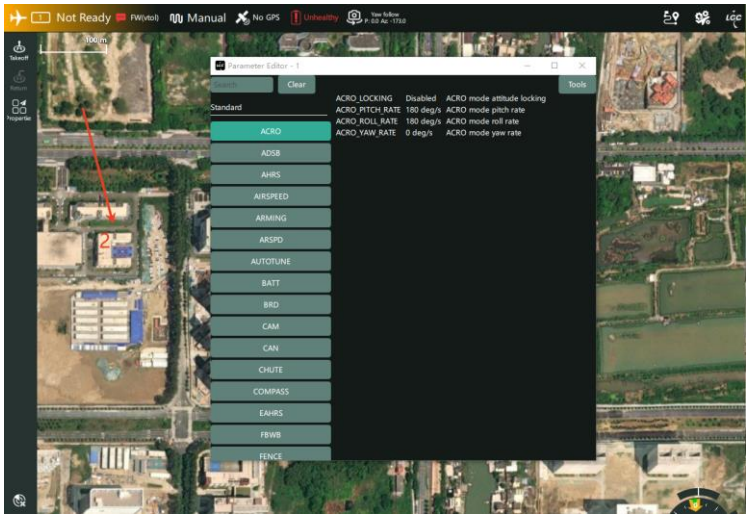
- **Separate Window**

On Windows, click the  icon in the upper-right corner of the Parameters page to open the page in a separate window, allowing you to perform certain tests and parameter checks simultaneously.




➢ **Quick Access**

On the flight map, double-click to quickly open the Parameters page. On Windows, this opens a separate window; on Android, it opens the vehicle settings view and navigates to the Parameters section.



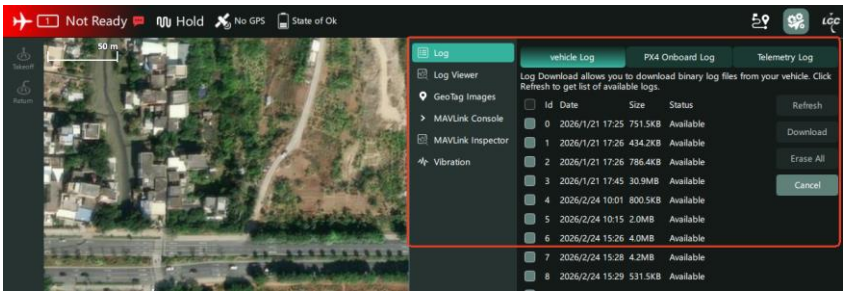

## 6.3. Analysis Tools

**Path: Vehicle Setup and Analyze > Analysis Tools**

**Shortcut: Triple-tap the flight map**

In the Analysis Tools view, you can review, analyze, and debug the

vehicle’ s operation; download and analyze flight logs; replay data transmission logs; and monitor MAVLink data in real time.




## 6.3.1. Log List

**Path: Vehicle Setup and Analyze > Analysis Tools > Log**

You can download logs from the smart controller’ s memory card, capture PX4 logs in real time, and replay local telemetry logs.

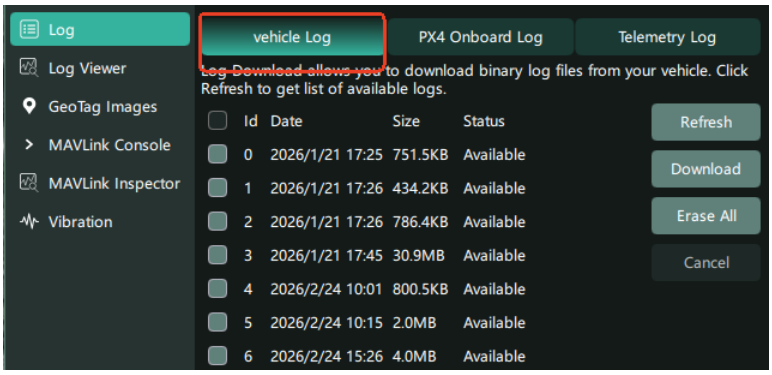
- **SD Card Logs**

These are the vehicle’ s operational logs, generated by the smart controller and saved to the memory card.

Click the “Refresh” button to retrieve the log list;

Check the logs and click the “Download” button to download the selected logs to your local device;

Click the “Clear All” button to delete all logs from the memory card;

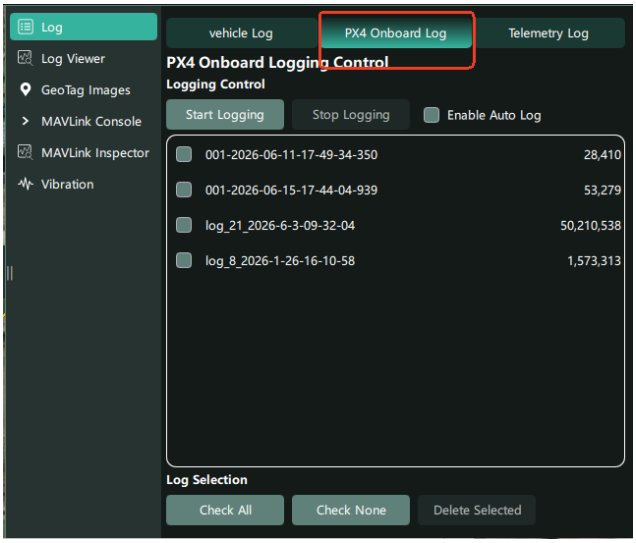


## ➢ PX4 Log Capture

You can capture PX4 controller logs in real time for analysis.

Click "Start Logging" to immediately capture the current logs and store them on your local system; click the "Stop Logging" button to stop logging immediately.

For log files that have been analyzed and no longer need to be saved, you can delete them. Check the target files and click the “Delete Selected” button to delete them.

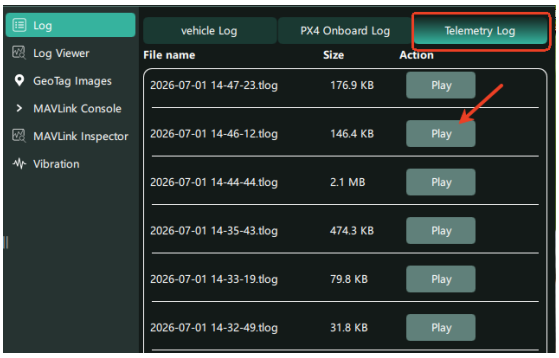



## ➢ Local Telemetry Logs

This section displays telemetry logs recorded by the LGC, which can be played back.

Click “Play” to begin. (Please note that you must disconnect all existing connections before starting playback. See Figure 

)

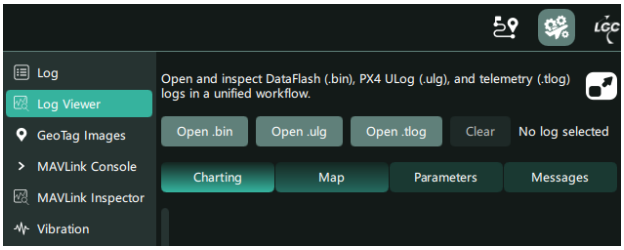



To configure telemetry log generation rules, go to the following path:

**App Settings (logo/gear icon in the top-right corner) > Telemetry > Log Saving**

## 6.3.2. Log Viewer

**Path: Vehicle Setup and Analysis > Analyze Tools > Log Viewer**



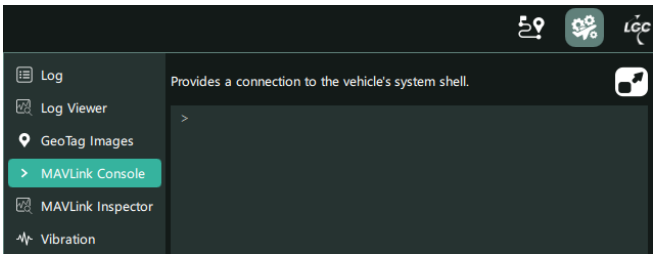

You can view and analyze onboard logs (controller logs). Click the "Open .bin" or "Open .ulg" buttons, select a log file from your local system, and the log content will be loaded into the "Charting," "Map," "Parameters," and "Messages" windows below for analysis.

You can replay telemetry logs. Click the "Open .tlog" button, select a telemetry log file from your local system, and you can replay the flight process in the flight view, or analyze the data in "Log Viewer > Charting" or "MAVLink Inspecctor."

### 6.3.3. MAVLink Console

Designed for PX4 controllers, this feature allows you to send MAVLink commands to the intelligent controller from the console.

Click to open a separate window. (Windows only)




### 6.3.4. MAVLink Inspector

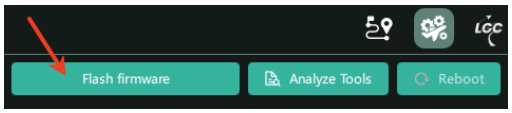
View real-time MAVLink data messages and perform basic analysis.

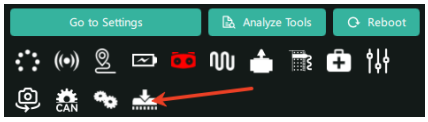
Click to open a separate window. (Windows only)

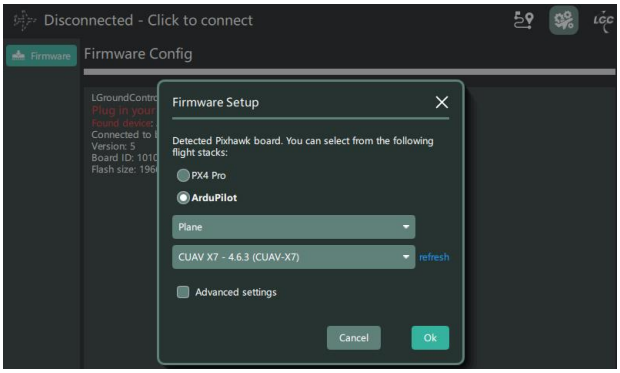
## 6.4. Firmware Flashing

**Path: Vehicle Setup and Analyze > Flash Firmware (Disconnected)**

**Path: Vehicle Setup and Analyze > Firmware Flash Icon (Vehicle Connected)**



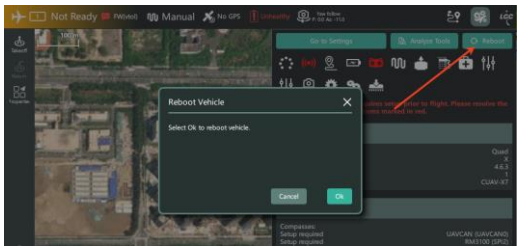

1) Once the interface opens, connect the smart controller via USB (if it is already connected, unplug it and plug it back in; if multiple controllers are connected, unplug them all).
2) Select an open-source platform
3) If you select ArduPilot, you will need to choose the framework type and controller model.
4) Controller models are automatically updated once a month. If a new model has been added by the official team recently but does not appear in the options, click the "Refresh" label.
5) Click the "OK" button to begin the firmware upload.

## 6.5. Reboot

**Path: Vehicle Setup and Analyze > Reboot**

**Path: Vehicle Setup and Analyze > Go to Settings > Reboot**

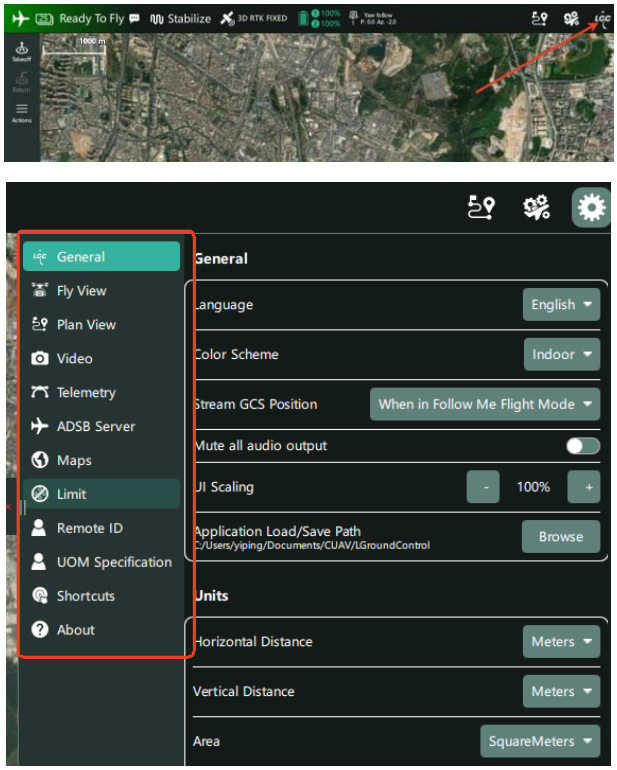
Click the button shown in the illustration to restart the vehicle.


Not Ready
Manual
No GPS
Reboot Vehicle
Select Ok to reboot vehicle.
Cancel
Ok


Ready To Fly
Stabilize
3D RTK FIXED
Frame Config
Reboot Vehicle
Select Ok to reboot vehicle.
Cancel
Ok

# 7. App Settings

Tap the LGC icon ( ) in the upper-right corner of the main interface to access the app settings. You can configure various aspects of the app, such as basic information, flight view, route planning view, video services, telemetry data, maps, no-fly zone management, remote identification specifications, shortcuts, and more




## 7.1. Telemetry Log

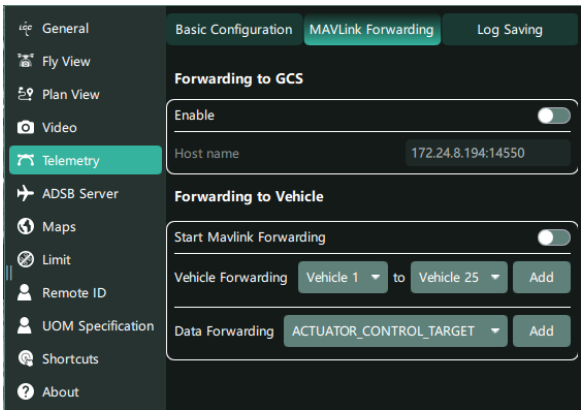
**Path: App Settings > Telemetry**

Supports MAVLink basic configuration, MAVLink forwarding configuration, and data log saving configuration;

- **MAVLink Forwarding**

LGC supports forwarding MAVLink data to other ground stations as

well as to other vehicles.




- Forward to a GCS

1) Turn on the "Enable" switch;

2) Enter the target ground station's hostname and port;

3) Restart the current ground station;

- Forwarding to a Vehicle

1) Turn on "Start Mavlink Forwarding";

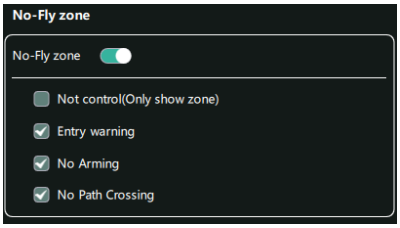
2) Select the source and destination vehicles; then click "Add." You can add multiple forwarding groups;

3) Select a data tag, then click "Add." You can add multiple data tags;

## 7.2. Fly Zone Management

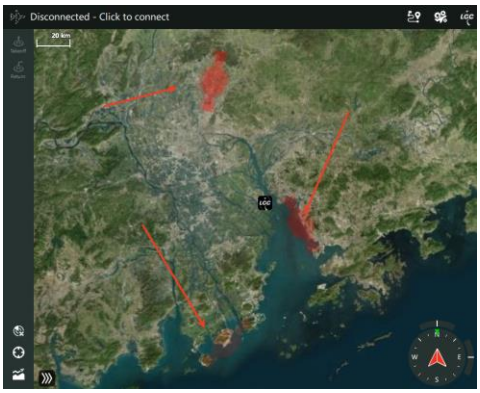
**Path: App Settings > Limit**

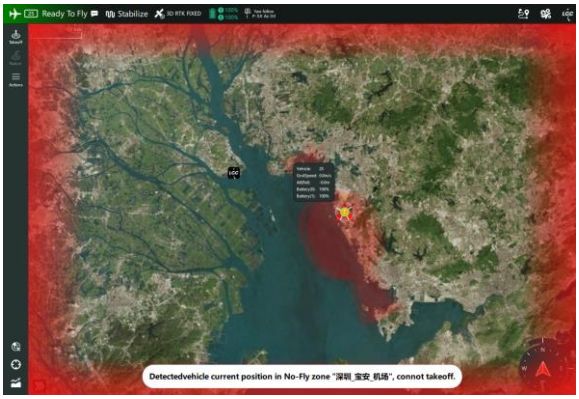
LGC supports no-fly zone control and flight altitude limit management;





## ➢ No-Fly Zones




LGC designates the protection zones of domestic civil airports and the city of Beijing as no-fly zones. No-fly zones are marked on the map with a special color. The system performs flight path checks at multiple stages; if it detects that the aircraft is about to enter or has already entered a no-fly zone, the system will issue a warning and either cancel the operation or initiate a return-to-home maneuver.

This feature is disabled by default; the system will neither display the restricted areas nor provide any alerts or control functions. If users wish to use this feature, they must manually enable the "No-Fly Zones" toggle and configure the settings accordingly. The explanations for each configuration option are as follows:

**No Control (Only show zone)**: Only displays the restricted areas; the

system does not provide any alerts or control measures.

**Entry Warning**: Displays the restricted areas and issues a warning if the aircraft accidentally enters them, but does not restrict flight behavior.

**No Arming**: When the aircraft is within a no-fly zone, takeoff cannot be unlocked.

**No Path Crossing**: Perform a route check before uploading a flight path, starting a mission, or issuing a point-to-point flight command; if the route is found to cross a no-fly zone, the mission will not be executed. Monitor the aircraft' s position during flight; if it is detected to have strayed into a restricted area, issue a warning and take corrective action.

- **Global Altitude Limits**

In accordance with airspace management regulations, micro, light, and small drones must fly below specified true altitudes, while drones of other classes must operate within the approved airspace (including altitude restrictions). LGC provides global flight altitude control functionality, performing altitude checks at multiple stages. If the system detects that the altitude is about to exceed or has already exceeded the limit, it will issue a warning and either cancel the operation or initiate a return-to-home.

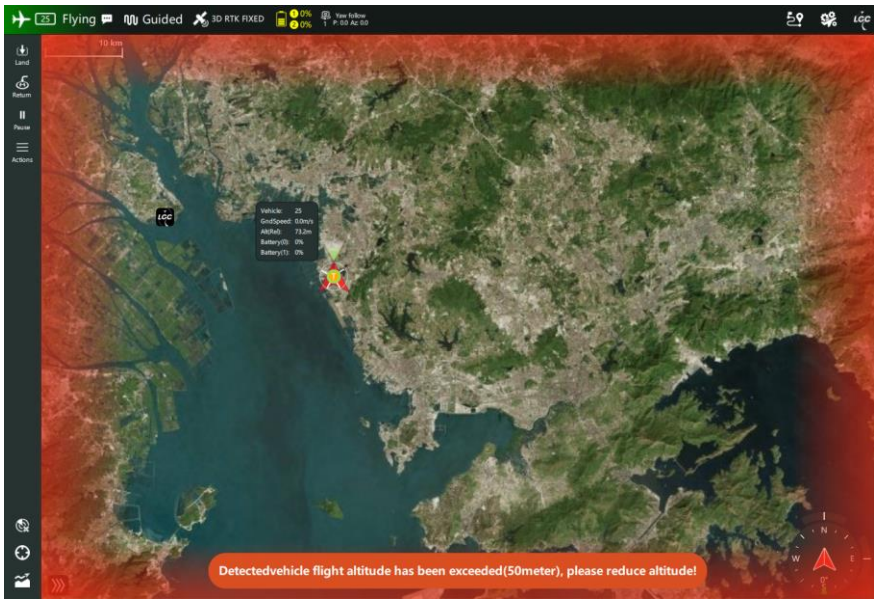
This feature is disabled by default. If you wish to use it, please configure it yourself. The steps are as follows:

1) Set the Height Limit

2) Select at least one of the following: "Excessive Altitude Warning" or "Path Must Not Exceed Altitude Limit." If neither is selected, the feature is considered disabled. Explanations for each configuration option are as follows:

**Exceedance Altitude Warning:** When the aircraft' s real-time altitude exceeds the limit , the ground station issues a warning

**No Path Exceeding Limit:** Performs altitude checks before uploading a flight plan, starting a mission, or issuing a point-to-point flight command; if an altitude violation is detected, the operation will not be executed. During flight, the system monitors the aircraft' s altitude and issues alerts and altitude-reduction measures if a violation is detected.




## 7.3. Remote ID and UOM Regulations

To operate unmanned aircraft in China, operators must comply with domestic regulations regarding the unique product identifier, real-name registration and activation, broadcast-based operational identification, and network-based operational identification (National Standard documents: GB 46860-2025, GB 46761-2025, GB 46750-2025). LGC’ s proprietary technology complies with the aforementioned mandatory national standards. For flights outside China, LGC supports the writing of the Aircraft ID and broadcast-based operational identification information (EU Standard: F3411-22a)

### 7.3.1. Writing the Aircraft ID (Unique Product Identifier)

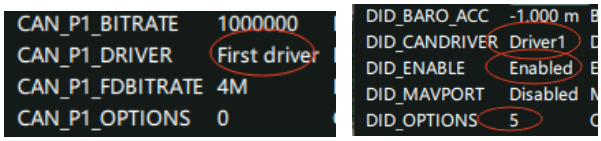
**Path: App Settings > Remote ID**

- China
  - ✧ Prerequisites:

1) Ensure the smart controller supports the Remote ID feature. (Using the ArduPilot platform as an example: Flash a specific bootloader and flight firmware, and ensure the DID_ENABLE parameter is enabled. Please consult service personnel for details);
2) Ensure the CUAV C-RID module has been flashed with firmware compliant with the new national standard, and connect the module to the controller;

3) Configure CAN-related parameters (using ArduPilot firmware as an example, configure CAN_P1_DRIVER and CAN_P2_DRIVER; configure the parameter corresponding to the bus port to which the module is connected, and ensure the parameter value matches the DID_CANDRIVER parameter).

4) Ensure that the remote ID identifying the aircraft has not been written (DID_OPTION parameter = 5)




5) After completing the basic parameter configuration, be sure to reboot the controller

✧ Writing the ID:

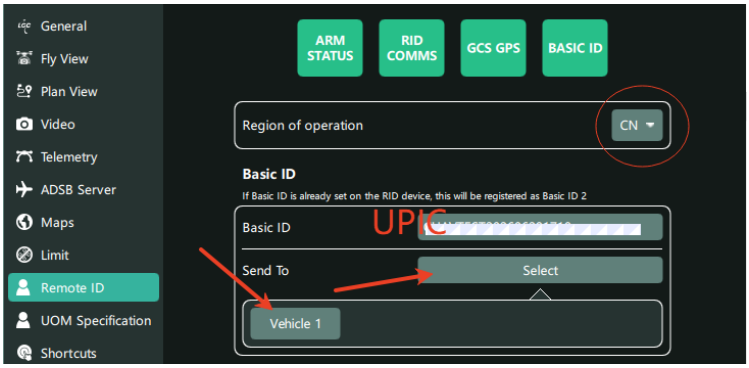
1) Go to the Remote ID interface and select "CN" as the region;

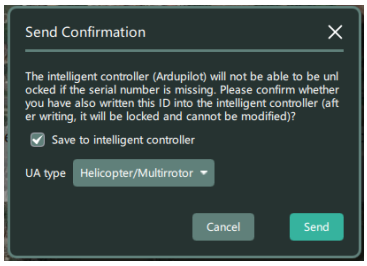
2) Enter the unique product identifier (or serial number); then click the "Select" > "Vehicle X" button;

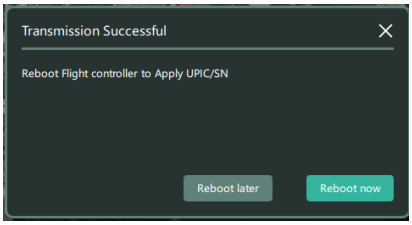
3) In the pop-up window, check the box for "Write to Smart Controller as well"; (If this box is not checked, the ID will not be written to the controller but only to the C-RID module, which may prevent the drone from unlocking).

4) Click the "Send" button to send the data to both the C-RID module and the controller.

5) After writing, a success notification will pop up; click the "Reboot Now" button.



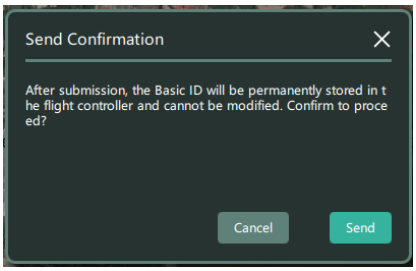

- Other Regions

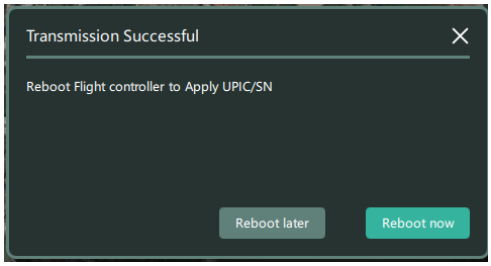
  ✧ Basic Preparations: Except for using international-standard firmware for the C-RID module, the rest of the procedures are the same as for the China region

  ✧ Writing the ID

1) Go to the Remote ID interface and select "EU" or "FAA" as the region.
2) Select the aircraft ID type and aircraft type, enter the aircraft ID, and then click the "Select" > "Vehicle X" button;
3) In the confirmation window that appears, click "Continue Sending."

4) After the information is saved, a success notification will appear; click the "Reboot Now" button.

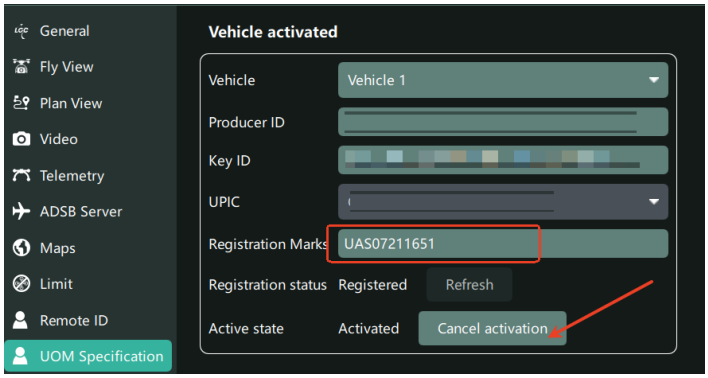




## 7.3.2. Real-Name Registration Verification and Activation

### Path: App Settings > UOM Specification

Within China, in accordance with mandatory national standards, drone owners must complete real-name registration on the UOM platform at and before the drone can be activated for use. The LGC ground station has been integrated with the UOM platform, providing drone activation and deactivation functions, and reporting activation status to the platform.

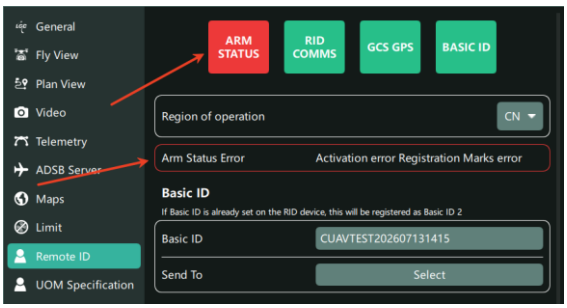


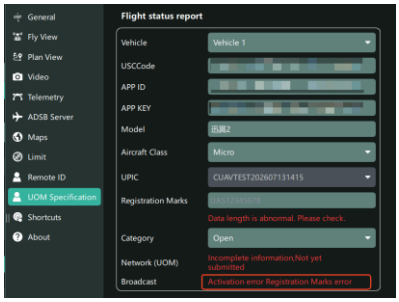

## 7.3.3. Broadcast Mode Identification

- China Region:

**Path: App Settings > Remote ID, UOM Specification**

As shown in the figure below, ensure that the region in the Remote ID interface is set to China, and confirm that the flight control parameters are properly configured, the remote module and firmware are up-to-date, and all fields required by the UOM specification are correctly filled, until no red alerts appear on either the "Broadcast" or "Remote ID" tab. The C-RID module will keep broadcasting.



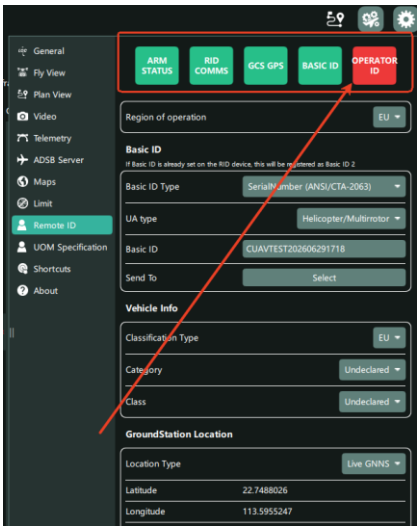




- Other Regions:

**Path: App Settings > Remote ID**

Select the appropriate region, then fill in the subsequent information correctly to ensure there are no red boxes at the top. The C-

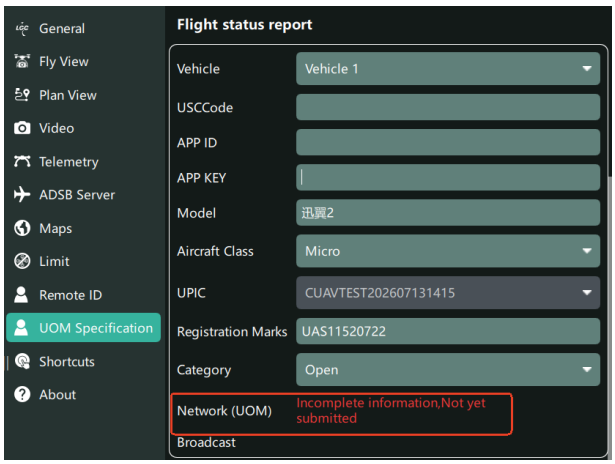
RID module will keep broadcasting.




## 7.3.4. Network-Based Operation Identification

**Path: App Settings > UOM Specification**

As shown in the figure below, ensure that the relevant fields in the UOM Specifications are correct and that there are no red error messages next to the "Network-based" label. The system will submit the data after the aircraft takes off.




## 7.3.5. Remote ID Scanner

**Path: Flight View > Toolbar in the Lower-Left Corner > Remote ID**

## Scanner

**Path: App Settings > Fly View > General > Show remoteId scanner**

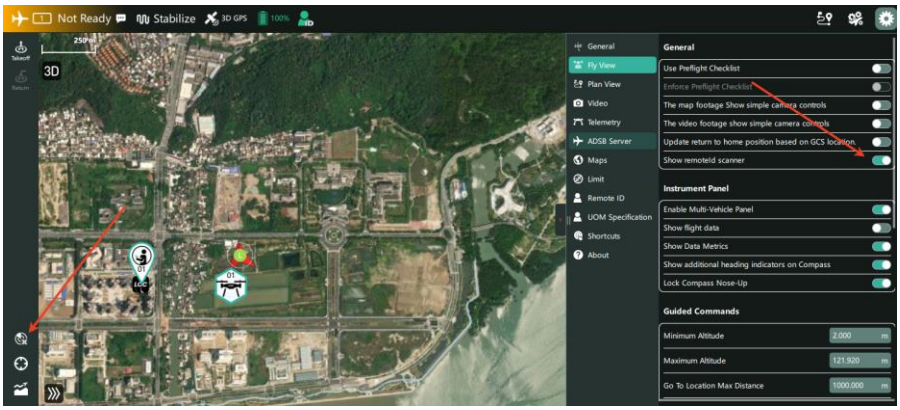
The Remote ID Scanner scans nearby Wi-Fi and Bluetooth broadcast signals, parses them according to the Chinese GB 46750-2025 standard and the international F3411-22a standard, and then clearly displays the data.For pilots, this feature allows them to verify that their aircraft is correctly broadcasting operational information. It also provides an alert function to detect nearby drones, helping to prevent accidental collisions. For the general public or event organizers, this feature can be used to check or monitor whether drones are flying in a specific area. If so, drone locations can be viewed in real time at , and operators can be quickly located.

- **Viewing Options**

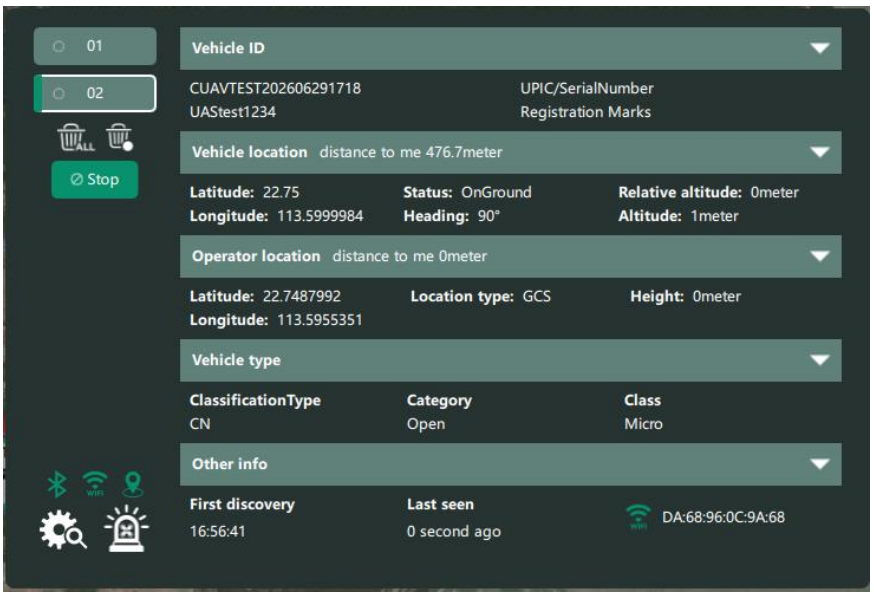
For detected drones, the system provides both list and map views.

- List View

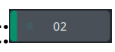
Tap the icon in the lower-left corner of the Flight View  to access the scanner list. If you do not see this icon, go to App Settings > Fly View, and under the "General" group, toggle on the "Show remoteId scanner" switch.




After opening the scanner list, if scanning has not started, click the "Start" button. The "Scanner Timing" section below will explain the rules regarding the scan toggle.




As shown in the image above, all detected drones are listed on the left, automatically numbered by the system. Click one of the numbers to view the drone's detailed information on the right. The Bluetooth and Wi-Fi icons in the bottom-right corner indicate whether the drone was detected via Bluetooth or Wi-Fi.

If a drone's ID appears in this format: 

, it means the drone

is marked as “My Drone,” and its icon will not appear on the map.

Tap to clear all drones and rescan. Tap to clear only those drones that have not been updated in the last 5 minutes (they may have flown away, landed and powered down, or other possibilities).

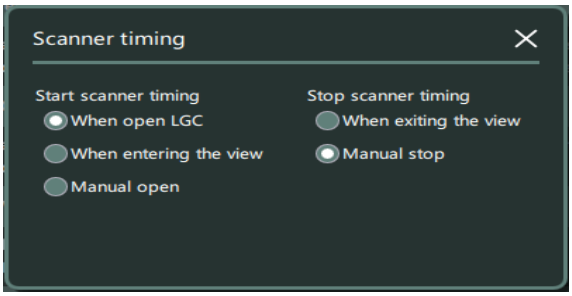
- Map View

As shown in the figure, the flight map displays drones and operators. When you hover over a drone icon (or tap it on mobile devices), a summary of that drone’s information appears on the right. Clicking the location icon allows you to quickly locate the operator of that drone, which is useful in scenarios with many drones; clicking the icon lets you view the drone’s detailed broadcast information.


➢ **Scanner Timing**

By default, scanning begins automatically when The LGC GCS is launched. Click the icon in the lower-left corner of the scanner list view

to configure the scan schedule as needed.




- **Bluetooth and Wi-Fi Options**

By default, the system scans for both Bluetooth and Wi-Fi signals simultaneously. A green icon indicates that the feature is enabled; tap it to disable that type.

- **Map Display**

Map display is enabled by default. A green icon indicates that the feature is enabled; tap it to disable it.

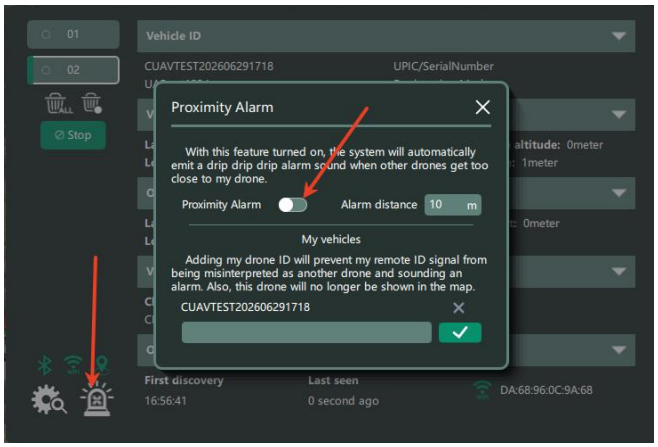
- **Proximity Alert**

This feature automatically emits a beeping alert when "my" drone gets too close to another drone, reminding "me" to operate with caution or take evasive action to avoid a collision.

This feature is disabled by default. Tap the "  " icon in the bottom-left corner of the list screen; you can enable or disable the feature in the pop-up window. If enabled, you' ll need to configure the alert distance.

If this feature is enabled, to prevent the system from mistaking your

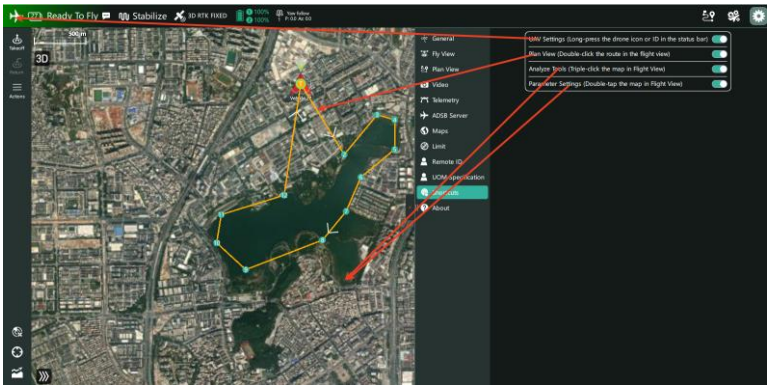
drone’s Remote ID signal for another drone’s and triggering continuous alerts, the system will mark the drone currently connected to the ground station as “My Drone.” If you find that the drone you’re connected to is not marked, please manually enter its unique product identification code or real-name registration number, then click the “ ” button.




## 7.4. Shortcuts

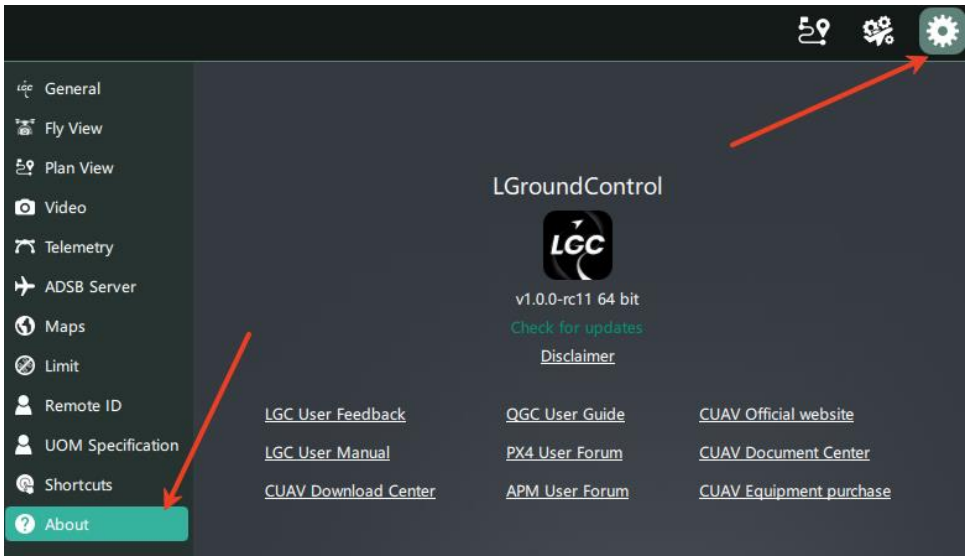
### Path: App Settings > Shortcuts

LGC provides quick access to multiple features, which can be opened by long-pressing or double- or triple-tapping specific targets. All shortcuts are enabled by default; if you do not need them, you can disable them manually.



# 8. About

**Path: App Settings > About**




## 8.1. Check for Updates

LGC will automatically check for new versions upon startup. If a newer version is detected, a reminder will pop up, and a red asterisk will appear next to the "Check for Updates" option on the About page. Click the green text label to manually initiate a version check.

## 8.2. Disclaimer

The disclaimer window will automatically pop up when you launch LGC for the first time; please read it carefully. You may revisit the full disclaimer content via this entry afterward.

## 8.3. User Feedback


Click LGC User Feedback to open the feedback page. You may submit operational issues, feature improvement suggestions or product evaluations through two channels:

① WeChat & Email Support (Real-time Consultation)

The QR code for the LGC product team's WeChat account is displayed on the left side of the page. Scan it to communicate directly with product managers regarding operational faults and functional inquiries. If you prefer email correspondence, send your feedback to pm@cuav.net, and we will respond promptly.

② Online Questionnaire (Structured Feedback Collection)

A QR code for the feedback questionnaire is shown on the right. Scan it to fill in detailed usage experiences, fault descriptions and optimization proposals. You may also click the text link below to jump directly to the questionnaire webpage and submit your comments, helping us continuously improve the LGC Ground Station.