DJI FlightHub 2 User Manual



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The information on the FlightHub 2 webpage may vary depending on the software version. This user manual is subject to change without prior notice. If you have any questions about this manual, contact DJI by sending a message to support@privacy.dji.com.

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Introduction

DJI FlightHub 2 is a cloud-based aircraft task management platform, providing features such as member, device, map photos, task area, flight route, and task plan management. By planning flight routes on the web and distributing tasks to DJI docks and supported aircraft, DJI FlightHub 2 makes remote access to real-time task information possible and improves team productivity and efficiency.

The on-premises version of FlightHub 2 is a SaaS business platform that can be deployed on an intranet, ensuring enterprise data security while providing an almost identical user experience to the public version of FlightHub 2. Through on-premises deployment, the FlightHub platform can achieve automated control over system maintenance and upgrades. Choosing the FlightHub 2 on-premises version package ensures the security of your business.

Before Using

- Supported Devices
- Operating Requirements
- Roles and Permissions
- Notes on On-premises Version

Supported Devices

Supported devices include DJI Dock 3, DJI Dock 2, DJI Dock, Matrice 350 RTK, the Matrice 30 series, Matrice 300 RTK, DJI Mavic 3E, DJI Mavic 3T, DJI Mavic 3T Advanced, the Matrice 3D series, the Matrice 4 series, the Matrice 4D series, and Matrice 400.

- Using Matrice 350 RTK and Matrice 300 RTK together with the Zenmuse H20 or H30 series is also supported. If a different payload is mounted onto the aircraft, some or all of the functions of DJI FlightHub 2 may not be supported.
- When using Matrice 300 RTK with the H30 series, DJI RC Plus should be used.

Operating Requirements

1. DJI FlightHub 2 requires the following computer configuration for optimal performance:
   - Processor: Intel Core i5 8th Generation or equivalent
   - RAM: 8G or higher
   - Graphics Processing Type: Dedicated graphics
   - Screen resolution: 1920 × 1080 pixels or higher
2. Browsers that can run DJI FlightHub 2 should be Chrome 92 and above, Safari 13 and above, or Firefox 90 and above. The recommended minimum bandwidth of the internet connection is 50 Mbps.
3. The DJI Pilot 2 app version should be later than v4.0. The app should be later than v6.1 if dock-related functions are used.

Roles and Permissions

There are five roles within an organization: super administrator, organization administrator, device maintainer, organization member, and temporary member. There can be multiple projects within an organization, and each project has two roles: project administrator and project member. Users with different roles are granted with different permissions, and permissions at the organization and project levels are independent of each other.

Organization Roles and Permissions

User permissions at the organization level are as follows:

1. Super Administrator: Manages the organizational life cycle and owns all permissions of an organization administrator. There should be at least one super administrator within an organization, and the super administrator can only leave the organization when the role is transferred to another member.
2. Organization Administrator: Manages members, devices, and projects within the organization.
3. Device Maintainer: Manages all devices within the organization.
4. Member: Views project information, adds devices, and exits the organization.
5. Temporary Member: Has limited operation permissions within the joined project.

> Note: Both super and organization administrators can click ⓘ on the Members page to view detailed permission descriptions.

Project Roles and Permissions

User permissions at the project level are as follows:

1. Project Administrator: Manages the project life cycle and owns all project permissions. There should be at least one project administrator within a project.
2. Member: Has basic operation permissions within the project.

> Note: The project administrator can click ⓘ on the “Edit project info” panel to view detailed permission descriptions.

Notes on On-premises Version

The FlightHub on-premises version cannot obtain updates from the flight safety database in real time. You can choose one of the following to enhance flight safety:

1. Before the flight, check the flight geography area on the DJI FlySafe website for any flight risks.
2. Make sure that the aircraft firmware version is up to date. The flight safety database will be updated along with firmware update.

Feature Differences Between Public Cloud and Private Cloud

- Feature Differences

The Public Cloud and On-Premises deployments offer different feature sets tailored to specific operational needs. While both versions share a core set of functionalities, key differences exist in areas like organization, map, task, and device management. This guide details the primary distinctions between the two versions.

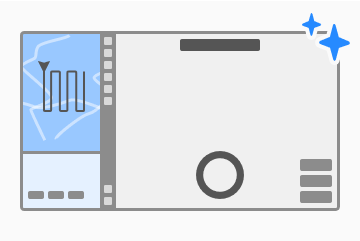
Feature Differences

Module	Function	Public Cloud	On-premises
Organization Management	Interface Customization	No	Yes
	Third-Party Account Login	Yes (via Enterprise SSO)	Yes (via OAuth)
Map Service	Map Data	Yes (Included by default)	Yes (Requires custom import)
	Elevation Data	Yes (Included by default)	Yes (Requires custom import)
Task Management	Automatic Post-Flight Mapping	No	Yes
Design Files	Design Files Display on Map	Yes	No
	Design Files Import and Calibration	Yes	No
Analyzer	Measurements	Yes	No
Smart Change Detection	-	Yes	No

Module	Function	Public Cloud	On-premises
Device Management	Live Weather and Ionosphere Data Display	Yes	No
	One-Click Dock Diagnostics	Yes	No
	SMS Alerts for Critical Faults	Yes	No
	eSIM Data Usage Warnings	Yes	No
	One-Click Damage Assessment	Yes	No
	GEO Zones Unlocking	Yes	No
PSDK	Real-Time Speaker Broadcasting	Yes	No
System Integration/Custom Development	OpenAPI	Limited support	Yes
	FlightHub Sync	Yes (OAuth and GB28181 forwarding not supported)	Yes
	MQTT Bridge	No	Yes
	Frontend Components	No	Yes
	FlightHub Sync (Beta)	Yes (Supported until end of 2025)	No

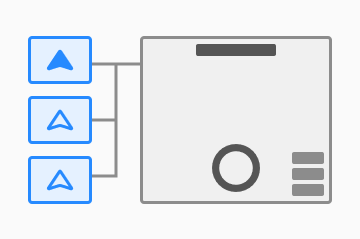
Public Version

2025-9-25
What's New



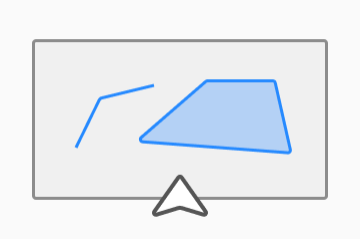
All-New Virtual Cockpit Interface

- Redesigned Interface: A complete visual and interactive optimization for a more intuitive experience.
- Flexible Layouts: Customize the interface with new layout options to fit your needs.
- Updated Icons: A brand-new icon set provides a cleaner, more refined look for improved clarity.
- Streamlined Interactions: The user experience has been optimized to make operations faster, smoother, and more intuitive.



Multi-Aircraft Control in Virtual Cockpit

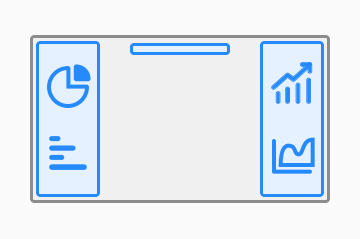
- Manage a group of aircraft for collaborative tasks using the new multi-aircraft control panel.
- Instantly switch control between different aircraft, enabling a single operator to manage multiple drones.



AR Projection for Spatial Lines and Areas

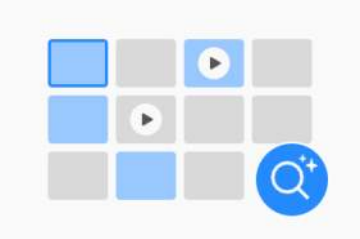
- AR projection now supports virtual lines and areas for enhanced situational awareness.

- View spatial lines and areas drawn in DJI Pilot 2 directly in the live view.



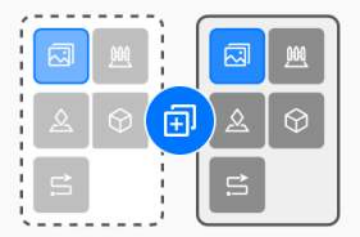
Dashboard

- Adds support for dashboard, a new centralized hub for viewing key operational data at a glance.
- Designed for administrators, it provides the high-level insights needed for effective management.
- Track core metrics including assets, device status, task schedules, and data outputs to support informed decision-making.



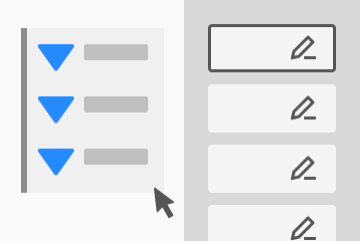
Smart Media Search

- Find what you're looking for faster. Smart Search automatically detects and tags objects in your photos and videos.
- Export search results as a detailed report for sharing, documentation, and further analysis.



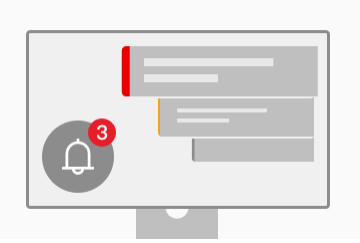
Organization Data Management

- Administrators can now manage data across the entire organization. Easily view and copy annotations, flight routes, models, and GEO Zones between projects.



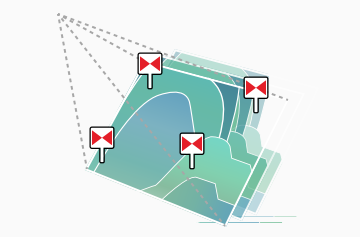
Batch Editing Waypoint Routes

- Save time by editing multiple waypoints at once. You can now batch-modify waypoint parameters and actions in the Flight Route Editor.



Centralized Message Center

- All notifications are now aggregated into the new Message Center. View historical system messages and customize which alerts you receive in your personal settings.



Using Ground Control Points for Mapping

- Cloud reconstruction supports setting image control points, and standard targets support automatic piercing and reconstruction

What's More



- On-Premises users can now import custom offline elevation data downloaded from the DJI Developer website.

- Adds a feature comparison table outlining the differences between the Public Cloud and On-Premises versions.

2025-9-16
New Model Support



DJI FlightHub 2 now supports Mavic 3T Advanced enterprise aircraft.

- Supports the Mavic 3T Advanced enterprise aircraft, its gimbal camera, and connected PSDK accessories.
- Supports point, line, and area annotations for Mavic 3T Advanced enterprise aircraft.

2025-8-28
What's New



Manifold 3 Cloud Integration

- Adds support for remote management and use of Manifold 3 applications via the cloud.
- Device Management: Adds support for device display and application management for Manifold 3.
- Virtual Cockpit: Enables launching loaded applications and viewing their effects in real time.



Integration of Third-Party Intelligent Algorithms on Aircraft

- Virtual cockpit adds support for third-party infrared AI recognition algorithms.
- Users can now view real-time AI recognition results from infrared cameras.

- For waypoint and patrol routes, you can now choose third-party intelligent algorithms on the aircraft to perform recognition tasks.



AI Task Report Export

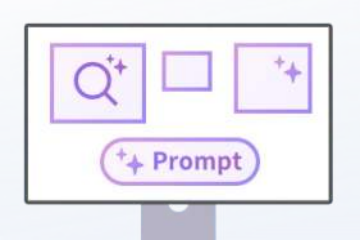
- Flight records now support exporting reports for AI-generated warning events.

What's More



- You can now set the threshold for crewed aircraft collision risk (Effective only for dock aircraft).
- Adds support for setting a reserve battery level for return-to-home for dock aircraft. In strong winds, it’s recommended to increase this value for safety.
- Virtual cockpit now supports infrared photo format settings.
- Adds a comprehensive guide to package options and billing methods.

2025-7-31
What's New



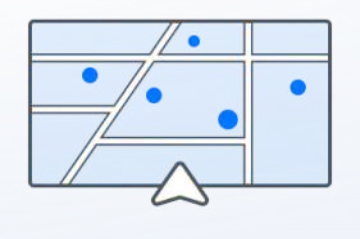
Multimodal Object Detection

- Virtual cockpit now supports multimodal object detection.
- Users can define the objects that trigger warnings by entering text, uploading images, or selecting objects in real time.
- Snapshots will be automatically archived to a dedicated folder in the media file library, with support for tag-based filtering.
- You can configure warning notification types and set record intervals.



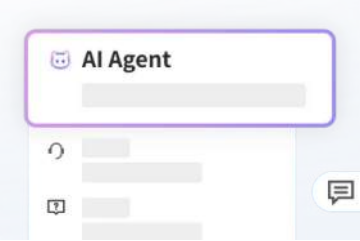
AI Warning Record List

- The AI warning record list in the virtual cockpit and flight records has been upgraded.
- Supports archiving and displaying records generated by multimodal object detection and cloud-based intelligent algorithms.



AR Street Projection

- The virtual cockpit now features AR street projection.
- Supports adjusting opacity and height offset, as well as displaying landmarks.



AI Assistant

- An AI Assistant is now available in the help pop-up window.
- The AI Assistant can intelligently answer product usage questions using content from FlightHub 2 public and on-premises product manuals, on-premises deployment manuals, and other documentation.

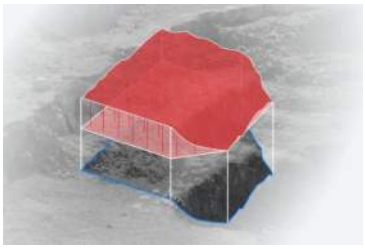
What's More



More Updates

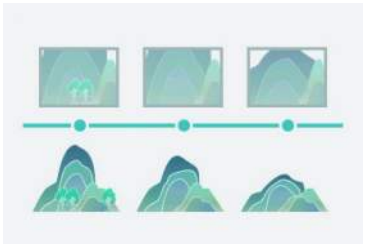
- Organizations can now enable Two-Factor Authentication for login to enhance FlightHub account security. Once enabled, members must bind an authenticator and enter a dynamic code to complete the login process.

2025-6-26
New Analyzer Feature: Supports Engineering Measurement and Progress Management



Measurement and Calculation

- Measurement and calculation tools can be created in the analyzer, enabling line and volume measurements based on models and design files.
- Line Measurement: Supports triangulation and gradient measurements and allows extraction of cross-sections.
- Volume Measurement: Supports current model volume calculation, two-phase and multi-phase model volume change calculations.



Timeline

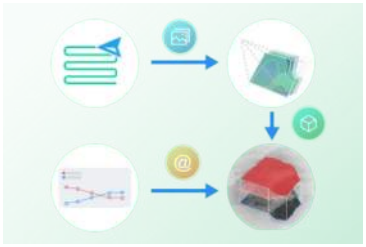
- Supports viewing model timeline, allowing quick and dynamic switching to display the model evolution process and intuitively track project progress.
- Supports viewing media timeline, enabling association and viewing media files by time and spatial dimensions for visual traceability and process management.



Analysis Report

- Supports generating measurement analysis reports, with configurable report covers, measurement areas, and other structured content.
- Supports report templates, scheduled automatic report generation, and email delivery, facilitating progress tracking, data archiving, and reporting.

What's New



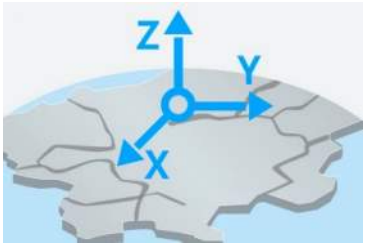
Automated Workflow

- Full Process Integration: Integrates flight, mapping, measurement, calculation, and analysis tasks for end-to-end automation from data collection to intelligent analysis.
- Flexible Task Management: You can freely choose from existing tasks or create new ones, with support for editing and linking to meet different scenario requirements.
- Efficient Preview and Performance: Preview task results with one click, quickly save and enable automation to improve operational efficiency.



Design File Support

- Supports PDF and DXF formats. Design files can be accurately positioned on the map via coordinate system conversion or matching point calibration.
- Supports parsing 3DFACE (DXF) to obtain design heights for cross-section and volume calculations.



Engineering Coordinate System

- Project settings now support engineering coordinate system configuration.
- Supports EPSG universal and custom projected coordinate systems.
- Supports four or seven parameter calculation and application.

What's More



- Adds Spanish language support for the interface.

2025-6-10
New Product Support



DJI FlightHub 2 now supports DJI Matrice 400.

- FlyTo tasks are now available for Matrice 400.
- Adds support to remotely control Matrice 400 gimbal camera and PSDK accessories.
- Adds support for flight route planning for Matrice 400.

What's New



AI Capabilities Support

- Patrol routes are now available. Users can specify areas for inspection, and the system can automatically identify people, vehicles, and boats within the patrol area using intelligent recognition algorithms and send alert notifications.
- The virtual cockpit now supports real-time AI recognition of people, vehicles, and boats, and can automatically send alerts based on infrared video streams.

- The media file library in FlightHub now supports displaying, viewing, and sharing AI-generated videos on the aircraft, showcasing AI recognition results.



Live Flight Controls Support

- Adds support for live flight controls of Matrice 4D series aircraft when connected via remote controller.
- Users can now issue return-to-home commands to all aircraft within a project with a single click.



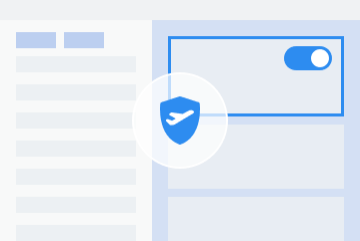
Management of Algorithms on Aircraft

- Users can now load third-party algorithms distributed from the DJI Developer website onto aircraft connected to docks via the Algorithms page.



FlightHub Sync

- FlightHub Sync Beta has been upgraded to FlightHub Sync. Users can synchronize specified project media files, flight routes, flight records, and other information to external storage buckets.



Compliance Requirements in Chinese Mainland

- Aircraft operating in the Chinese mainland must report flight dynamic data to the Civil Aviation Administration. Go to My Organization > Organization Settings > Organization Basic Information to view details and enable the feature.

What's More



- Flight records now support compatibility with DJI Dock 2.
- When distributing tasks, the system checks the flight route's historical obstacle sensing records and prompts if any exist. If obstacle sensing is triggered during recurring or continuous tasks, subsequent tasks are automatically suspended and must be manually resumed to ensure safety.
- Adds support for automatic association of abnormal feedback with dock or aircraft logs. After selecting the time, data is automatically matched and the error code field is filled in to improve problem analysis efficiency.
- Supports remote switching between FlightHub public and on-premises environments for docks.

2025-4-15

Starting from April 15, 2025, the DJI FlightHub 2 package adjustments will be effective:

- New Packages
  - Enterprise package, only limits the number of online devices. There are no restrictions on livestream and storage usage, offers extra-large mapping images package and advanced features like SSO login.
  - Introduction of larger capacity options for Livestream Minutes Recharge, and Storage Space Upgrades.
- Original Package Adjustments

- Activation Validity: The enterprise package has no activation period, whereas other packages (Professional Version 1-Month Plan, Professional Version 12-Month Plan, Professional Version Large Capacity 3-Year Plan, Mapping Images Recharge, Livestream Minutes Recharge, Storage Space Upgrade) have a 6-month activation validity.
- After activation, the livestream minutes recharges, mapping images recharges, and storage upgrades have a 1-year usage period.
- The above adjustments apply only to packages purchased on or after April 15. Previously purchased packages will retain their original terms.

For more details, please visit the DJI Store. If you have any questions or suggestions, please feel free to contact us.

What's New



SSO Login

- The enterprise package supports SSO login, allowing login through third-party enterprise accounts.



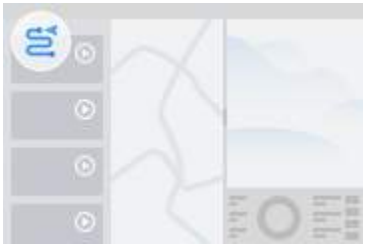
Device Recommendation

- On the team page, click the FlyTo destination, and the system will automatically sort and recommend suitable docks for the user to choose from.
- When creating a new plan in the Task Plan library, after selecting a flight route task, the system will automatically sort and recommend suitable devices based on the distance between the first waypoint and the dock.



Automatic Swap Task

- The virtual cockpit supports creating automatic swap tasks. After choosing an area of interest, it automatically schedules two aircraft to swap for uninterrupted observation.
- This feature currently only supports DJI Dock 3.



Flight Route Distribution via Virtual Cockpit

- The virtual cockpit supports viewing tasks in the flight route library. Users can select, distribute, and perform waypoint routes and area routes.
- This feature currently supports DJI Dock 3, DJI Dock 2, and Matrice 4 enterprise aircraft.



Flight Records

- The Task Plan library supports displaying manual flight tasks controlled via the virtual cockpit or the remote controller.
- Adds support for displaying device change information during flight, aircraft key behaviors, user commands, and more.
- Adds support to export summary or detailed information of flight records.
- This feature currently only supports DJI Dock 3.



Remote Connection to Relay

- DJI Dock 3 can now search for relays nearby. Users can select a relay device and enter a password to connect.

What's Updated



Waypoint Route Supports POS Data Recording

- The Waypoint route adds a Record Current Attitude action, allowing one-click capture of the current virtual aircraft's gimbal yaw and tilt angles, aircraft yaw angle, and camera zoom level. These data are then added to the action list.
- The Waypoint Route Editor adds a Sync POS Info When Adding Waypoints setting in the upper right corner. When enabled, it will automatically add the aircraft's POS information when adding new waypoints, improving waypoint route editing efficiency.



More Updates

- When DJI Dock 2 performs an area route, it supports automatic obstacle bypassing of custom GEO Zones when the aircraft is flying to the first waypoint. The setting needs to be enabled in the area route editor > Advanced Settings > Custom GEO Zone Obstacle Bypassing.
- Gimbal tilt angle of Matrice 4T when performing waypoint routes is now extended to 70 degrees.
- DJI Dock 3 aircraft supports more payload capacity.
- The device list adds a visual display of aircraft payloads and accessories, making it easy to quickly select suitable docks and aircraft.

2025-3-19
What's New



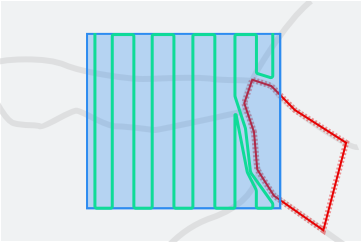
Role Configuration and Management of Project Permission

- Project role management enables detailed control over member permissions within a project by assigning various permissions to different roles.
- Organization administrators and super administrators can manage project roles within the organization via Members > Member Role Management > Project Member Role Management.



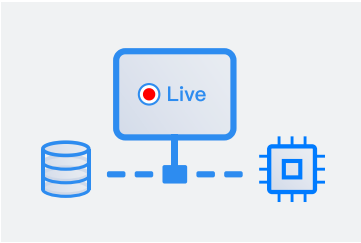
Linear Flight Route

- The flight route library now supports creating linear flight routes, which are suitable for mapping scenarios such as rivers and pipelines.



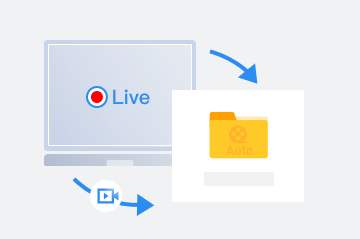
Custom GEO Zone Obstacle Bypassing in Area Route

- Area routes support Custom GEO Zone Obstacle Bypassing within Advanced Settings, allowing the aircraft to bypass custom GEO Zones during mapping.
- This feature is currently supported by DJI Dock 3, Matrice 4 Enterprise Series, and DJI Dock 2.



Cloud Intelligent Algorithms

- Users can deploy intelligent algorithms via Algorithms on the cloud.
- Users can instantly call successfully configured cloud intelligent algorithms and instances in the virtual cockpit.
- Users can view deployable intelligent algorithm models from vendors on the DJI Developer platform.



Livestream Auto Recording

- Supports configuring devices within the project for automatic livestream recording.
- Recorded files will be archived in the media file library under the Auto Record Playback folder.
- Supports flexible cleanup cycle settings to automatically free up storage space.

What's More



More Updates

- Added more layout modes and improved user experience for simultaneous livestreams.

2025-2-27
New Product Support



DJI FlightHub 2 now supports DJI Dock 3.



Accessory Support

- DJI Dock 3 supports the D-RTK 3 Relay Station and DJI Dock 3 Vehicle-Mounted Gimbal Mount.
- Matrice 4D series aircraft support the DJI AS1 Speaker, DJI AL1 SpotLight and DJI FTS Module（For countries in Europe only）.

What's New



AI Capabilities Support

- The virtual cockpit supports real-time AI recognition and automatic alerts when people, vehicles, or boats are identified, and provides the ability to view detailed alert records generated during tasks in real time.
- The virtual cockpit supports Smart Track, allowing continuous tracking of AI-recognized objects.
- Waypoint routes support intelligent recognition actions, capable of recognizing people, vehicles, boats, or subjects with abnormal high and low-temperature during the flight, and performing actions such as taking photos, recording videos, and waiting for the operator to take over after alerts.
- The plan library now supports AI route warning notification, allowing the configuration of alert receiving methods and frequency after subject recognition.
- The above features are currently only supported by the Matrice 4D series aircraft.



AI Change Detection

- Media File Change Detection: The media file library supports intelligent detection and marking of changes in photos from two media folders generated by the same waypoint route task.
- Model Change Detection: The model library supports intelligent detection and marking of changes in two overlapping 2D models.



Vehicle-Mounted Deployment Mode

- Adds support for quick calibration of device location and pre-flight safety checks in vehicle-mounted deployment mode.
- The feature is currently only supported by DJI Dock 3.



Multi-Drone Takeoff/Landing

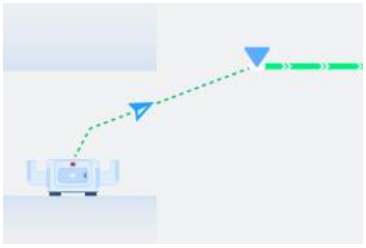
- Adds support for scheduling devices to take off or land in areas where docks are densely deployed.
- The feature is currently only supported by DJI Dock 3.



Custom No-Landing Zone

- DJI FlightHub 2 adds a new type of no-landing zone in custom flight areas, preventing aircraft from automatically landing within these zones.
- Users can manually draw no-landing zones or convert map line annotations into no-landing zones automatically.

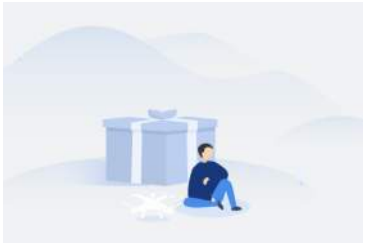
- Adds support for sending no-landing zones to DJI Dock 3 and Matrice 4D series aircraft within the project to enhance flight safety.



Entry/Exit Route

- Adds support for performing the entry/exit routes after takeoff to ensure safe departure before performing flight tasks.
- The feature is currently only supported by DJI Dock 3.

What's More



More Updates

- Matrice 4D series aircraft support the Night Scene mode.
- The Mouselook feature in the virtual cockpit has been upgraded.
- Resolution settings are now supported during model mappings.

2025-1-8
New Product Support



DJI FlightHub 2 now supports DJI Matrice 4 enterprise series

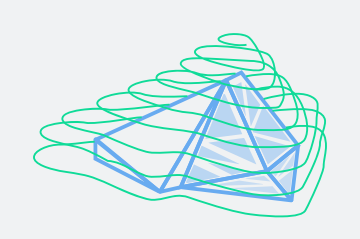
- Adds support for Live Flight Controls for Matrice 4 enterprise series aircraft.
- Adds support to remotely control gimbal cameras of Matrice 4 enterprise series aircraft.

What's New



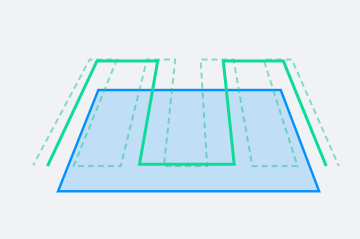
AI Recognition

- Adds support to remotely control Matrice 4 enterprise series to intelligently recognize people, vehicles, and boats, and alert users after recognition.
- Third-party algorithm models developed on DJI AI Developer platform can now be imported into Pilot 2 to expand AI recognition scenarios.
- Media file library supports display, counting, and editing of AI recognition results. Currently only wide-angle and zoom photos are supported.
- The feature is currently **only supported by Matrice 4 enterprise series aircraft**.



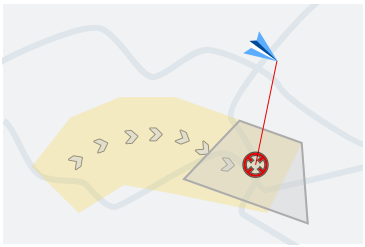
Smart 3D Capture Route

- Rough models can now be generated during model mapping and used for creating Smart 3D Capture routes.
- Adds support for Smart 3D Capture in the flight route library, allowing generation of flight routes based on rough models and simplifying mapping tasks.
- The feature is currently **only supported by Matrice 4 enterprise series aircraft**.



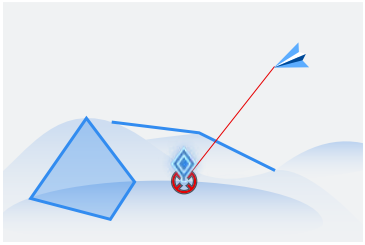
Enhanced Ortho Collection for Area Routes

- Smart Oblique can now be enabled to improve efficiency during ortho collection when aircraft is performing area routes. It is recommended to use the feature for ortho mapping tasks only.
- The feature is currently **only supported by Matrice 4 enterprise series aircraft**.



Observed View Synchronization

- Adds support for syncing observed views from Pilot 2 to FlightHub 2.
- The feature is currently **only supported by Matrice 4 enterprise series aircraft**.



Spatial Annotation Synchronization

- Adds support for syncing spatial annotations from Pilot 2 to FlightHub 2.
- The feature is currently **only supported by Matrice 4 enterprise series aircraft**.

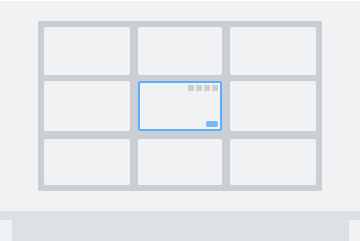
2024-11-7

Starting from November 7, 2024, DJI FlightHub 2 officially adjusts its policy on free quotas for device binding.

- Changes to the allocation logic:
  - Organizations can receive free quotas when binding a device (Dock or aircraft) for the first time.
  - An organization can only receive free quotas once. If an organization has already received free quotas, it cannot receive them again when binding additional devices.
  - A device can only receive free quotas once. If a device has already received free quotas, it cannot receive them again when re-bound to another organization.
- Changes to the amount and validity of free quotas:
  - The amount of free quotas will no longer vary by device type. All devices will receive 100GB storage space, 5000 livestream minutes, and 3000 mapping images.
  - The validity period of the free quotas is 3 months.

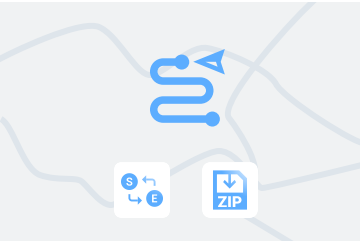
From November 21, 2024, compressed files will count towards storage. If storage space is insufficient, files that occupy extra space will not be deleted, but new files cannot be added. It is recommended to download, archive, or delete compressed files to avoid exceeding the storage limits. If you have any questions or suggestions, please feel free to contact us.

What's New



Livestream Management

- Adds support for simultaneous livestreams for multiple devices within a project. Supported devices include the security cameras of the docks and the gimbal cameras of the aircraft.
- Adds support to choose different grid layouts for livestream display.
- Users can also recenter the device on the map, press keyboard shortcuts to enable the livestream view in full screen, adjust the on-screen display information, and select between different livestream display modes.



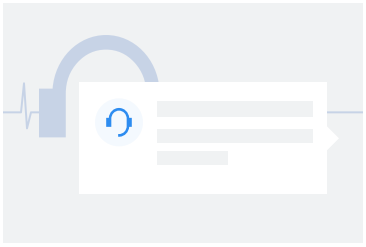
Flight Route Management

- Adds support for automatically swapping continuous actions such as starting and ending recordings when reversing flight routes.
- Adds support to download flight routes in batch.



Dock Management

- Adds support to subscribe to notifications when the dock cover is not closed for an extended period of time.
- Adds support for submitting issue reports in the Task Plan library and warning message panel.
- DJI Dock 2 now supports vision assist.
- DJI Dock 2 now supports emergency landing.
- DJI Dock 2 now supports timed shots, storage settings, resolution settings, Link Zoom, and more.
- DJI Dock 2 now supports device damage assessment.
- Base station PPK files can now be transferred back to FlightHub 2, and the files will be stored in the corresponding flight route folder in Media Files.
- More battery data will be displayed for DJI Dock 2.



Online Support

- Users can now feedback system problems, make optimization suggestions, and obtain quick assistance.



Third-Party Flight Task Distribution

- FlightHub Sync now supports distributing flight tasks from third-party cloud platforms, and the tasks will be synchronized to DJI FlightHub 2.

What's Updated



- Optimized organization package information. Users can now view the details of storage space, mapping images, and livestream minutes.
- Optimized the map searching feature.

2024-9-24

DJI FlightHub 2 is expected to officially adjust its policy on free quotas for device binding in November 2024.

1. Changes to the allocation logic:
    - Organizations can receive free quotas when binding a device (Dock or aircraft) for the first time.
    - An organization can only receive free quotas once. If an organization has already received free quotas, it cannot receive them again when binding additional devices.
    - A device can only receive free quotas once. If a device has already received free quotas, it cannot receive them again when re-bound to another organization.
2. Changes to the amount and validity of free quotas:
    - The amount of free quotas will no longer vary by device type. All devices will receive 100GB storage space, 5000 livestream minutes, and 3000 mapping images.
    - The validity period of the free quotas is 3 months.

We commit to maintaining the current policy until the new policy is officially implemented. The resources you have already received can be used until they are exhausted or expired. The new pollcy is expected to take effect in November. If you have any questions or suggestions before then, please feel free to contact us.

2024-9-19
What's New



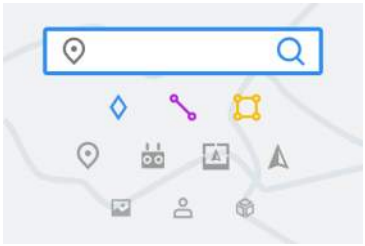
Annotation Management

- Adds support to create separate folders for annotations.



Circular Annotations

- Adds support to add circular annotations.



Global search for elements on map

- Users can search geographic locations, map annotations, device information, and models or photos that are overlaid on the map.



Flight Route File Management

- Users can now create folders to organize flight route files. Previous files will be automatically stored in the root directory.



More Information Stored During Recording

- When aircraft is performing a waypoint route task and recording, aircraft yaw and gimbal pan angles and camera zoom ratio will be recorded at the same time.



Local Media Files Import

- Adds support to import local media files or folders with media files that are collected by DJI devices.
- Supported file types includes wide, zoom, and infrared photos, panoramas, livestream screenshots, videos, and PPK files.

What's Updated



- Adds support to add PinPoints based on the camera orientation and terrain data for DJI Dock 2.
- Optimized the user experience when centering elements on the map.
- Optimized the photo markup feature.
  - When using the markup feature, shortcut instructions will be displayed on the lower left corner.
  - Adds support to change the markup color.
  - Adds support to filter photos with unnamed markups.

What's Fixed

- Fixed certain known issues.

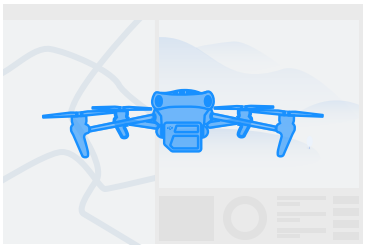
2024-8-15
What's New

- DJI Dock users can cancel tasks after RTK convergence has timed out.

What's Fixed

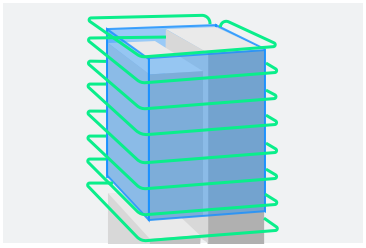
- Fixed certain known issues.

2024-7-18
What's New



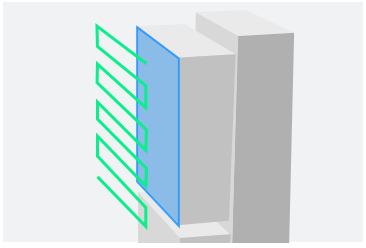
Remote Control of Mavic 3 Enterprise Series Gimbals

- Adds support for remotely controlling the Mavic 3 enterprise series gimbals.



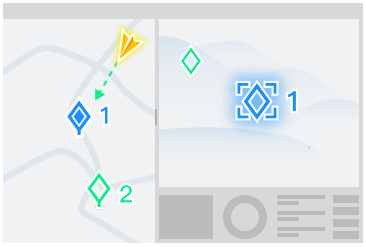
Geometric Routes

- DJI Dock 2 now supports geometric routes.



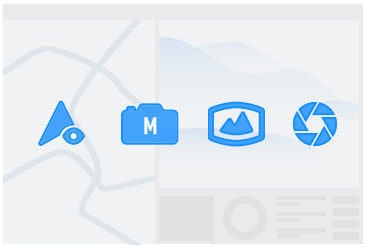
Slope Routes

- DJI Dock 2 now supports slope routes.



AR Projection

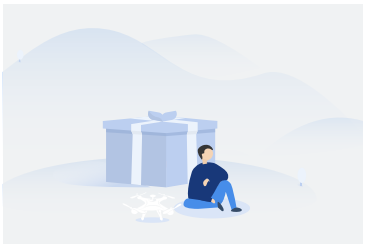
- DJI Dock 2 supports AR projection of PinPoints. Users can view PinPoints in the livestream view now.



New Features of Live Flight Controls for DJI Dock 2

- Adds support for Discreet mode.
- Adds support for manual mode and settings of parameters such as shutter speed, ISO, and aperture.
- Adds support for dewarp in camera settings on DJI Matrice 3D.
- Adds support for mechanical shutter settings on DJI Matrice 3D.

What's Updated

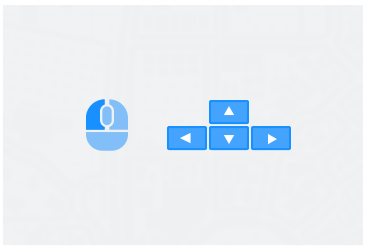


- Taking panoramas in Waypoint routes for DJI Dock 2 is now supported.
- Adds support for transferring PPK files of Waypoint and Area routes from DJI Matrice 3D to cloud, downloading, and accessing PPK files through FlightHub Sync or Cloud API.
- Adds support for embedding SRT files in videos captured by DJI Dock 2. Downloading and accessing videos with SRT files through FlightHub Sync or Cloud API are also supported.

What's Fixed

- Fixed certain known issues.

2024-6-24
What's New

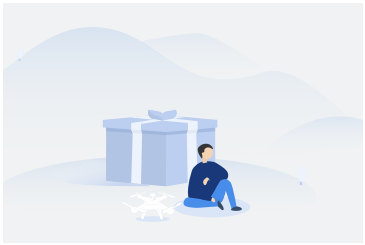


Map Roaming

- Press arrow keys on keyboard to move the map.

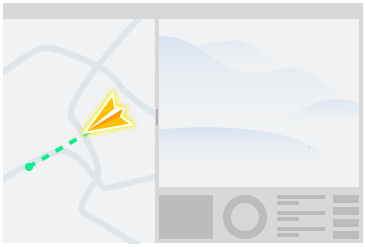
- Press Shift and left-click or press Shift and keyboard arrow keys simultaneously to move the map vertically for a detailed view of walls and other surfaces.
- Press Alt and left-click or press Alt and keyboard arrow keys simultaneously to move the map horizontally.

What's Updated



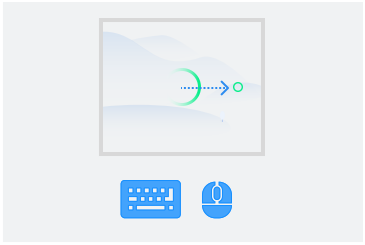
- Improved browsing experience on the map and models.
- Improved map element display effects.

2024-5-23
What's New



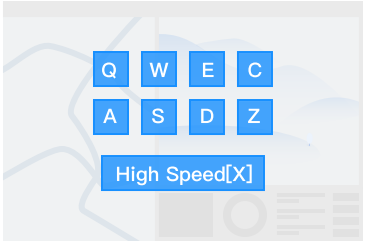
Virtual Cockpit

- Adds support for virtual cockpit for Live Flight Controls.



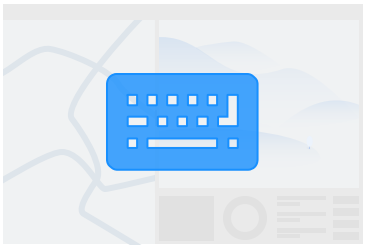
Virtual Cockpit—First Person View

- Users can control flight in the first person view after enabling mouselook.



Virtual Cockpit—Flight Speed Mode

- Users can switch between high and low speed modes for aircraft.



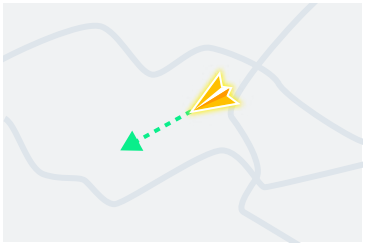
Virtual Cockpit—Keyboard Shortcuts

- Adds support to use shortcuts to switch lenses, take photos, and start recording.



Virtual Cockpit—Voice Prompts/Sounds Effects

- Voice prompts and sound effects are supported during flight.



Virtual Cockpit—Gimbal Orientation

- Users can view the aircraft gimbal orientation on the map during flight (for DJI Dock 2 only.)

New Product Support

- Adds support for Zenmuse H30 series. When using Matrice 300 RTK with the H30 series, DJI RC Plus should be used.

What's Updated



- Users can select the coordinate system when creating 3D mapping tasks on the cloud.
- Adds support for importing KML or KMZ files exported by third-party software programs such as ArcGIS, OvitalMap, and LocaSpace Viewer. For OvitalMap, both OVKML and OVKMZ are supported.

What's Fixed

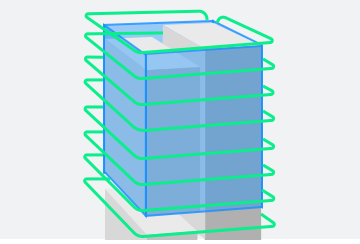
- Fixed certain known issues.

2024-4-28
What's New

- Adds support for the remote ID status display in China, the United States, Japan, and some countries in Europe.

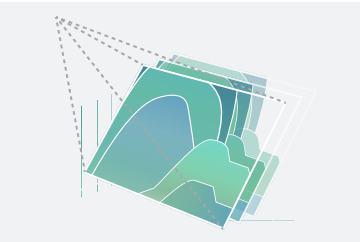
> - When the remote ID status error prompt appears on the dock status panel, update the aircraft firmware of DJI Dock 2. For DJI Dock users, please wait for a later firmware version.
> - An abnormal remote ID status error prompt does not affect the normal use of the dock or aircraft. If users are unable to update the firmware, this error prompt can temporarily be ignored.

2024-4-11
What's New



Geometric Routes

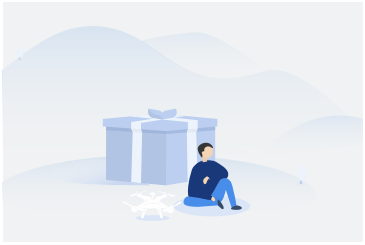
- Adds support for planning geometric routes in the flight route library for mapping of prism- and cylinder-shaped structures.



Mapping Optimization

- Point cloud models based on visible photos are now supported during model mapping.
- Mapping quality reports are supported for models generated in the model library. Users can view the reports in the model list or when previewing models.
- Users can select formats such as OSGB, OBJ, and PLY when generating models in the model library.

What's Updated



- Users can now set weather-related flight restrictions for different device models in the project settings.
- When downloading more than 1,000 photos at a time, photos will be compressed into several packages, and users can select the packages to download.

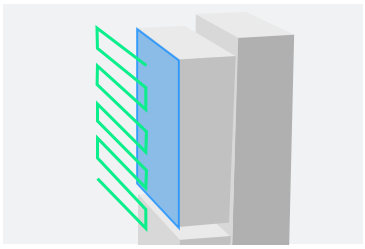
What's Fixed

- Fixed certain known issues.

DJI FlightHub 2 will update storage policy for paid resources recently to ensure its accuracy. Contact DJI Support if you have any questions.

- Related resources of deleted projects will be cleared and will no longer take up storage space.
- Errors caused by deleting files in batches will be corrected. Deleted resources will no longer occupy storage space.
- Models generated in the model library during the beta test that did not take up storage space will be included this time.
- Due to transmission errors, data that were not counted toward storage will be corrected this time.

2024-4-7
What's New



Slope Routes

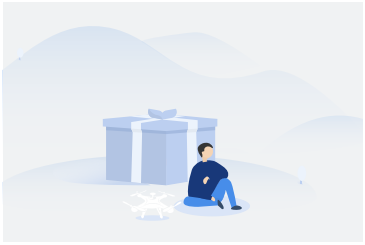
- Adds support for planning slope routes in the flight route library to capture photos for slope mapping.



Subject Zoom

- Users can now right-click and drag to select a subject to zoom in when viewing the livestream of the DJI Dock 2 aircraft.

What's Updated



- Optimized the FlyTo performance for DJI Dock 2.

What's Fixed

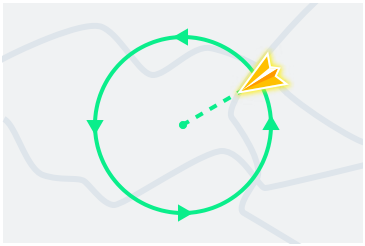
- Fixed certain known issues.

Following features are now supported by DJI Dock 2:

- Media files captured during FlyTo and planned tasks are automatically separated and stored in different folders.
- Photos and panoramas can be transferred to the cloud in real time during Live Flight Controls.

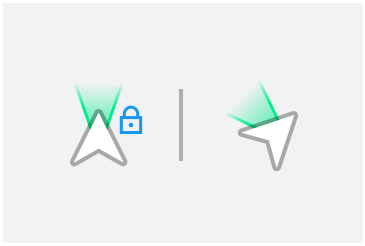
- Adds support for panorama and Smart Low-Light photo modes. Setting the exposure value and MF, AFS, or AFC focus mode is also supported.
- Dock aircraft trial flight, unlocking licenses, silent mode, and flight trajectory playback are now supported.

2024-2-22
What's New



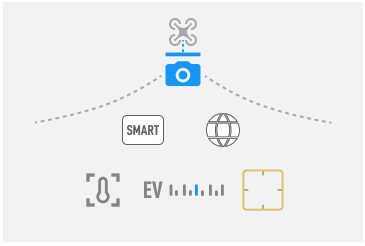
POI

- FlightHub 2 users can select any location or PinPoint on the map and start POI when DJI Dock is in the Live Flight Controls mode.



Consistent Gimbal and Aircraft Orientations

- When DJI Dock is in the Live Flight Controls mode and livestream is started, users can now set the gimbal mode as Lock mode. When users double-click the livestream view to change the gimbal angle, the aircraft will adjust its orientation and remain consistent with the gimbal.

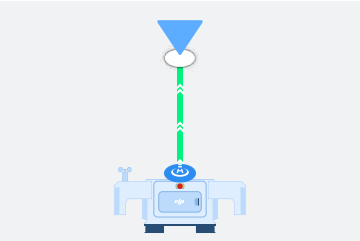


Optimized Data Collection Performance

For DJI Dock:

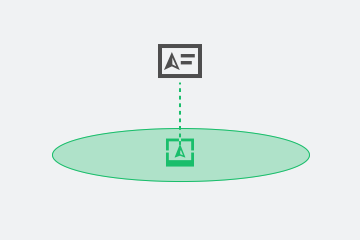
- Media files captured during FlyTo and planned tasks are automatically separated and stored in different folders.

- Adds support for transferring photos and panoramas to the cloud in real time during Live Flight Controls.
- Adds support for panorama and Smart Low-Light photo modes. Setting the exposure value and MF, AFS, or AFC focus mode is also supported.
- The infrared camera now supports spot and area temperature measurement and high temperature alarm.



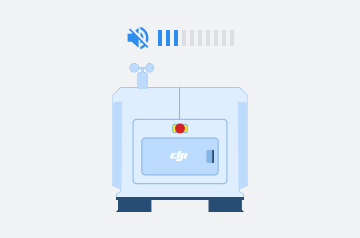
Dock Aircraft Trial Flight

- Users can now assess DJI Dock's task performance and media file transfer reliability. Click Trial Flight in Device Maintenance and a task plan will be automatically created.
- The dock aircraft will ascend 60 meters vertically, and the gimbal will tilt down to 90° to take a photo and then return home.



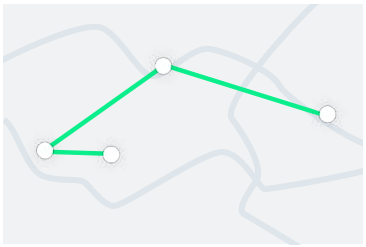
Unlocking Licenses

- DJI Dock can now transfer unlocking licenses to the dock aircraft in Devices > Dock.
- Adds support for updating Flight Safety Database for DJI Dock in Devices > Dock.



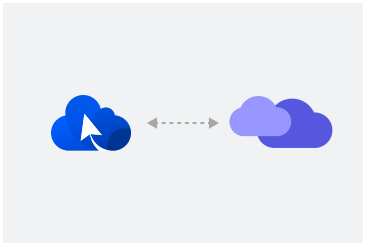
Dock Silent Mode

- When enabled in Device Maintenance, noise will be reduced when DJI Dock is in operation.



Flight Trajectory Playback

- Users can now view the flight trajectory after a planned task is completed by DJI Dock.



FlightHub Sync

- FlightHub Sync supports forwarding livestream data to third-party platforms.
- FlightHub Sync supports transferring the dock and aircraft status data, such as location and altitude, to third-party platforms in real time.
- Bidirectional flight route file transfer between FlightHub 2 and a third-party platform is now supported.
- Third-party platforms can send notifications with event details such as time, location, and description to FlightHub 2.

What's Updated



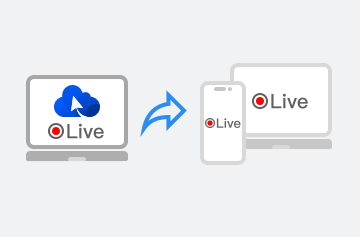
- DJI Dock supports the obstacle data settings.
- Users can now update the FlyTo destination without interrupting the FlyTo task (for DJI Dock only).
- Large Restricted Zone can now be bypassed when the DJI Dock aircraft is performing FlyTo tasks.
- Panorama is now supported when editing waypoint routes for DJI Dock and Matrice 30 series.

What's Fixed

- Fixed certain known issues.

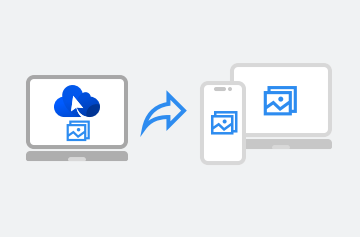
> Note: Certain features mentioned above will be supported by DJI Dock 2 in later versions.

2023-11-23
What's New



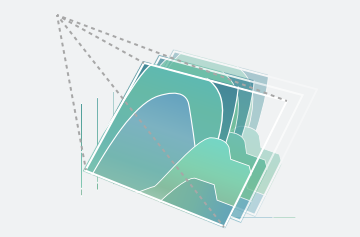
Livestream View Sharing

- FlightHub 2 users can share camera livestreams, and anyone can use the shared link to view livestreams without logging in to the cloud.



Media Files Sharing

- FlightHub 2 users can share photos, panoramas, and videos, and anyone can use the shared link to view files without logging in to the cloud.



2D/3D Mapping

- The beta test of cloud mappings and mappings based on media files has ended. Related models will occupy the cloud storage space. Removing unnecessary models recommended.
- Setting one region of interest before a mapping task is supported.

Photos and Models Comparison

- Photos Comparison: FlightHub 2 adds support for comparing wide-angle, zoom, and infrared photos taken by the same Take Photo (Fixed Angle) action at the same waypoint. Users can compare when previewing photos.
- Models Comparison:
  - Users can now compare 2D models that have overlapping areas. The models comparison can be accessed from Model Library or Map Photos.
  - Adding point, line, and area annotations is also supported.

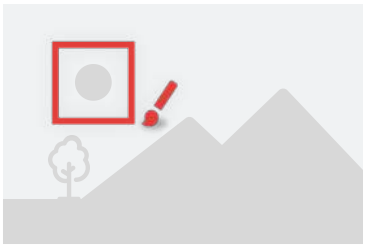
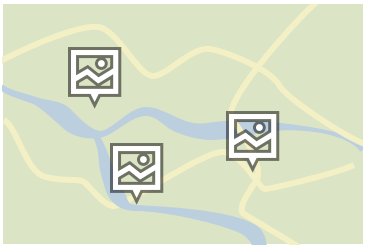


Photo Markup

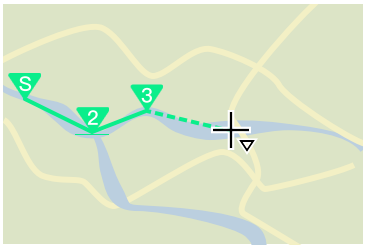
- Users can now add shapes and notes when previewing livestream screenshots and previewing or comparing wide-angle, zoom, and infrared photos.



Map Photo Management

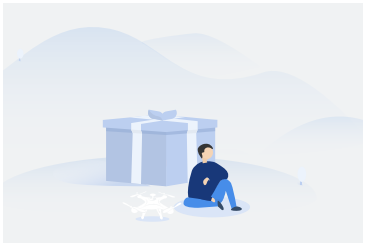
- FlightHub 2 adds support for the map photo management. Users can now preview photos on the map in Map Photos and overlay photos in the same folder onto the map in Media Files.

What's Updated



Flight Route Editor Optimization

- Users can simply left-click on the map to add waypoints.



More Updates

- Live Flight Controls: The search result on the map can be directly converted to a FlyTo destination.
- Setting units of measurement is supported in Organization Settings.
- Models can be copied to other projects in the same organization.

What's Fixed

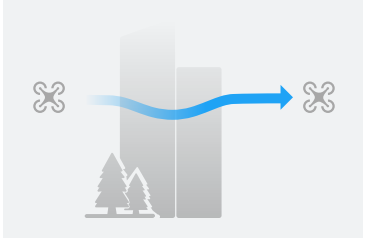
- Fixed certain known issues.

2023-11-15
What's New



New Product Support

- Adds support for DJI Dock 2.



Obstacle Data

- Obstacle Data is now available in Task Area Management. Data can be transferred to Dock 2 and used for the FlyTo tasks and the RTH planning.

What's Updated



Auto Planning of Optimal Route

- Adds support for the optimal route planning during the FlyTo tasks and RTH for Dock 2. Users can enable settings when editing task plans or when aircraft is in the Live Flight Controls mode.



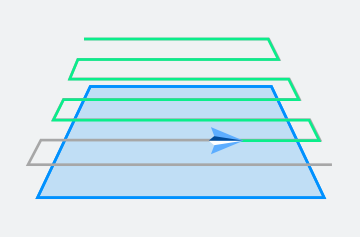
More Updates

- Adds support for viewing or setting eSIM for enhanced transmission for Dock 2.
- Adds support to automatically bypass obstacles during flight for Dock 2.

What's Fixed

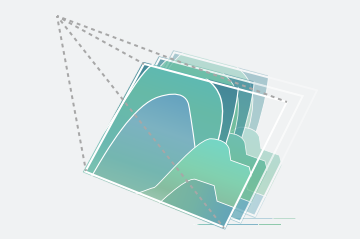
- Fixed certain known issues.

2023-09-18
What's New



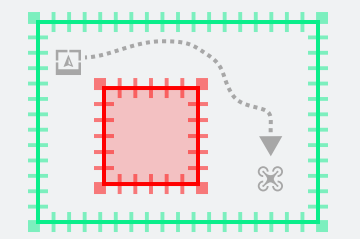
Area Route

- Adds support for area routes to collect ortho or oblique photos.



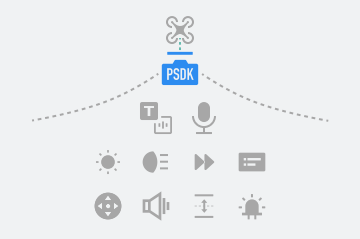
Cloud Mapping

- Cloud mapping beta is now available. Users can start area route task to capture photos or upload photos from DJI Pilot 2 and complete 2D or 3D mapping in cloud.



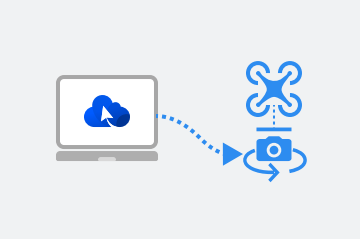
Custom Flight Area

- Task Area Management is now available to increase task safety. Users can create custom task areas or GEO Zones and synchronize data to dock and Matrice 30 series in the same project.



PSDK Support in Live Flight Controls

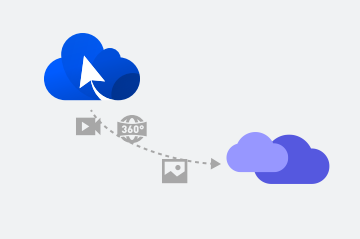
- Adds support for PSDK devices. Users can now view PSDK device info and control device after Live Flight Controls is enabled in device status window.
- Adds support for speaker to broadcast directly or convert text to speech.



Other Updates on Live Flight Controls

- Adds support for laser rangefinder to determine subject distance to aircraft and set subject as a PinPoint. Users can click Face PinPoint, and PinPoint will be centered in liveview.

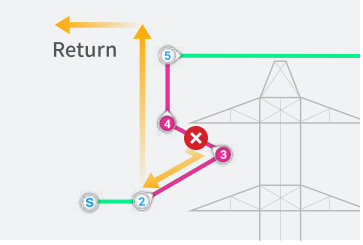
- IR camera now supports IR palette, temperature bar, and displaying zoom and IR camera views side by side.
- Gimbal action now includes Gimbal Down and Gimbal Tilt Down.
- Users can drag livestream view with mouse to change gimbal orientation or use keyboard shortcuts to fine-tune gimbal angle.
- Setting Task Altitude is supported for enhanced flight safety. Users can now set the lowest altitude of aircraft when performing tasks.
- Adds support to remotely control aircraft with key combinations.



Media File Direct Transfer

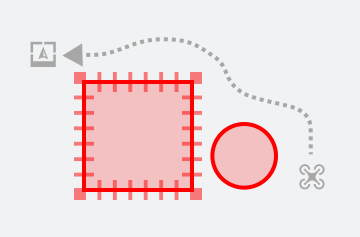
- Media File Direct Transfer is released for efficient data synchronization. Users can add third-party cloud service address in Organization Settings, and media files captured in tasks will be directly transferred to third-party platform.
- See FlightHub Sync Documentation for more details.

What's Updated



No-Return Points

- When editing waypoint route, waypoint with obstacle above it can be marked as no-return point. Area including no-return point and the route to its previous and next waypoints will be marked as no-return area. When aircraft is in no-return area and RTH is triggered, aircraft will follow route and fly out of the area before ascending to RTH altitude and returning to home.



Smart Return to Home

- Return to Home is updated. Dock aircraft can automatically bypass custom or DJI GEO Zone when returning to home.



More Updates

- Users can copy and rename waypoint routes. Waypoint routes performed by the same device type can also be merged into one.
- Adds support for online user manual (HTML version).
- Adds support to set keyboard layout as QWERTY, QWERTZ, or AZERTY in User Center > Preferences.

What's Fixed

- Fixed certain known issues.

2023-07-19

- Adds support for dock log upload.
- Adds support for displaying obstacle data collected by ToF sensor during Live Flight Controls.

2023-05-31

- Free trial of DJI FlightHub 2 cloud platform will expire on June 30, 2023. Go to My Organization to view available livestream minutes, cloud mapping images, and storage space. Contact local dealer to purchase service if needed.
- What's New and Updated
  - Dock Live Flight Controls
    - Adds support for IR camera zoom.
    - Adds support for adding PinPoint on livestream view and obtain PinPoint location.
    - Optimized beginner guide and error message prompt.
  - Dock Operation Reliability Improvement
    - Adds hourly weather forecasts of dock task area.
    - Adds flight restriction based on set conditions.

    - Flight Route Editor Optimization
        - Adds support to adjust waypoint action order by drag-and-drop.
        - Optimized interface design.
    - Adds support to enable HD model in lower right corner of the map.
    - Optimized error message prompt when uploading models.
- What's Fixed
    - Fixed display error of some 2D models.

2023-05-18

- Adds support for DJI Matrice 350 RTK.
- Fixed some known issues.

2023-05-05

- New Flight Route Editor:
    - Adds support to use mouse and keyboard to control virtual aircraft and plan waypoint route.
    - Adds support to capture subject based on imported 3D models.
    - Adds support for displaying media files captured by Matrice 30 series dock version after taking fixed-angle shots. Users can adjust shooting angle to capture desired view if photos captured are not as expected.
    - Adds support for AI Spot-Check flight route editing (beta version). Subject will be automatically matched by AI algorithm and captured during flight.

2023-04-25

- Adds support for Live Flight Controls of dock aircraft.
    - Adds support for one-click takeoff and pause, FlyTo task, and manual operation after obtaining aircraft control in cloud.
    - Adds support to operate gimbal, switch cameras, take photos, record videos, zoom on livestream view after obtaining payload control in cloud.
- Adds support for resuming flight from breakpoint.
- Adds support for email and message notification.
- Optimized Schedule and Standby charging modes by increasing battery storage level and fully charging battery automatically before task is started.
- Improved media file download speed.
- Fixed issue where media files could not be uploaded to cloud when flight was not complete and Stop Recording action was not performed.

2023-03-09

- Adds support for adding tags to media files.
- Adds support for creating folder to organize flight route files in Flight Route Library.
- Optimized user experience when switching between aircraft models in waypoint route task.
- Adds Smart Low-Light mode in waypoint route task.
- Features related to DJI dock:
  - Adds support to display more aircraft battery statuses, including warming up, maintaining temperature, maintenance required, and maintaining battery.
  - Adds remote control of AC in DJI FlightHub 2.
  - Adds support to distribute AI Spot-Check task to dock.
  - Adds support for Continuous task plan in Task Plan Library.
  - Adds support for displaying aircraft battery information when aircraft is inside dock and powered off.
  - Adds support for automatically resuming livestream after network or transmission becomes stable again.
- Fixed certain known issues.

2022-12-19

- Adds support to close dock cover when aircraft is not inside dock.
- Adds support to display number of takeoffs for Matrice 30 series dock version on DJI Maintenance Program page.
- Adds support for beginner guide after entering FPV view in flight route editor.
- Fixed certain known issues.

Note: Distributing AI Spot-Check flight task to dock in task plan library is currently not supported.

2022-11-17

- Adds support to use DJI Dock together with Matrice 30 series dock version to perform one-stop aircraft task cloud management. Users can deploy dock, remotely manage flight tasks, and access and archive data. Supported features include:
  - Dock Deployment: Adds support for dock site selection, local debugging, and deployment in DJI Pilot 2. Users can configure network, calibrate location, set alternate landing site, view device status, and debug modules in app.
  - Task Plan Library: Adds support to manage Immediate, Timed, and Recurring task plans and distribute tasks to dock. Users can view aircraft camera liveview, flight route, and trajectory when aircraft is performing task. After task is complete, data will be automatically be uploaded to cloud, and users can choose to archive data.

    - Remote Debugging: Adds support to remotely debug dock and view device status and warning messages in device status window and maintenance panel. Users can also remotely update firmware, debug devices, and report issues.
- Adds support for FPV view in flight route editor for Matrice 30 series and customizing waypoint actions on 3D model, providing immersive experience while editing.
- Adds support for importing models in PNG, TIFF, PNG+TIFF, PNTS, LAS, or B3DM format to Model library. Supported models include models generated by DJI Terra. Users can choose to display models on map and create digital sand table when needed.
- Adds support for Map Lab. Users can click Map Lab icon in the bottom right corner of the map to enable Building Model.
- Optimized video loading time and playback performance in Media Files.
- Fixed certain known issues.

2022-11-08

- Adds support to import KMZ flight route in Flight Route Library.
- Adds support for displaying flight trajectory in Flight Route Library.
- Adds support to customize storage format when setting waypoint actions such as taking photo or video in Flight Route Editor.
- Adds support to display waypoint action list and switch editing between flight route and waypoint action in Flight Route Editor.
- Adds support for pano preview to display PinPoint and photo location info within a 5km radius of where the panorama was taken.
- Optimized accuracy of estimated task duration performed by Matrice 30 series aircraft.
- Optimized loading speed of photos and panoramas in Media Files.

2022-09-27

- Adds support for DJI Mavic 3E and Mavic 3T.
- Fixed some known issues.

2022-06-16

- Added support for user feedback.
- Improved user experience when using DJI FlightHub 2 on tablets.
- Fixed issue where colors of lines and shapes not displayed after importing KML files generated by Google Earth.
- Fixed some known issues.

On-Premises Version

- 2025-06-10 v1.2
- 2025-02-27 v1.1
- 2024-09-24 v1.0

2025-06-10 v1.2

Release list

DJI FlightHub 2 on-premises version v1.2 is fully aligned in functionality with the DJI FlightHub 2 public version.

Functionality Alignment

1. FlightHub Sync

- FlightHub Sync Beta has been upgraded to FlightHub Sync. Users can now synchronize specified project media files, flight routes, flight records, and other information to external storage buckets.

2. AI Capabilities Support

- A new patrol route feature allows users to specify areas for inspection. The system can automatically use intelligent recognition algorithms to identify people, vehicles, and boats within the patrol area and send alert notifications.
- The virtual cockpit now supports real-time AI recognition of people, vehicles, and boats, and can automatically send alerts based on infrared video streams.
- The media file library in FlightHub now supports displaying, viewing, and sharing AI-generated videos on the aircraft, showcasing AI recognition results.

3. Live Flight Controls Support

- Adds support for live flight controls of Matrice 4D series aircraft when connected via remote controller.
- Users can now issue return-to-home commands to all aircraft within a project with a single click.

4. Management of Algorithms on Aircraft

- Users can now load third-party algorithms distributed from the DJI Developer website onto aircraft connected to the dock via the Algorithms page.

5. Support for More Features

- Flight records now support compatibility with DJI Dock 2.
- When distributing tasks, the system checks the flight route's historical obstacle sensing records and prompts if any exist. If obstacle sensing is triggered during recurring or continuous tasks, subsequent tasks are automatically suspended and must be manually resumed to ensure safety.
- Adds support for automatic association of abnormal feedback with dock or aircraft logs. After selecting the time, data is automatically matched and the error code field is filled in to improve problem analysis efficiency.
- Supports remote switching between FlightHub public and on-premises environments for the dock.
- Supports real-time 2D mapping (requires deployment of mapping service).

On-premises Version Feature Optimization

1. Deployment Optimization

- Optimized the upgrade process for the on-premises version incremental package, visualizing upgrade checks and installation steps.
- Upgraded on-premises version operation and maintenance features, supporting server health checks and built-in NTP service.

Issue Fixes

- Known issues fixed to enhance system stability.

Firmware Version

For supported firmware versions, visit the deployment manual on the DJI Developer website for details, or directly download the **latest firmware list** to check.

2025-02-27 v1.1

Expansion of Support Capabilities for Aircraft and Docks

New Model Support

- Matrice 300 RTK and Matrice 350 RTK Enterprise Aircraft: Supports viewing camera view and payload livestream on FlightHub 2.
- Mavic 3 Enterprise Aircraft: Supports live flight controls of the gimbal camera.
- Matrice 4 Enterprise Aircraft: Supports live flight controls of the aircraft and gimbal camera and AI recognition of people, vehicles, and boats.
- DJI Dock 3: Supports AI recognition of people, vehicles, and boats, Smart Track, AI flight route features, vehicle-mounted deployment mode, and multi-drone takeoff/landing capabilities.

New Accessory Support

- D-RTK 3 Relay Station
- DJI AS1 Speaker
- DJI AL1 SpotLight

New Payload Support

- Zenmuse H30, Zenmuse H30T
- Zenmuse H20, Zenmuse H20T, Zenmuse H20N

Flight Route Functionality Upgrade

Flight Route Planning

- Standard geometric route
- Slope route
- Smart 3D Capture Route: Supports generating refined routes for mapping (supported by Matrice 4).
- Ortho Collection for Area Route: Supports enabling Smart Oblique in the area route settings to improve efficiency (supported by Matrice 4).
- Waypoint Route: New panoramic photo action added; supports swapping start and end points of waypoint routes, with options to switch some continuous actions. When adding video actions, it supports synchronously recording the pose information of the virtual aircraft and camera, automatically adding aircraft yaw angle, gimbal yaw angle, gimbal tilt angle, and camera zoom actions.

Route Management

- Route Folder: Supports creating multi-level folders to manage route files.

- Batch Download: Supports batch downloading of flight route library routes.

Flight Route Task

- Transfer PPK File to FlightHub 2: Supports transferring base station PPK files for flight route tasks to FlightHub 2 and storing the files in the corresponding flight route task folder in the media file library.

Comprehensive Support for AI Features

AI Recognition and Smart Track

- The virtual cockpit supports real-time AI recognition and automatic alerts when people, vehicles, or boats are detected, and allows instant viewing of alert record details triggered during flight route tasks (supported by Matrice 4 and DJI Dock 3).
- Third-party algorithm models developed on the DJI Intelligent Computing platform can be imported to and applied in Pilot 2, expanding AI recognition scenarios.
- The media file library supports the display, counting, and editing of AI recognition results. Currently only wide-angle and zoom photos are supported.

AI Flight Route (Supported by DJI Dock 3)

- Waypoint routes support intelligent recognition actions, capable of recognizing people, vehicles, boats, or subjects with abnormal high and low-temperature during the flight, and performing actions such as taking photos, recording videos, and waiting for the operator to take over after alerts.
- The task plan library now supports AI route warning notification, allowing the configuration of alert receiving methods and frequency after subject recognition.

Smart Track

- The virtual cockpit supports Smart Track, allowing continuous tracking of AI-recognized subjects (supported by DJI Dock 3).

Dock Function Optimization

Flight Operation Capability Enhancement

- DJI Dock supports canceling tasks when RTK convergence times out.
- DJI Dock 2 supports emergency landing function.

- DJI Dock 3
  - Adds support for scheduling devices to take off or land within a project in areas where docks are densely deployed.
  - Adds support for performing the entry/exit routes after takeoff to ensure safe departure before performing flight tasks.
  - Adds a new type of no-landing zone in custom flight areas, preventing aircraft from automatically landing within these zones.
  - Adds support for quick calibration of device location and pre-flight safety checks in vehicle-mounted deployment mode.
  - The Mouselook feature in the virtual cockpit has been upgraded, making First-Person-View (FPV) operation smoother.

Improved Payload Task Capabilities

- DJI Dock 2 supports manual mode, allowing for shutter, ISO, aperture settings, timed shot, storage settings, video resolution settings, Link Zoom, and more.
- DJI Matrice 3D adds distortion correction switch function and mechanical shutter function.

Other Supported Features

- AR Projection: DJI Dock 2 supports AR projection of PinPoints. Users can view PinPoints in the livestream view now.
- Vision Assist: DJI Dock 2 supports Vision Assist.
- Discreet Mode: New discreet mode supported by DJI Dock 2 and DJI Dock 3.
- Remaining Task Time: DJI Dock 2 virtual cockpit now displays the remaining task time.
- Embedded SRT in Video: Support for embedding and downloading SRT files in videos.
- Assisted Pinpointing: Adds support to add PinPoints based on the camera orientation for DJI Dock 2 (Terrain data required).

Software Feature Upgrade

New Multi-Channel Livestream

- Adds support for simultaneous livestreams for multiple devices within a project. Supported devices include the security cameras of the docks and the gimbal cameras of the aircraft. Adds support for other functions such as positioning devices on the map. **Task Management Capability Upgrade**
- Supports for subscribing to notifications of dock cover not being closed for an extended period.

- Adds support for submitting issue reports in the Task Plan library and warning message panel, and viewing feedback analysis results.

Improved Map Function

- Adds support to create separate folders for annotations.
- Adds support to add circular annotations.
- Global search for elements on map: Users can search geographic locations, map annotations, device information, and models or photos that are overlaid on the map.
- Optimized the user experience when centering elements on the map.
- Adds support for syncing observed views from Pilot 2 to FlightHub 2 (supported by Matrice 4).
- Adds support for syncing spatial annotations from Pilot 2 to FlightHub 2 (supported by Matrice 4).

Media Feature Upgrade

- Adds support to import photos, panoramas, livestream screenshots, videos, and PPK files to FlightHub 2.
- Adds photo markup shortcut operation tips, and supports modifying markup colors.
- Adds support to filter photos with unnamed markups.

Model Reconstruction Upgrade

- Rough models can now be generated during model mapping and used for creating Smart 3D Capture routes.
- Model reconstruction supports selecting resolution.

FlightHub Sync Upgrade

- Supports obtaining PPK/SRT files through FlightHub Sync.
- Supports distributing flight route tasks through FlightHub Sync.

OpenAPI

- Authentication and Authorization
- System Services
- Organization Projects
- Device Management
- Livestream Management
- Flight Route Management

- Task Management
- Model Management
- Annotation Management

Frontend Components

- Supports flight route creation components, flight route editor components, virtual cockpit components, and project/map components. It also supports custom theme colors and custom styles for components.

MQTT Bridge

- Provides MQTT bridging and forwarding functionality, supporting the forwarding of dock's MQTT information to third-party systems via FlightHub 2.

Issue Fixes

Known issues fixed to enhance system stability.

Firmware Version

Product	Firmware Version
Matrice 350 RTK	10.01.08.05
Matrice 300 RTK	60.01.08.06
Matrice 30/30T	10.01.05.04
DJI RC Plus	05.02.13.02
Mavic 3 Enterprise Series	10.01.05.03
DJI RC Pro Enterprise Version	02.01.05.10
Matrice 4 Series	12.00.01.07
DJI RC Plus 2	01.61.03.03
DJI Dock 3	99.99.92.50
DJI Dock 2	10.01.32.05
DJI Dock	10.01.02.05
DJI Pilot 2	99.0.0.1

2024-09-24 v1.0

Release list

After successfully deploying the FlightHub 2 on-premises version, most features and the overall user experience are consistent with those of the public version. The main new and optimized features are as follows:

Basic Functions

- Supports rapid deployment with Docker. Refer to the DJI FlightHub 2 On-premises Version Deployment Manual for details.
- By default, the system is accessed using only the IP address after deployment, and there is no need to configure DNS. DNS can also be enabled later if required.
- Supports importing and configuring offline map data, including importing and displaying road network data.
- Supports displaying GEO Zones in the offline version.
- Supports binding docks using DJI Pilot 2, with an option to select "FlightHub 2 On-Premises Version" during binding.
- Supports offline firmware upgrades and management.
- Supports quick access to the on-premises version manual by pressing the question mark key on the keyboard from any interface.
- Supports either a local account system or an OAuth2 account system.
- Supports basic device and cloud service log retrieval.
- Supports license expiration reminders.

Features

- Supports deployment of 2D/3D mapping services.
- Supports customization of the login page, allowing modification of the logo, background, and other information.
- FlightHub Sync Beta supports GB28181 streaming format.
- The FlightHub Sync Beta module supports the distribution of flight route tasks, allowing third-party cloud platform to directly call the interface and distribute Immediate tasks.
- After successfully deploying the FlightHub 2 on-premises version, it will include the FlightHub 2 on-premises version operations and maintenance platform by default, allowing for a more

intuitive view of the operation status of FlightHub on-premises services. You can also monitor the system's running status in real time by adding a Webhook callback to monitor messages.

Firmware Version

Product	Firmware Version
Matrice 3D/3TD	10.01.1607
DJI RC Pro Enterprise Version	02.01.0507
DJI Dock 2	10.01.1607
Matrice 30/30T	10.01.0014
DJI RC Plus	05.02.1106
DJI Dock	10.01.0205
DJI Pilot 2	10.1.0.30

Known Issues List

Affected Products	Issue Description	Workaround
All models	When clicking the device status window button to watch the livestream, the virtual cockpit livestream screen will stutter for about 0.5 seconds and then return to normal.	-

Package and Billing Details

- Package Overview
- Billing Method
- Purchase and Activation
- Free Quota Policy
- Resource Usage Details

This guide provides an overview of DJI FlightHub 2's package options and billing methods.

Package Overview

DJI FlightHub 2 offers both public cloud and on-premises deployment options. The public cloud offers Standard (Free), Professional, Enterprise, and recharge/space upgrade packages, each tailored to different user needs.

Classification		Package Type
Default Package	Standard (Free)	Free to use, with limitations on features and resources. Ideal for evaluating core capabilities.
Paid Packages	Professional	Unlocks most features with no limit on online device number. Resource quotas apply, requiring the purchase of a recharge/upgrade package if depleted.
	Enterprise	Includes all features with unlimited use of most resources. It offers a very large quota for mapping images and restricts the number of devices that can be online simultaneously.
	Recharge/Upgrade	Adds a specific quota for livestream minutes, mapping images, or storage to an existing package without changing its features. Recommended for Professional users.
	On-premises	A self-hosted version for users with strict data security or intranet requirements.

For a detailed comparison and introduction, please refer to the sections below.

Package Comparison

Feature Differences	Standard Version(Free)	Professional Version	Enterprise Version	FlightHub 2 On-Premises Version Basic Packages
Project Quantity	5 You can create up to five projects in an organization. No new projects are allowed beyond the limit.	Unlimited	Unlimited	Unlimited
Online Device Quantity	—	—	Determined by the purchased basic package and device expansion package.	Determined by the purchased basic package and device expansion package. Supports up to 200 units of the DJI Dock series after expansion.
Replace Logo	—	✓	✓	✓
Custom Login Page	—	—	—	✓
Livestream	—	2,000 minutes/month Livestream time is calculated based on the total watch time of the audience. Unused livestream time will be rolled over into the following month only	Unlimited duration Limited livestream minutes for dock camera: 30,000 minutes for 1-year 1-device version, 100,000 minutes for 3-year 1-device version	Unlimited duration
Storage Capacity	5 GB	500GB 500GB cloud storage is available within the validity period. When storage is full, files can still be downloaded but additional files cannot be uploaded	Unlimited capacity	Unlimited capacity
Mapping Quantity		3,000 images/month Unused quota for mapping images will be rolled over into the following month only. Images for real-time mapping and mapping based on media files share the same quota.	150,000 images for 1-year 1-device version, 500,000 images for 3-year 1-device version, 150,000 images for online device expansion	Unlimited quantity The current version supports up to 2,000 images for a single mapping task.
Display Model	1 Includes 2D and 3D models. Only one model can be overlaid on the map at a time in a project	Unlimited	Unlimited	Unlimited
Third-Party Account Login	—	—	✓	✓
OpenAPI	—	✓	✓	✓
Product Pricing	Free to Use	✓	✓	Stay tuned for overseas availability.

When resource quotas run out in Standard or Professional versions, recharge/upgrade packages can supplement resources.



Standard Version (Free) Overview

Feature Limitations:

- Maximum of 5 organization projects.
- Maximum of 1 model overlaid on the map.
- Advanced features like logo replacement, custom login page, third-party login, and OpenAPI are unsupported.

Free Resource Quota:

- Livestream Minutes: None
- Storage Space: 5 GB
- Mapping Images: None

Note: To access more resources, you must upgrade your package or purchase a recharge package.

Professional Version Overview

Feature Limitations:

Advanced capabilities like custom login page or third-party login are not supported.

Resource Allocation by Package:

Feature	1 Month	1 Year
	6 months (180 days)	6 months (180 days)

Activation Period[1]		
Usage Period[2]	1 month (30 days)	1 year (365 days)
Livestream Minutes	2,000/month (No rollover)	2,000/month (Rollover to next month only)
Storage Space	500 GB	500 GB
Mapping Images	3,000/month (No rollover)	3,000/month (Rollover to next month only)

Notes:

1. Activation Period:
    - Activate within the validity period to avoid expiration.
    - Calculation starts from the delivery date of your activation code via email/SMS.
2. Usage Period: Begins on the date of activation.
3. Stacking Packages: Activating multiple Professional packages extends the total validity period, but resource quotas are not cumulative. Purchase recharge/upgrade packages if you need more resources.

Recharge/Space Upgrade Package Overview

These packages add specific resources to your account but do not change the feature limitations of your current plan. For example, when a Standard version is upgraded with a recharge or space package, the corresponding resources become available without altering any Standard feature restrictions.

	Livestream Recharge	**Mapping Recharge**	**Storage Upgrade**
Options Available	10,000 minutes 100,000 minutes	20,000 images	500 GB 5 TB
Activation Period[1]	6 months	6 months	6 months
Usage Period[2]	1 year	1 year	1 year

Notes:

1. Activation Period:

- Activate within the validity period to avoid expiration.
- Calculation starts from the delivery date of your activation code via email/SMS.

2. Usage Period: Begins on the date of activation.

Enterprise Version Overview

1. Core Features

- During the usage period:
  - Livestream Minutes: Unlimited
  - Storage Space: Unlimited
  - High-Capacity Mapping: A very large, but finite, quota of mapping images is included.
- Advanced Capabilities: Enables third-party SSO login and OpenAPI access.
- Device Limits: The number of devices that can be online simultaneously is restricted.
  - No limitations on the number of device bindings.
  - Maximum number of simultaneous online devices:
    - The number of aircraft is limited when logging into the cloud via a remote controller. The number of docks is also limited when logging into the cloud. In dual-control scenarios, where one aircraft is simultaneously controlled by a remote controller and a dock, it counts as only one online device.
    - On the device management page, the number of devices that can be added to a project is limited.

2. Package Types

Include base packages and an optional expansion package for adding more online devices.

Base Packages

	Activation Period	Usage Period	Simultaneous Devices	Livestream Minutes	Storage Space	Mappi Image

	Activation Period	Usage Period	Simultaneous Devices	Livestream Minutes	Storage Space	Mappi Image
1 Year, 1 Device	Unlimited	1 year	1	Unlimited*	Unlimited	150,00
3 Years, 1 Device	Unlimited	3 years	1	Unlimited*	Unlimited	500,0C

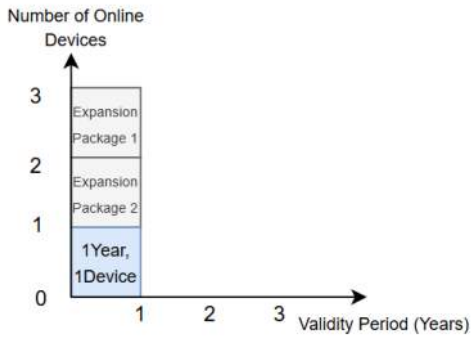
*Livestreaming from aircraft cameras is unlimited. For cameras inside and outside of docks combined, the 1-year package includes 30,000 minutes, and the 3-year package includes 100,000 minutes.

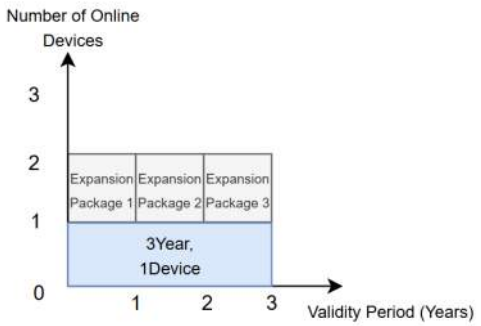
Online Device Expansion Package

To increase your simultaneous device limit, purchase an expansion package. Contact your local dealer for purchasing details.

Expansion Rule: Within the validity period of the Enterprise base package, multiple Online Device Expansion packages can be activated cumulatively.

The number of packages needed is: (New Device Count - Current Device Count) x Remaining Years (rounded up).

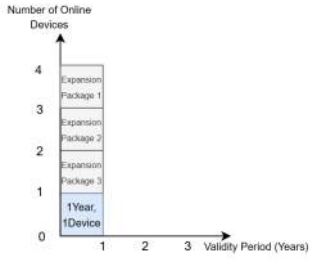
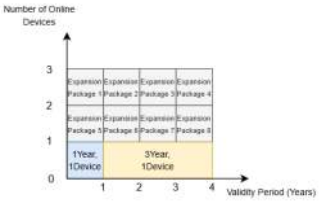
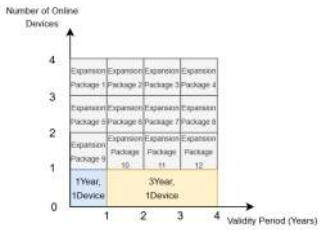
Before Expansion	After Expansion	Packages Needed	Explanation
1 Year, 1 Device	1 Year, 3 Devices	2 expansion packages	

Before Expansion	After Expansion	Packages Needed	Explanation
3 Years, 1 Device	3 Years, 2 Devices	3 expansion packages	

3. Purchase Channels and Guide

You can purchase the Enterprise version through the DJI Store and authorized dealer.

Purchasing Scenarios:

Requirement	Recommended Configuration	Chart
4 devices for 1 year	1-year, 1-device base package + 3 expansion packages	
3 devices for 4 years	1-year, 1-device base package + 3-year, 1-device base package + 8 expansion packages	
4 devices for 4 years	1-year, 1-device base package + 3-year, 1-device base package + 12 expansion packages	

4. FAQ

Question	Answer

Question	Answer
What happens if I activate an Enterprise package while having an active Professional or recharge package? After activation, will the remaining resources of existing packages expire?	You can activate the Enterprise package. Your existing package and its remaining resources will be paused. They will automatically resume once the Enterprise package expires.
Can I add a Professional or recharge package while my Enterprise package is active?	No. The Enterprise package already provides unlimited or high-capacity resources, making additional packages unnecessary.
Can I activate a new Enterprise package if I already have one?	Yes. This will extend the validity period. The new package will automatically begin after the current one expires.
Can I activate a device expansion package without a base Enterprise package?	No.
Can I activate different types of Enterprise base packages at the same time?	No. You can only stack identical base packages to extend the validity period. To use different base packages (e.g., 1-year and 3-year), you must activate them separately according to your desired activation order.

On-premises Version Overview

This version is designed for users who require deployment on a private intranet.

1. Core Features

- Unlimited Resources:
  - Livestream Minutes: Unlimited
  - Storage Space: Unlimited
  - Mapping Images: Unlimited (Single mapping tasks are limited to 2,000 photos.)
- Advanced Capabilities: Supports OAuth 2.0 login, OpenAPI, customized login page, and other capabilities.
- Device Limits: The number of devices that can be online simultaneously is restricted.
  - No limit on the number of bound devices, but a limit on the maximum number of online devices: The number of aircraft is limited when logging into the cloud via a remote controller.

The number of docks is also limited when logging into the cloud. In dual-control scenarios, where one aircraft is simultaneously controlled by a remote controller and a dock, it counts as only one online device.

- The number of simultaneous online devices is limited but can be expanded up to 200.

2. Package Types

Contact your local dealer for specific purchasing details.

Classification		Note
Base Package	1-device version	Supports 1 online device (expandable). Includes cloud mapping and private deployment of 4G Enhanced Transmission.
Device Expansion	+1 device	Adds 1 more online device to the base package.
	+5 devices	Adds 5 more online devices to the base package.
Upgrade Validity	1-year extension	The base package includes 1 year of free upgrade validity. If you need a longer period, you can purchase this package.

Billing Method

DJI FlightHub 2 public cloud charges for livestream minutes, mapping images, and storage space. The following details the billing method for each billing item.

Livestream Minutes

Usage is calculated based on the cumulative duration of all livestreams.

Dimension	Details
Minutes are counted from all sources	Includes dock cameras, aircraft cameras, FPV camera, and payload cameras.
All viewing paths will be counted	Includes device status window, virtual cockpit, multi-channel livestream, livestream sharing, livestream recording (manual/automatic), livestream forwarding (cloud AI algorithms), livestream forwarding (FlightHub Sync), livestream forwarding (FlightHub Sync Beta), and livestream (multi-modal object detection).

Dimension	Details
Usage is calculated per viewer	The total minutes consumed is multiplied by the number of users watching the livestream.

Notes:

- During the livestream, if the livestream minutes are fully consumed, users will be allowed to continue viewing the livestream until the livestream is disabled. The extra time will be deducted from your next package purchase.
- If the virtual cockpit page is exited for more than 40 minutes, the livestream will be automatically disabled.

Mapping Images

Operations that consume the number of mapping images include:

- Real-time mapping
- Mapping based on existing media files

The required number of images is deducted when a mapping task starts. If the task fails, the images are refunded.

Storage Space

The following resources are all counted towards storage space.

Category	Details
Media Files	Source: DJI Pilot 2, docks, and local uploads Types: Photos, videos, and compressed files
Models	Source: Real-time reconstruction, mapping based on existing media files, and local uploads Types: 2D and 3D models

When storage space is low:

- Existing data remains accessible.

- Ongoing data recording and data uploads can be completed normally, but subsequent data upload, recording, and other features will no longer be available, and a prompt for insufficient remaining space will appear.

Purchase and Activation

How to Buy

Packages are available for purchase through the DJI Store and authorized dealer.

How to Activate

1. Activation Period:

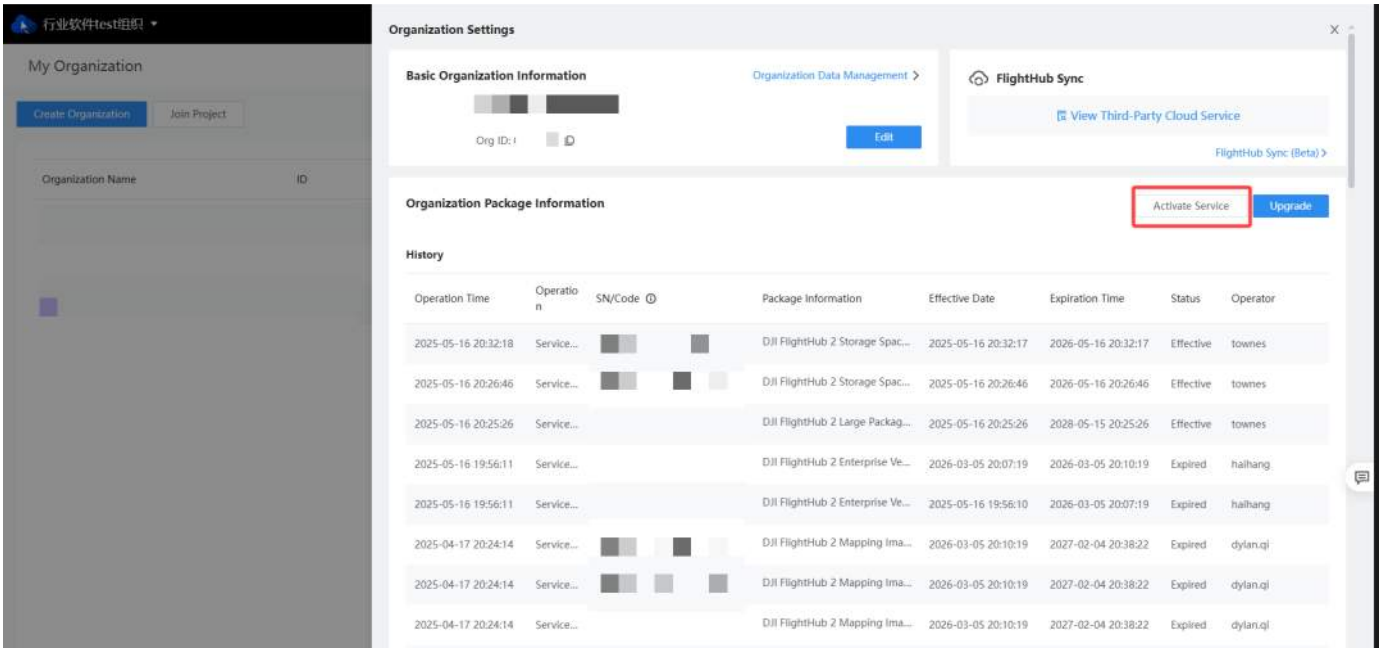
- Enterprise Package: Unlimited activation period.
- All Other Packages (1-month Professional version, 1-year Professional version, 3-year Professional version, mapping recharge packages, livestream recharge packages, and storage space upgrade packages): Must be activated within 6 months of delivery.

2. Notes

- After successful purchase, the activation code will be sent via email or SMS.
- A refund can be requested only if the code is unused within 30 days of delivery.
- After the activation code is activated, refunds or exchanges will not be provided, nor does it support transfer to other organizations.
- Service will be available at the time of activation.

3. Activation Steps

- Log in to DJI FlightHub 2 and go to My Organization.
- Enter the Organization Settings.
- In the Organization Package Information panel, click Activate Service.
- Confirm the organization details, enter your activation code, and click Activate.



Free Quota Policy

1. Device Binding Bonus

When an organization binds its very first device (aircraft or dock), it receives a one-time bonus, which is valid for 3 months.

- 100 GB of storage
- 5,000 livestream minutes
- 3,000 mapping images

Notes:

- An organization can only obtain bonus once.
- A device can only obtain bonus once.

2. Livestream Minutes for Multimodal Object Detection

All organizations receive a free grant of 1,000 livestream minutes exclusively for use with the multimodal object detection feature.

Resource Usage Details

You can view resource purchase history, remaining usage, and usage details under My Organization > Organization Settings > Organization Package Information. Usage details include:

- Livestream Minutes: Displays the total daily usage of livestream minutes by the organization. You can download a CSV file to view details, including specific time, project, livestream type, user, and device used.
- Mapping Images: Displays the total daily usage of mapping images by the organization. Quotas for failed tasks are automatically refunded. You can download a CSV file to view details, including specific time, user, project, and model name.
- Storage Space: Displays the storage space occupied by projects within the organization.

Notes:

- Usage history is only available for data generated on or after November 7, 2024. Viewing of historical data is not supported.
- When multiple packages are active, resources are consumed from the one with the earliest expiration date.

Registration and Login

- Account Login
- SSO Login Settings

Account Login

Users can visit the DJI FlightHub 2 official website, create a DJI account, and log in to DJI FlightHub 2.

FlightHub 2 supports SSO login. Users can use third-party enterprise accounts and their enterprise domain for login. Initial login requires binding a DJI account. After binding, you can directly log in through the enterprise account.

> Note: Users can log in to DJI FlightHub 2 and DJI Pilot 2 at the same time with the same DJI account, but multiple logins to the same platform are not supported.

SSO Login Settings

The organization admin or super admin enters My Organization, clicks  to access the organization settings page, selects Configure SSO metadata, enables SSO feature, and configures the related settings.

> Note: SSO login is currently only supported in the enterprise version.

1. SSO Status: Enable or disable the single sign-on feature for third-party application users under this domain name.
2. Domain name: Domain name is used to restrict third-party user login names.
3. Metadata Document: Metadata document provided by external identity provider (IdP), including IdP's login service address and X.509 public key certificate (used to verify the validity of SAML Assertion issued by IdP).

Note: Currently, only email format is supported, and the "nameIdentifierFormat" in the name_id format of the metadata document needs to be set to "urn:oasis:names:tc:SAML:1.1:nameid-format:emailAddress".
Authentication callback address should be filled in as: https://es-flight-api.djigate.com/manage/api/v1/sso/acs.

Click Save to complete the configuration.

Create an Organization

- Create Organization
- Message Subscription
- My Organization
- Two-Factor Authentication for Login
- Organization Package Information
- Notes on On-premises Version

Create Organization

If users have not joined any organizations, they will be directed to the Organization Management page. Click Create Organization and enter an organization name to create an organization. The user who creates the organization will be assigned as a super administrator.

At the next login, users will be directed to the Projects page and be able to switch organizations in the upper left corner of the page.

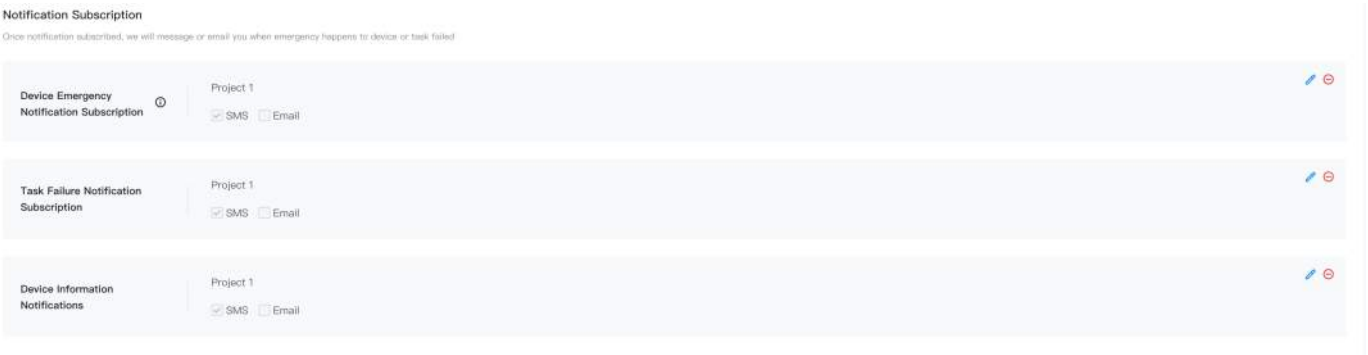


Message Subscription

Users can click the user account in the upper right corner and select User Center to view the account and organization information and add a mobile number or email address for service subscription.

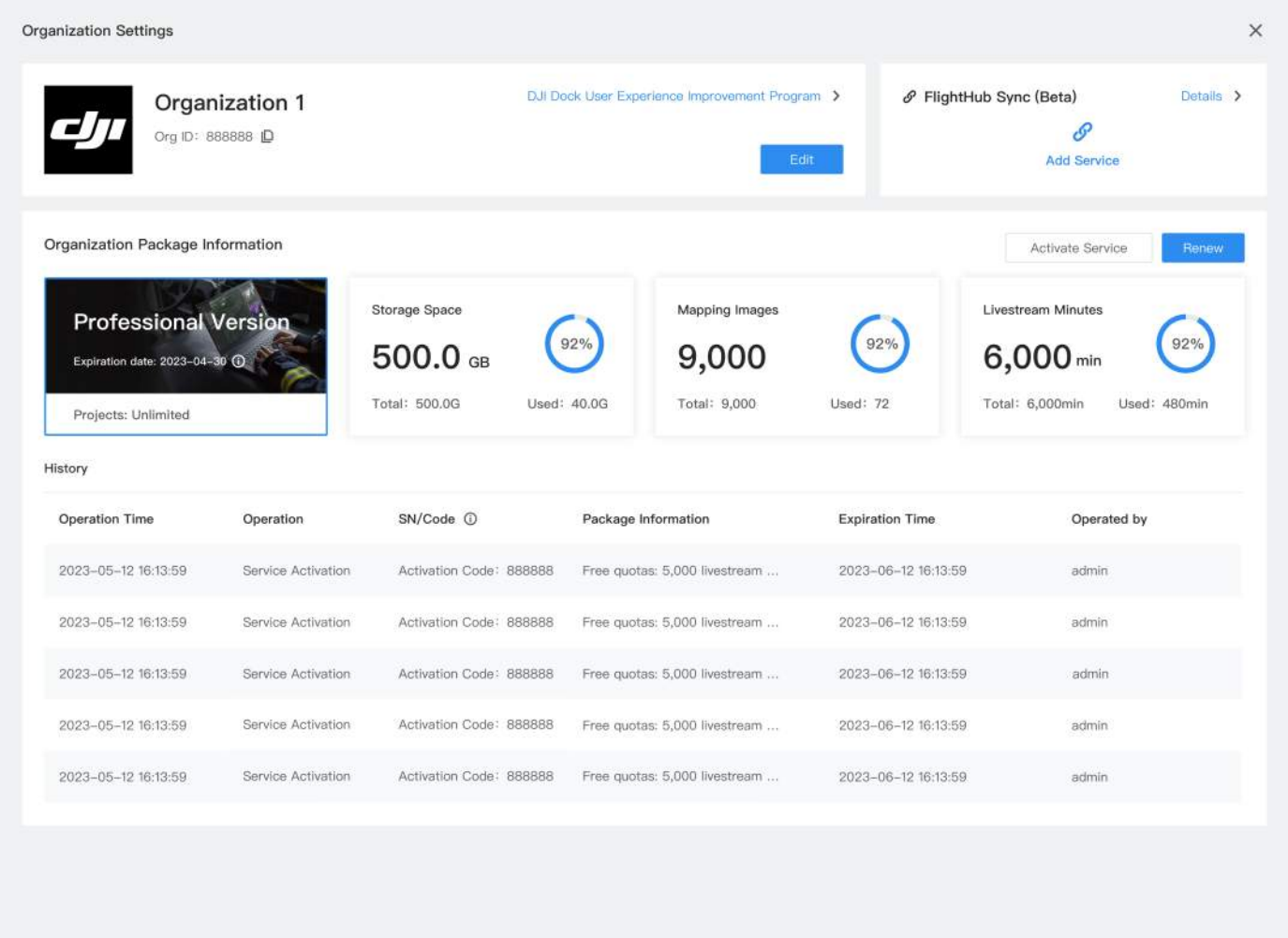


Once notification is subscribed, the system will automatically send a message or email to notify users of an emergency, a failed task, or a device error.



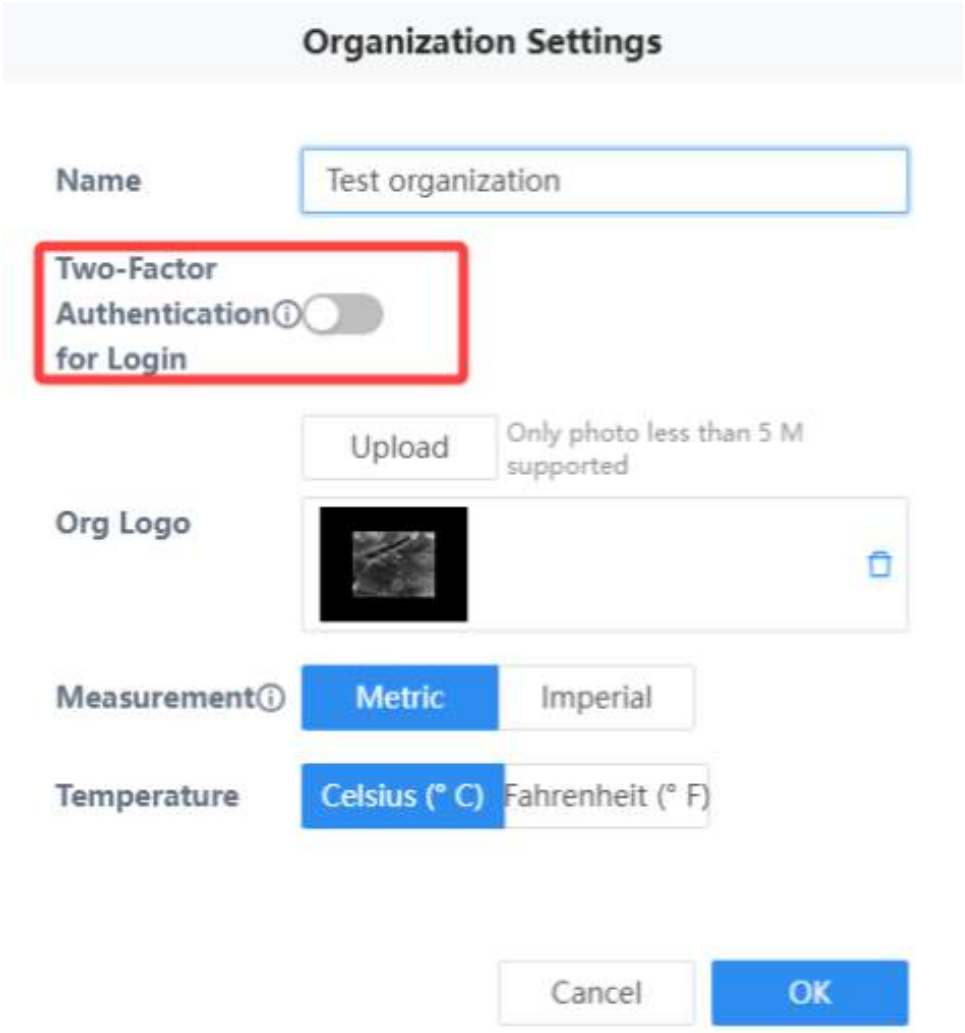
My Organization

Users can also select My Organization to edit the organization information or exit the organization. Click ⚙ to enter Organization Settings to upgrade the organization package, add FlightHub Sync Beta service, join the DJI Dock User Experience Improvement Program, and edit the basic organization information, including uploading the organization logo and selecting the units of measurement.



Two-Factor Authentication for Login

To enhance the security of FlightHub accounts, super admins can enable the Two-Factor Authentication for Login feature. The super admin can click My Organization > Organization Settings > Organization Basic Information > Edit button to enable the feature. Once enabled, all organization members will be required to bind an authenticator app (Google Authenticator is recommended) and enter a dynamic code during login.



Organization Package Information

Users can choose to:

- Purchase or activate packages.
- View activation history.
- View purchase records and usage of resources.
  - Storage Space: Displays the storage space occupied by each project.

- Mapping Images: Display the total number of mapping images used on a specific day within the organization. If mapping fails, related images will be returned. Users can download a CSV file to view details, including the usage time, user, project, and model name.
- Livestream Minutes: Display the total livestream minutes used on a specific day within the organization. Users can download a CSV file to view details, including the livestream time and duration, project, livestream type, user information, and device name.

> Note: Users can only view the details of resource usage on and after November 7, 2024.

Notes on On-premises Version

Users can also select My Organization to edit the organization information or exit the organization. Click ⚙ to enter Organization Settings to add FlightHub Sync Beta service and edit the basic organization information, including uploading the organization logo and selecting the units of measurement.

Overview Dashboard

- Dashboard Components

The dashboard provides a centralized, at-a-glance view of your organization's key operational data. Using intuitive charts and figures, it summarizes metrics for projects, members, devices, and automated tasks, offering valuable insights for management and decision-making.

Note: Access to the dashboard is limited to the organization's super administrators and administrators.

Dashboard Components

Time Filter

Filter the dashboard by a specific time period. Options include:

- This week
- This month
- Past week
- Past month
- Past 6 months
- Past year
- Custom Range

Assets Module

1. Package and Resource Overview

Tracks your organization's subscription plan details and resource consumption, including storage space, mapping images, and livestream minutes.

2. Projects & Members

Displays the total count of projects and members in the organization.

3. Device Status Distribution

Dock Status: A donut chart shows the status distribution of all docks. The center of the chart displays the total number of docks.

Other Device Status: A separate donut chart shows the online/offline status of all other connected devices.

Status Descriptions:

Status	Description
Idle	The dock is idle.
In Task	A task is currently in progress.
Debug	The device is undergoing remote debugging, on-site maintenance, or a firmware update.
Error	The device is offline or has been stopped by an on-site emergency command.

4. Flight Routes

Displays the total number of planned flight routes across the organization.

5. AI Algorithms

Displays the total number of available AI algorithms.

Data Output Module

Summarizes key data outputs generated by your projects, including the total count of media files, models, reports, and AI object alarms.

Click View Details to see a breakdown of data volume and storage distribution.

Automation Module

Tracks the scale and performance of your organization's automated workflows.

Parameter Description:

Parameters	Description
Workflow Count	The total number of automated tasks.
Execution Cycles	The total number of times an automated task has run to completion.

Parameters	Description
Task Completion Rate	The percentage of workflows that ran successfully from start to finish.

Task Module

1. Task Distribution

A bar chart shows the distribution of planned tasks vs. manual tasks over time, helping you identify peak activity periods.

2. Task Outcomes

A line chart tracks the trends of task outcomes over time—Success (green), Suspended (yellow), and Failure (red)—to help you monitor overall task reliability.

Flight Data Module

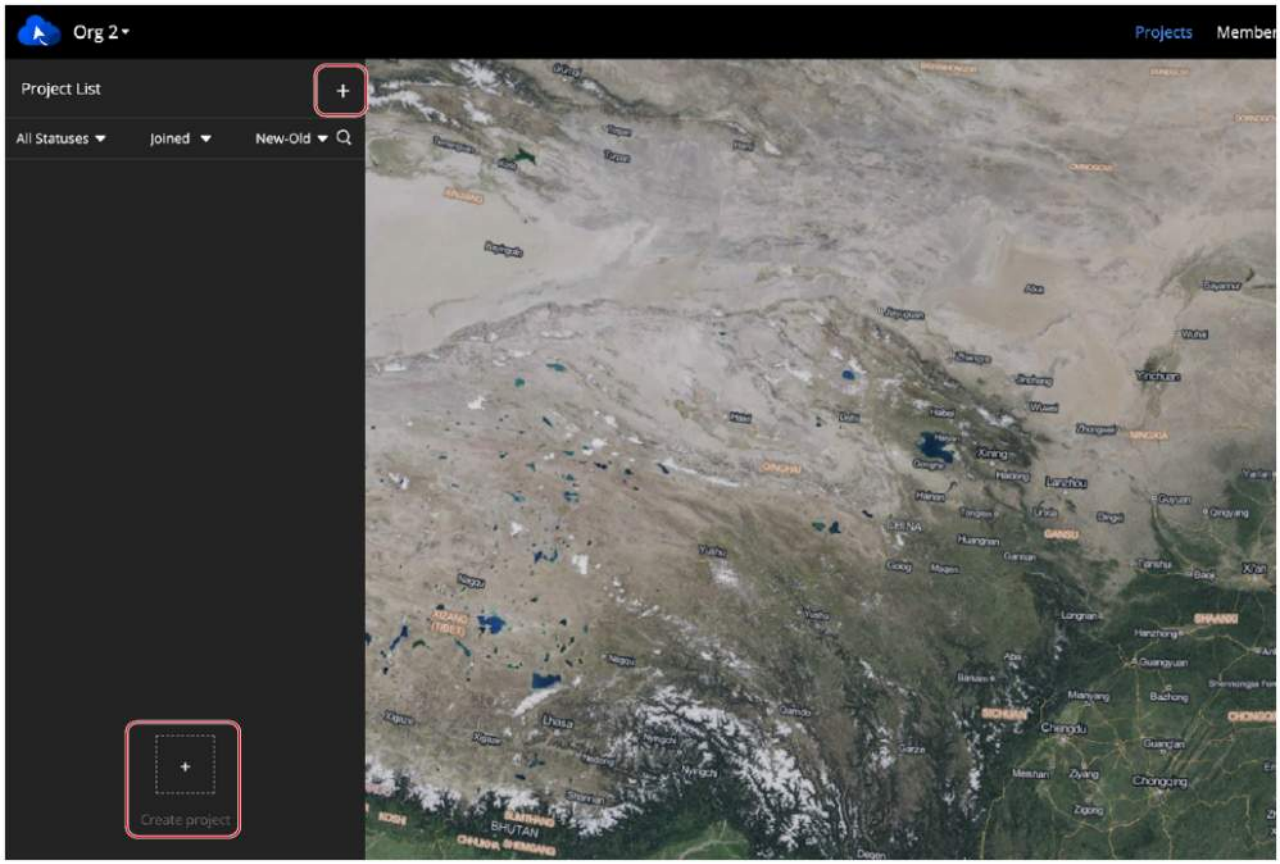
Summarizes key flight statistics, including the total number of flights, cumulative flight duration, and total flight distance.

Create a Project

- Project Creation Process and Introduction
- Notes on On-premises Version

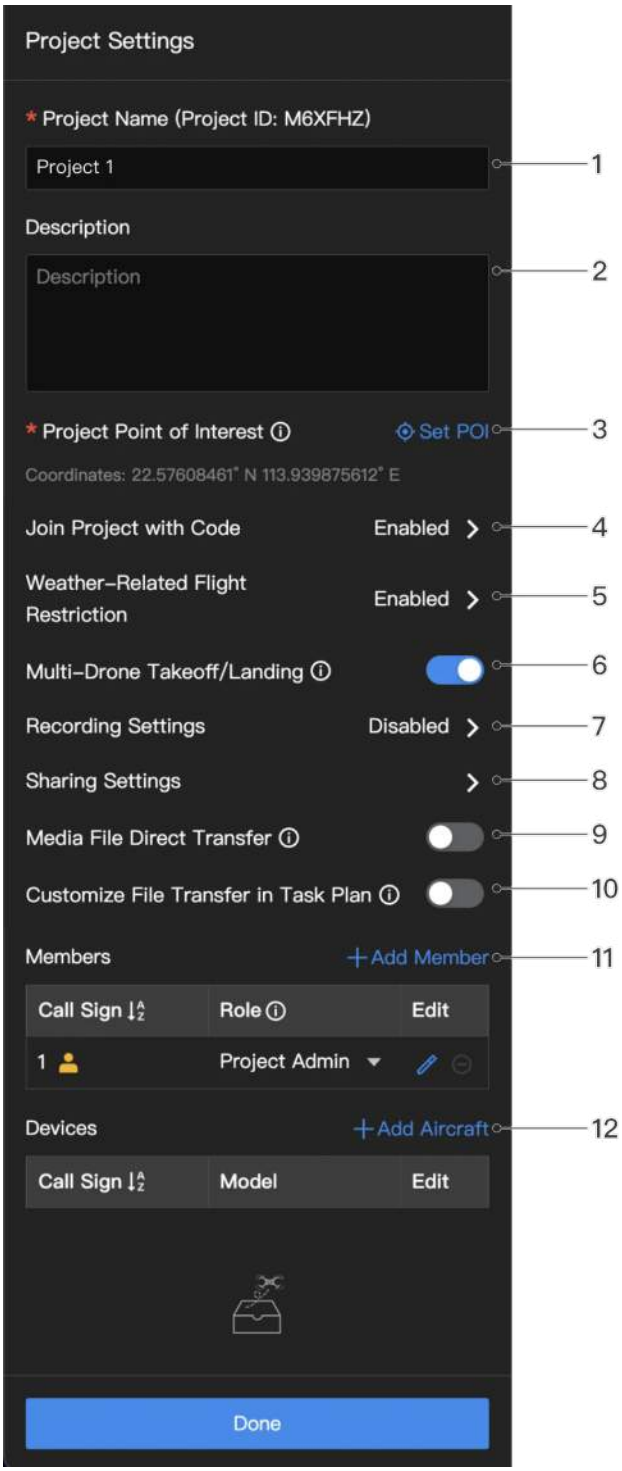
Project Creation Process and Introduction

Administrators can click “+” in the middle of the project list panel or in the upper right corner to create a project.



The location information of the administrator will be requested when creating a project, and the geographic location obtained will be used as the default project point of interest.

Fill in the following information to create a project.



1. Project Name

The project name is required and should be within 40 characters.

2. Description

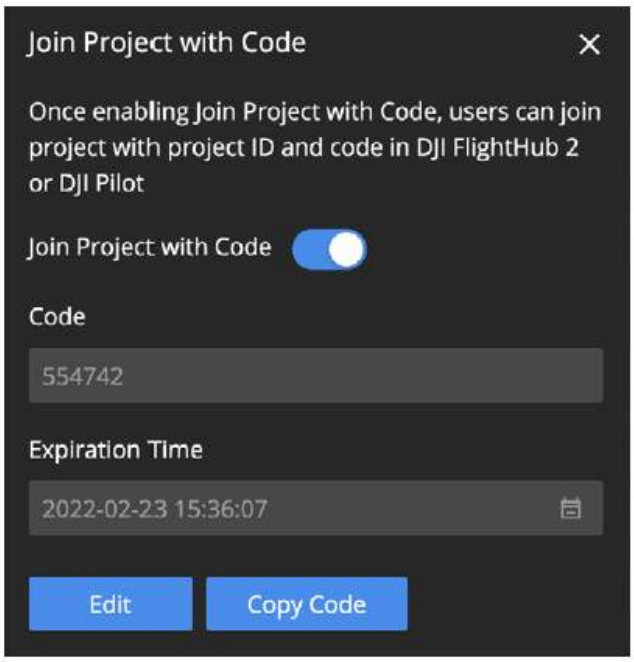
The project description is optional.

3. Project Point of Interest

Click Set Point of Interest. The set point will be displayed in the middle of the web page when users enter the project.

4. Join Project with Code

Administrators can enable Join Project with Code after creating a project. Click Copy Code to copy the project ID and code as well as the project link and send them to members who wish to join the project.



DJI FlightHub 2 users can click the link or enter the project ID and code on the My Organization page to join the project. DJI Pilot 2 users can log in to the DJI FlightHub 2 cloud service and join the project with the project ID and code. For users who are not organization members but join projects under the organization, their organization roles will be assigned as temporary members.

5. Weather-Related Flight Restriction

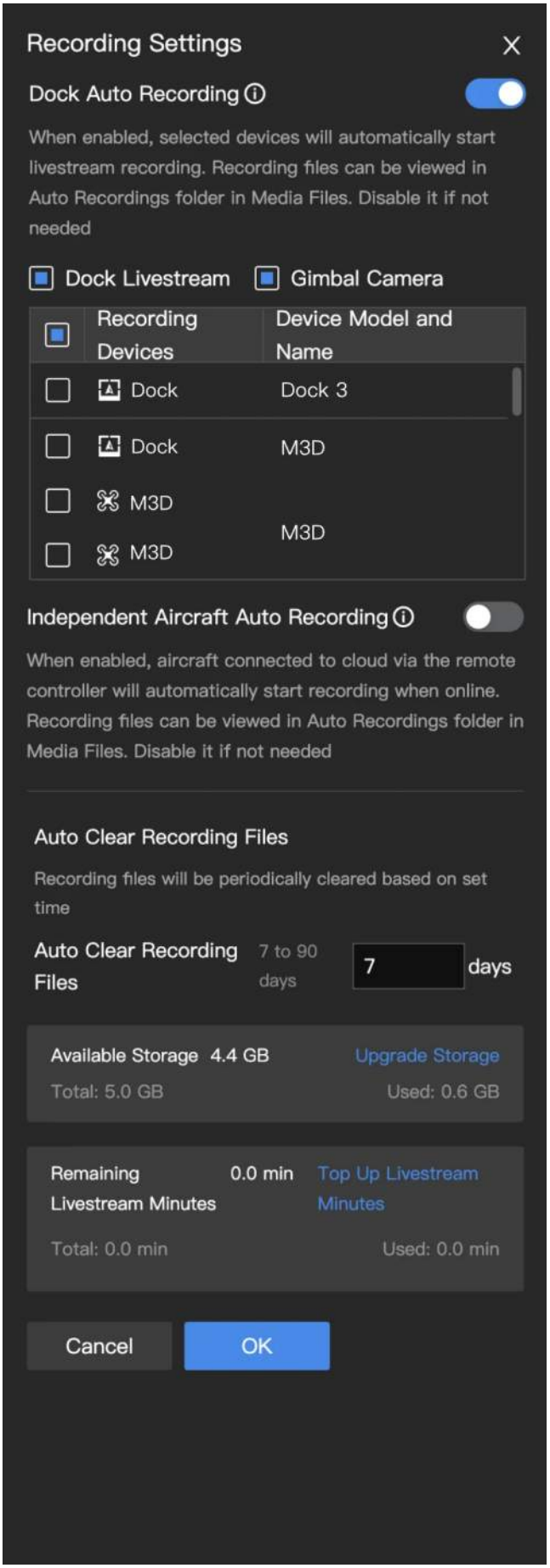
Click to set flight restrictions for different device models, and settings apply only to the current project.

6. Multi-Drone Takeoff/Landing

Click to enable or disable the multi-drone takeoff/landing settings within this project. Once the status is updated, it will take effect on the next flight task and will not affect the flight tasks currently in progress. See Multi-Drone Takeoff/Landing for more details.

7. Recording Settings

The project administrator can enable either Dock Auto Recording or Independent Aircraft Auto Recording. When enabled, the system will consume the organization's livestream minutes and storage space. It is recommended to enable this feature according to actual needs.



7.1 Dock Auto Recording

- When enabled, the selected device will automatically start livestream and recording, and the recorded files will be stored in the Auto Record Playback folder in the media file library.
- Trigger Logic: Docks will start recording at the beginning of a task and stop at the end.
- Device Selection: Users can quickly select devices in batch based on device categories. Checking Live will automatically select all dock security cameras within the project. Checking FPV Camera will automatically select all FPV cameras of dock aircraft within the project. Checking Gimbal Camera will automatically select all gimbal cameras of dock aircraft within the project. Alternatively, users can select the required recording devices individually from the device list according to actual needs.

7.2 Aircraft Auto Recording

When enabled, all aircraft connected to the project will automatically start recording when online, and the recorded files will be stored in the Auto Record Playback folder in the media file library. The aircraft will start recording automatically once the device is online and stops when the device goes offline.

7.3 Auto File Cleanup

After enabling any automatic recording function, a retention period for recorded files must be set. The default is 30 days, with a modifiable range of 7 to 90 days. The system will periodically clear the cache of automatically recorded videos based on the set retention period to avoid storage redundancy.

7.4 Resource Consumption Display (for FlightHub 2 public version only)

Below the recording settings, the remaining storage space and livestream minutes for the organization related to the project will be displayed. If resources are insufficient, users can click Upgrade Storage and Top Up Livestream Minutes to navigate to the DJI FlightHub 2 package link for renewal and purchase.

8. Sharing Settings

Project administrators can enable livestream view and photo sharing.

9. Media File Direct Transfer

Organization administrators can go to My Organization > Organization Settings > FlightHub Sync Beta > Media File Direct Transfer to add a third-party cloud service. After enabling Media File Direct Transfer, the data collected by the dock will only be uploaded to the third-party cloud platform.

10. Customize File Transfer in Task Plan

When enabled, users can enable or disable Media File Direct Transfer when creating task plans. When disabled, the task plan settings will apply the project settings.

11. Members

Click Add Member to add organization members to the project. If the member is not on the list, the organization administrator can add the member in Member Management. Users can also join the project with the project ID and code.

12. Devices

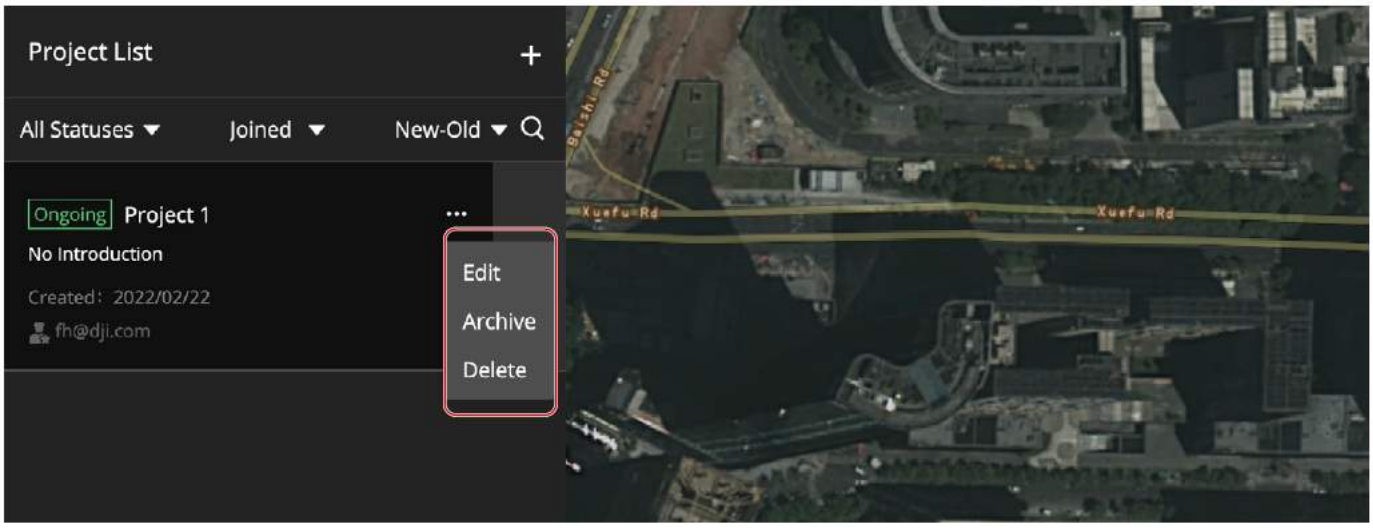
Devices include the docks and the aircraft that are bound to the current project. Click Add Aircraft to add aircraft that are bound to the organization to the project. See Device Management for more details.

a. Users can deploy a dock in DJI Pilot 2 or DJI Enterprise app. The dock information will automatically be displayed on the panel.

b. For DJI Pilot 2 users who enter the cloud project, once their aircraft are linked with remote controllers, the aircraft information will automatically be displayed on the device list.

Click Create Project to create the project.

Both super and organization administrators can edit, archive, and delete projects. They can also activate archived projects. The project administrator can edit, archive, activate, and delete projects they manage. Other members can only view information of joined projects.



Note: DJI Pilot 2 users cannot view or work on archived projects.

Notes on On-premises Version

The FlightHub 2 on-premises version does not support joining projects with a code and archiving or activating archived projects.

Member Management

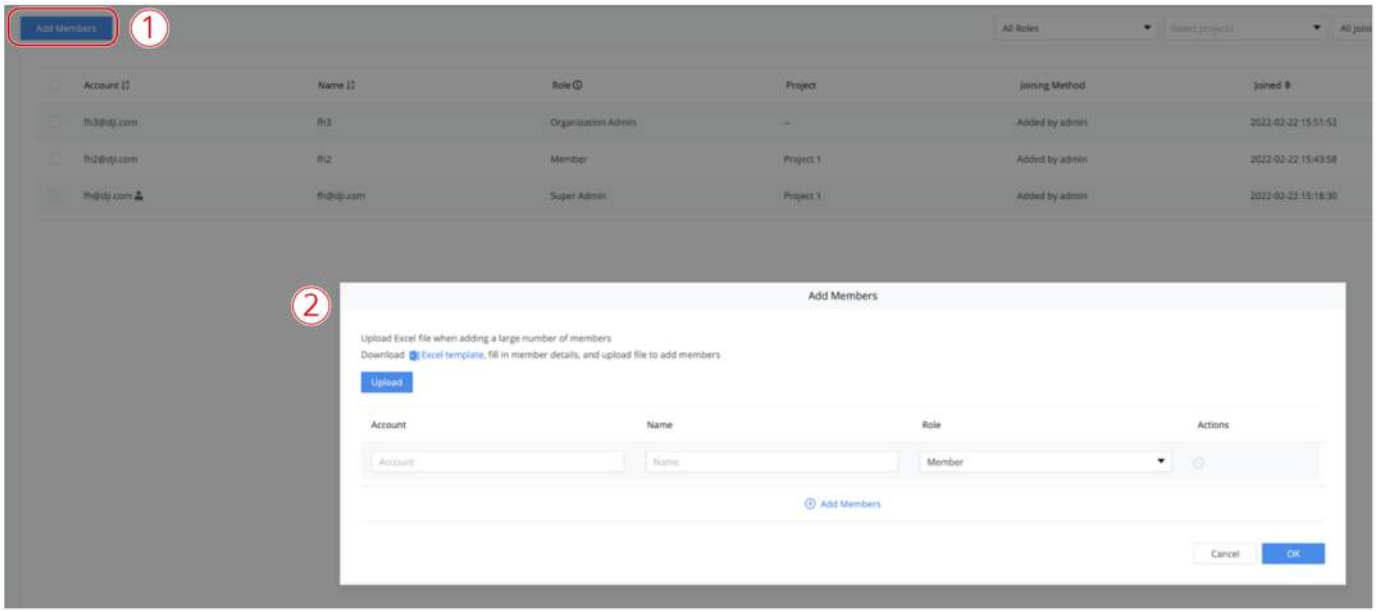
- Notes on Public Version
- Notes on On-premises Version

Notes on Public Version

Both super and organization administrators can manage members on the Members page.

Add Members

Click Add Members and fill in members' DJI accounts and organization names and roles. To add multiple members at once, administrators can also download an Excel template, fill in the members' information, and then upload the file.



> Note: Members should have DJI accounts before joining organizations and projects.

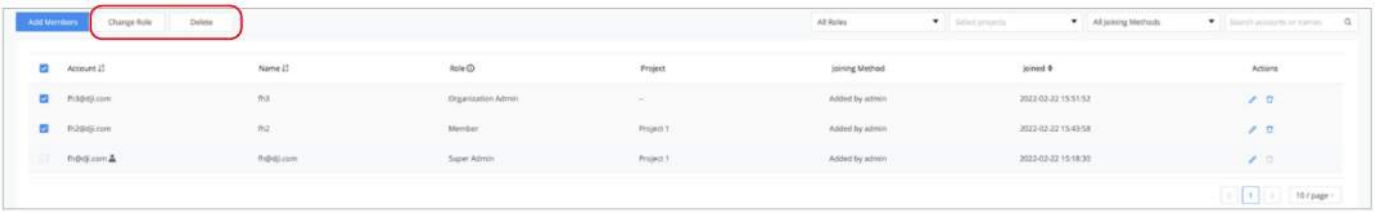
Change Member Information

Administrators can edit member information and delete members.

Note: The organization administrator cannot change the role or delete the account of the super administrator.



Administrators can also select multiple accounts and change member roles or delete all accounts at once.



When deploying the FlightHub 2 on-premises version, you can choose between a local account system or a third-party account system. The organizational management methods of these two account systems differ.

- Local account system: Manually add and manage accounts after deployment. Suitable for users without an existing account system.
- Third-party account system: Use by configuring the OAuth2 protocol during deployment. Suitable for users with an existing account system who wish to integrate with FlightHub 2. Unlike the FlightHub 2 public version, after logging in with a third-party account, if not pre-assigned as a super admin, the default role is Guest with no permissions, requiring an admin to set roles.

Note： For specific definitions and permissions regarding roles, please refer to **DJI FlightHub 2 User Manual > Organization Roles and Permissions**.

Notes on On-premises Version

Local Account System

Login with Password

If you use the local account system, a super administrator account will be included during deployment. The super administrator must log in for the first time using the default super administrator username and password. Other members must log in using the accounts and passwords added by the super administrator or organization administrator. After logging in, change your password in the User Center as soon as possible.

Organization Creation

The super administrator can create an organization, and only one organization can be created.

Member Management

The super administrator or organization administrator can manage members on the Members page.

Add Organization Members

The super administrator or organization administrator can go to the Members page, click Add Members and fill in members' accounts, passwords, and organization names and roles. To add multiple members at once, administrators can also download an Excel template, fill in the members' information, and then upload the file.

Edit Member Information

You can edit the name and user role of organization members.

Remove Members

The super administrator and organization administrator can delete members by clicking the delete button. Members cannot delete their own accounts or the super administrator account.

Password Loss and Reset

If a password is lost, the super administrator and organization administrator can reset the password for that account. The super administrator's password can only be reset by the super administrator. The reset password will be automatically generated.

It is recommended to set up multiple super administrators and keep account passwords safe. If all super administrator passwords are lost, refer to the deployment manual to redeploy or contact DJI Support.

Third-Party Account System

Login with Password

If using a third-party account system, the super administrator account ID must be configured during deployment. All members can log in using their third-party account credentials. After logging in, members are automatically added to the organization created by the super administrator. By default, their user role is visitor with no permissions. After being assigned another role by the super administrator or organization administrator, members can obtain the corresponding permissions.

Organization Creation

The super administrator can create an organization, and only one organization can be created.

Member Management

The super administrator or organization administrator can manage members on the Members page.

Add Organization Members

If using a third-party account system, including the account system of the public version FlightHub 2, the super administrator is pre-written during deployment, but the super administrator does not have the ability to add members. Therefore, OAuth2 protocol needs to be configured during deployment to use the third-party account system. If you want to continue adding members after the on-premises version deployment, you can add members directly on the third-party platform.

Edit Member Information

You can edit the name and user role of organization members.

Delete Members

If a member is deleted directly from the organization, the member will no longer exist in the organization, but can still log in with the same account. After logging in, their role will be a visitor with no permissions.

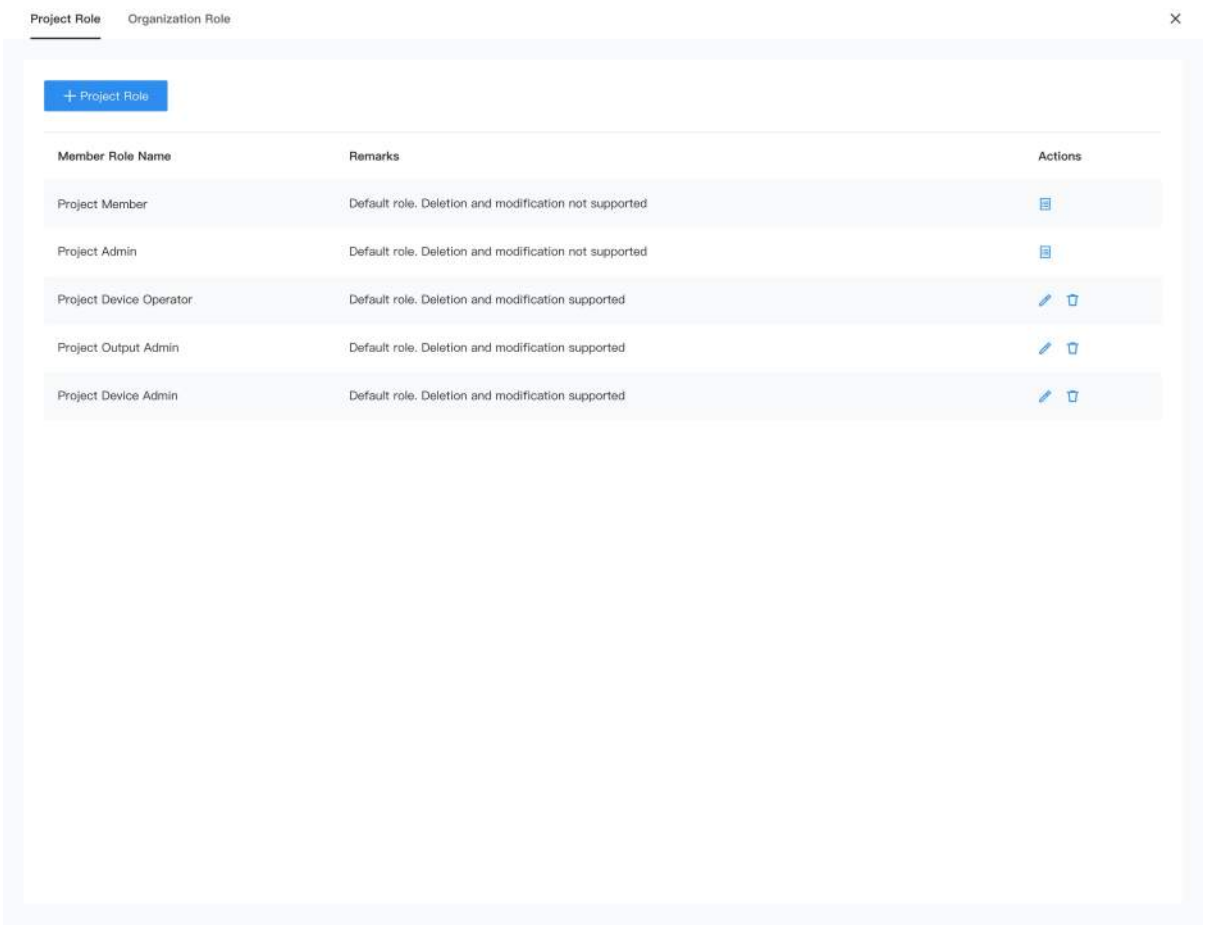
Project User Role Management

- Add and Modify Project User Roles
- Project User Role Assignment and Settings
- Delete Project User Role

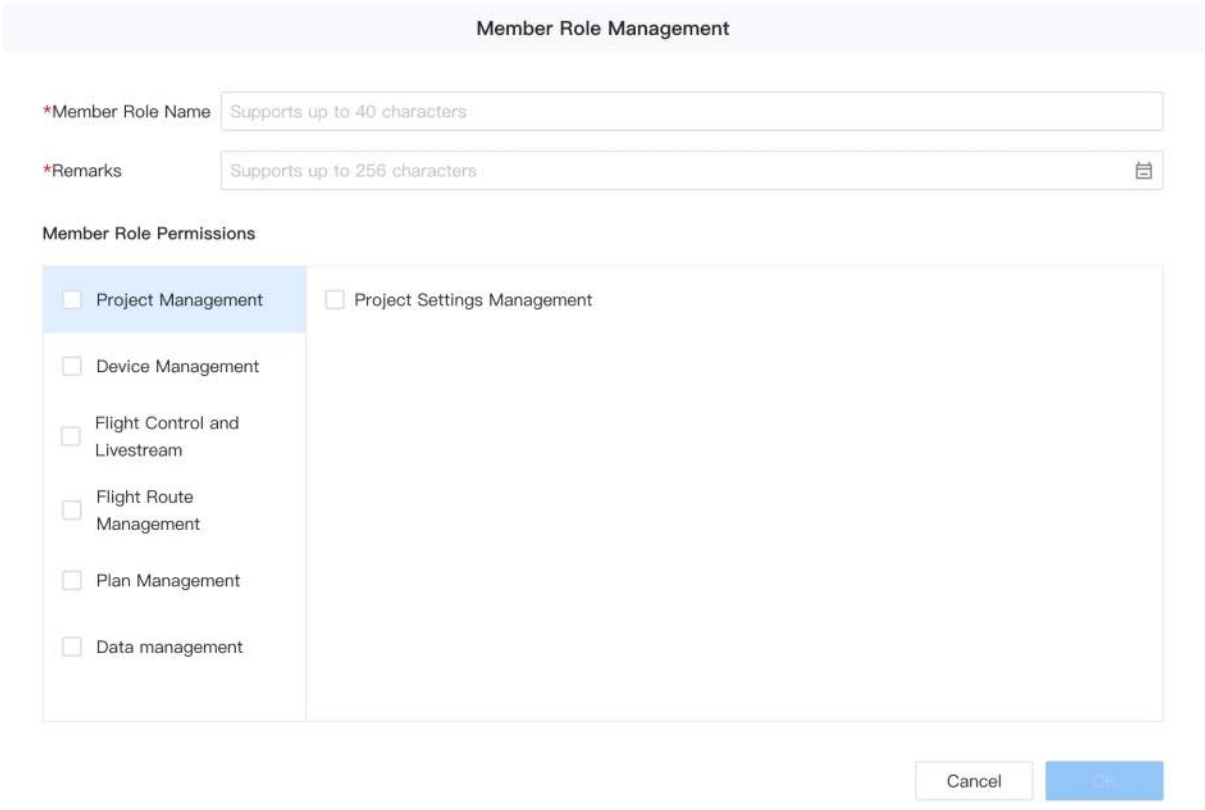
Project user role management allows for detailed control of member permissions within a project by assigning various permissions to different user types. FlightHub 2 presets five user roles: Project Admin, Project Member, Project Output Admin, Project Device Operator, and Project Device Admin.

Among them, Project Admin and Project Member are system default user roles that cannot be deleted or modified. Temporary members joining the project within the organization will also be authorized as project members by default. The remaining three user roles are example user roles that can be modified or deleted according to actual needs. New user roles can also be created as needed to meet management requirements.

Specifically, the organization super admin and organization admin can edit the detailed settings of any project on the project list page. However, accessing detailed project settings within the project requires members to have the Edit Project permission for that project.



Add and Modify Project User Roles

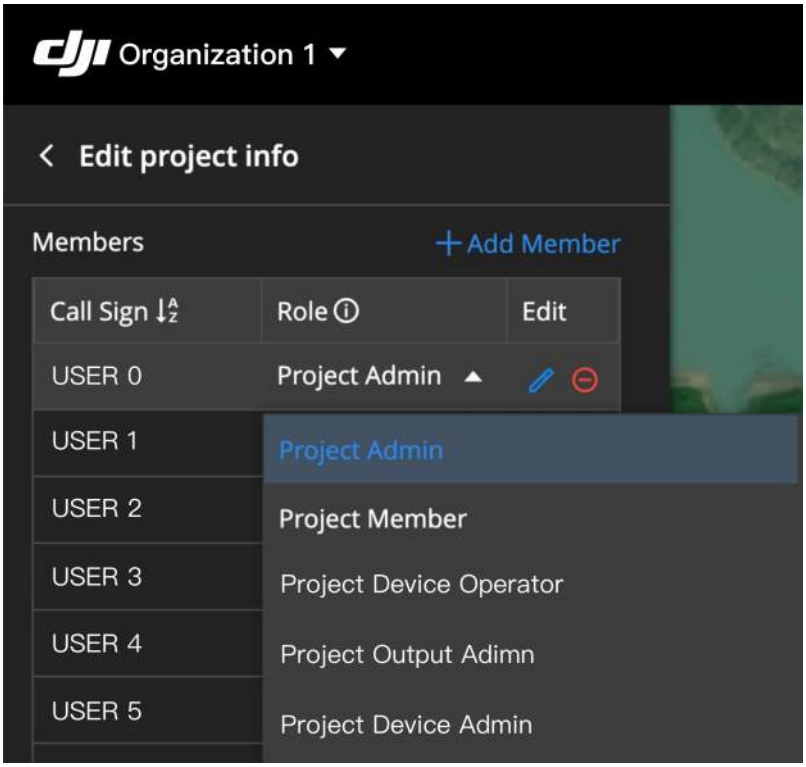


- When creating and modifying user roles, the user role name and remarks are required fields. It is recommended to accurately describe the remarks for future management.
- Pre-permission: Some feature permissions depend on other permissions to function properly. When enabling the corresponding permissions, pre-permissions will be enabled first to ensure the feature functions properly. For example, the pre-permissions for Plan Management are: Flight Route Management - Create Flight Route, Flight Route Management - Delete Flight Route, Flight Route Management - View Flight Route, Device Management - View Device Details, and Data Viewing and Management - Upload or Create Media.
- Basic Permissions: Basic permissions are the most fundamental permissions at the current permission level. Before enabling peer-level or subordinate-level permissions, basic permissions must be enabled. For example, the basic permission required to enable Delete Media is View Media.

Project User Role Assignment and Settings

The permission to enter the project settings interface is: Project Management > Edit Project. Organization super admins and organization admins can enter the settings interface of any project without project-specific permissions.

After defining the project user roles on the Members page, you can assign these user roles to members within the project settings



Delete Project User Role

Deleting removable user roles within the project will cause all users assigned to that user role to exit the project. Please proceed with caution.

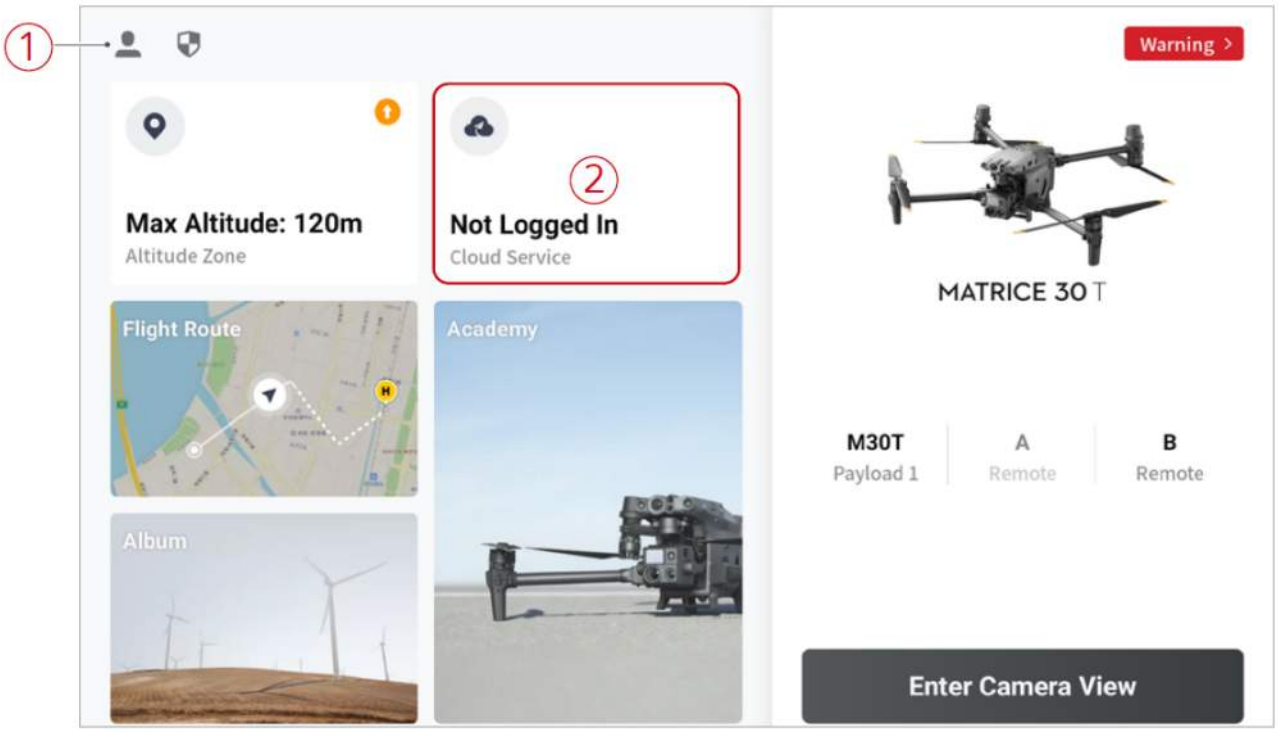
Device Management

- Aircraft Management
- Dock Management
- Notes on On-premises Version

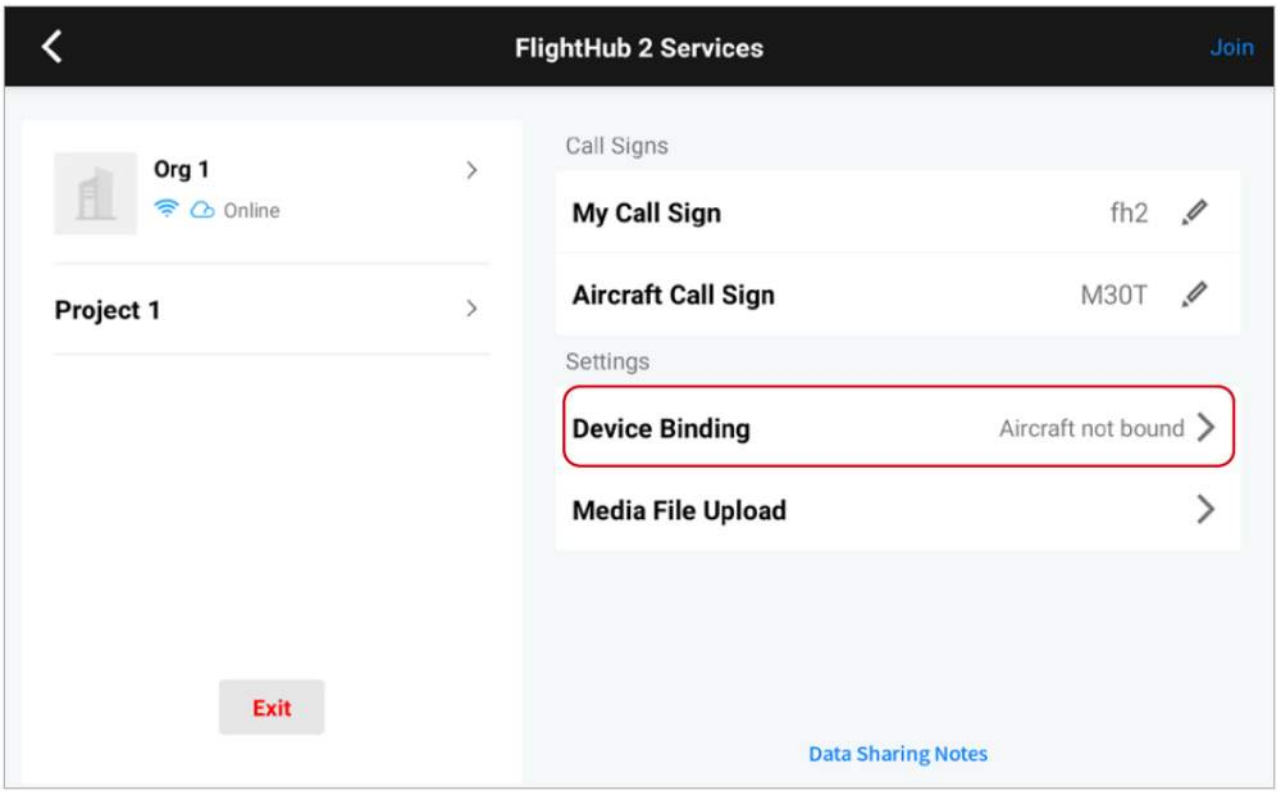
Aircraft Management

DJI Pilot 2 users can bind their aircraft to DJI FlightHub 2 organizations. Make sure that the remote controller is connected to the internet. Open DJI Pilot 2 and enter the home screen.

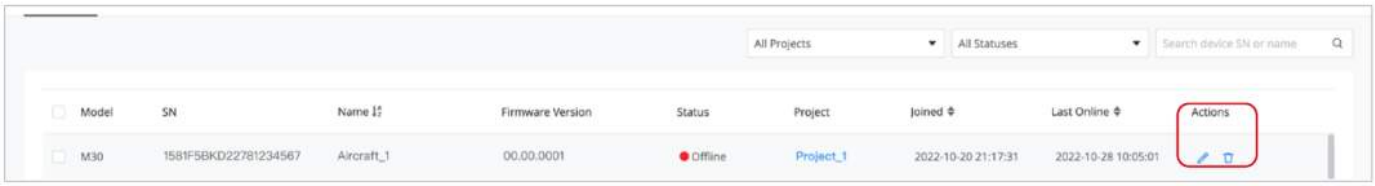
1. Tap Settings in the upper left corner and log in with a DJI account.
2. Tap Cloud Service and select the DJI FlightHub 2 cloud service. Users need to select the organization and project they want to join upon the first login. At subsequent logins, they will be directed to the project page they entered last time. If users have not joined any organization, they can contact the administrators for details.



3. After logging in, the project information will be displayed on the screen. Click Device Binding to bind the aircraft to the organization.



The administrators can manage the aircraft on the Devices page after the aircraft is bound to the organization.



Dock Management

Bind to an Organization

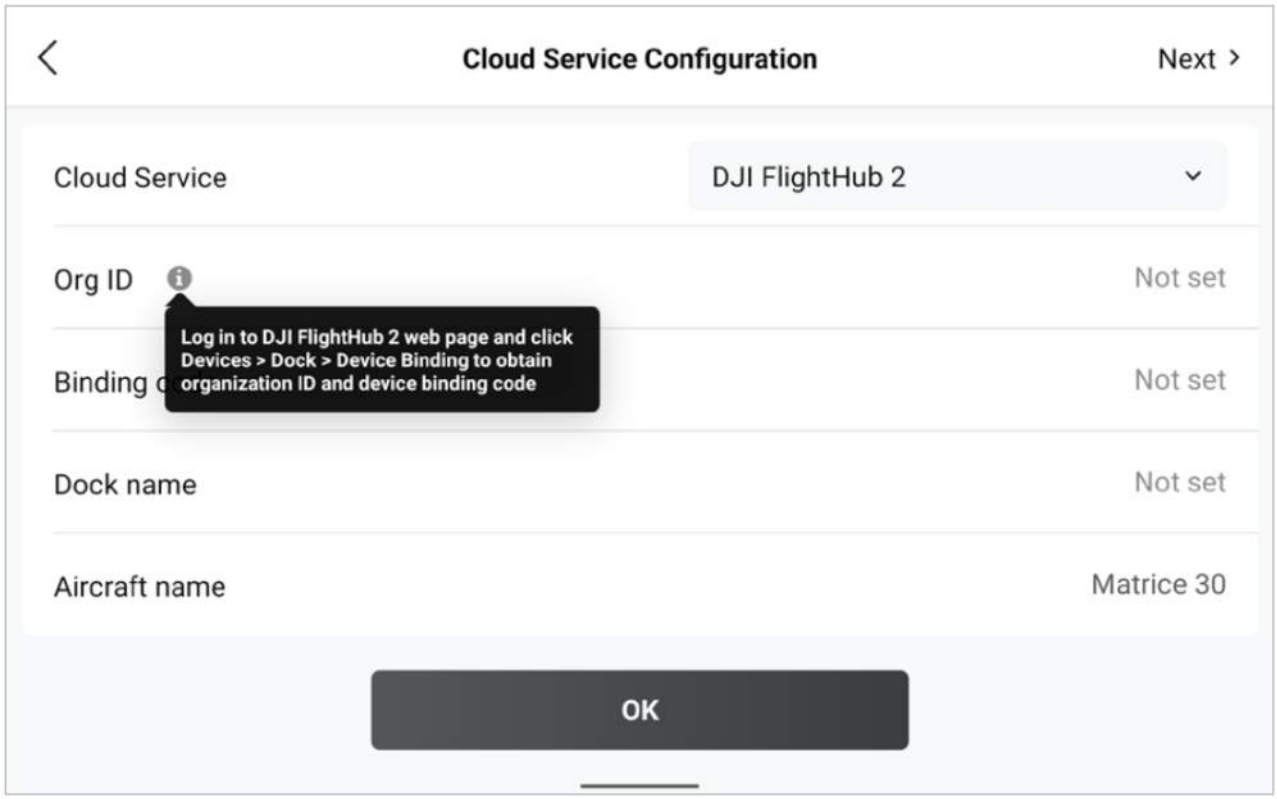
The DJI dock can be bound to the FlightHub 2 organization via the DJI Pilot 2 or DJI Enterprise app.

- DJI Dock and DJI Dock 2 can be bound to an organization via DJI Pilot 2.
- DJI Dock 3 can be bound to an organization via the DJI Enterprise app.

1. Bind docks to organizations through Pilot 2

Make sure that the dock is connected to the cable or 4G network. Open DJI Pilot 2 and enter the home screen.

1. Connect the USB-A port on the dock to the USB-C port on the remote controller with a USB cable.
2. Follow the on-screen instructions to deploy the dock. Input the organization ID, device binding code, and dock and aircraft names on the Cloud Service Configuration screen.
3. Tap OK after completing the information, and the dock will be bound to the organization.



2. Bind docks to organizations through the DJI Enterprise app

Make sure that the dock is connected to the cable or 4G network. Open the DJI Enterprise app and enter the home screen.

1. Connect the phone to the dock using a dual-ended USB-C cable.
2. Follow the on-screen instructions to deploy the dock. Input the organization ID, device binding code, and dock and aircraft names on the Cloud Service Configuration screen.
3. Tap OK after completing the information, and the dock will be bound to the organization.

- Go to Devices > Dock > Device Binding to access the organization ID and device binding code on FlightHub 2.
- A dock can only be bound to one organization. To switch organizations, users can go to Devices > Dock to unbind the dock first and bind the dock to a new organization in DJI Pilot 2 or the DJI Enterprise app.

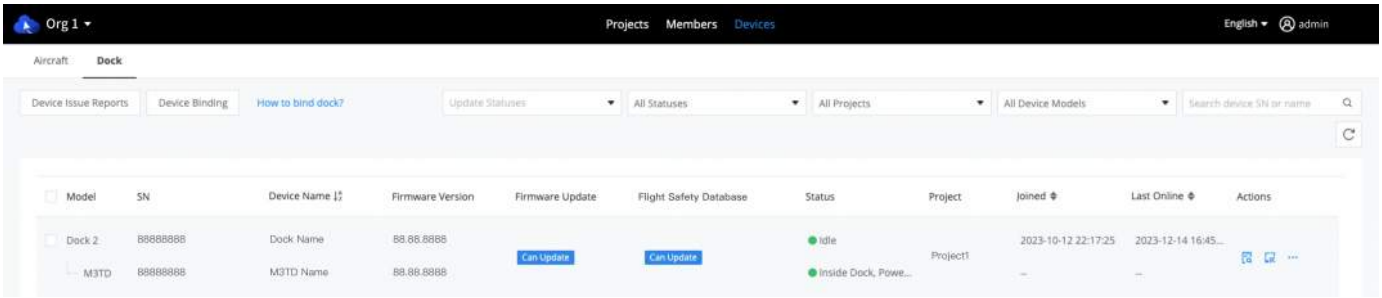
Manage on the Cloud

Administrators can manage the dock on the Devices page after the dock is bound to an organization. Users can also bind the dock to a project, view the warning messages, operate the dock remotely, and update the Flight Safety Database.

> Note: To update the Flight Safety Database, the firmware version of DJI Dock should be v01.06.17.02 or later.

Bind to a Project

The administrators can click Dock > ••• > Edit to bind the dock to a project.



> Note: A dock can only be bound to one project.

View Warning Messages

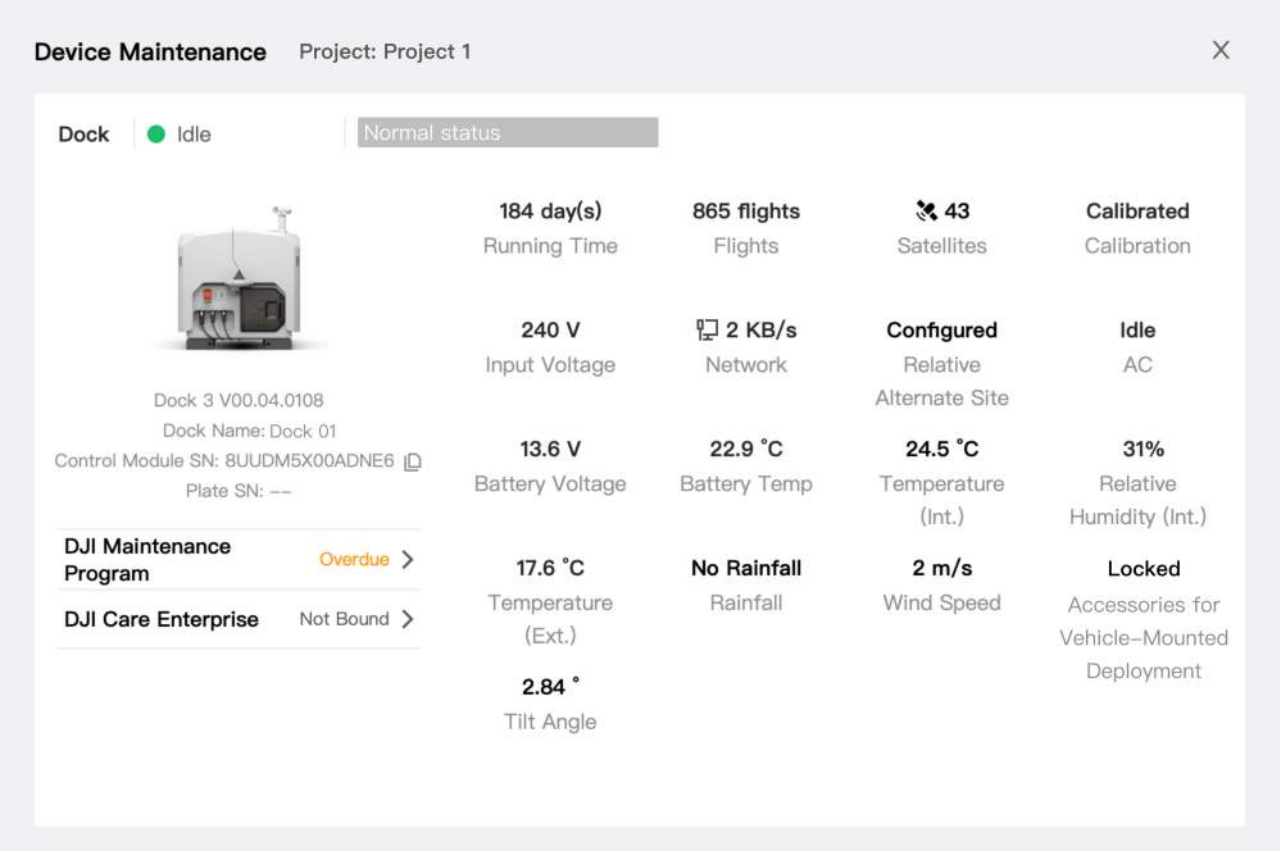
Users can click to view the warning messages of the dock and aircraft. The message includes the start and end time, warning level, device type, error code, content, and recommended solutions.

Monitor and Maintain Devices

Users can click to monitor and maintain the dock and aircraft remotely.

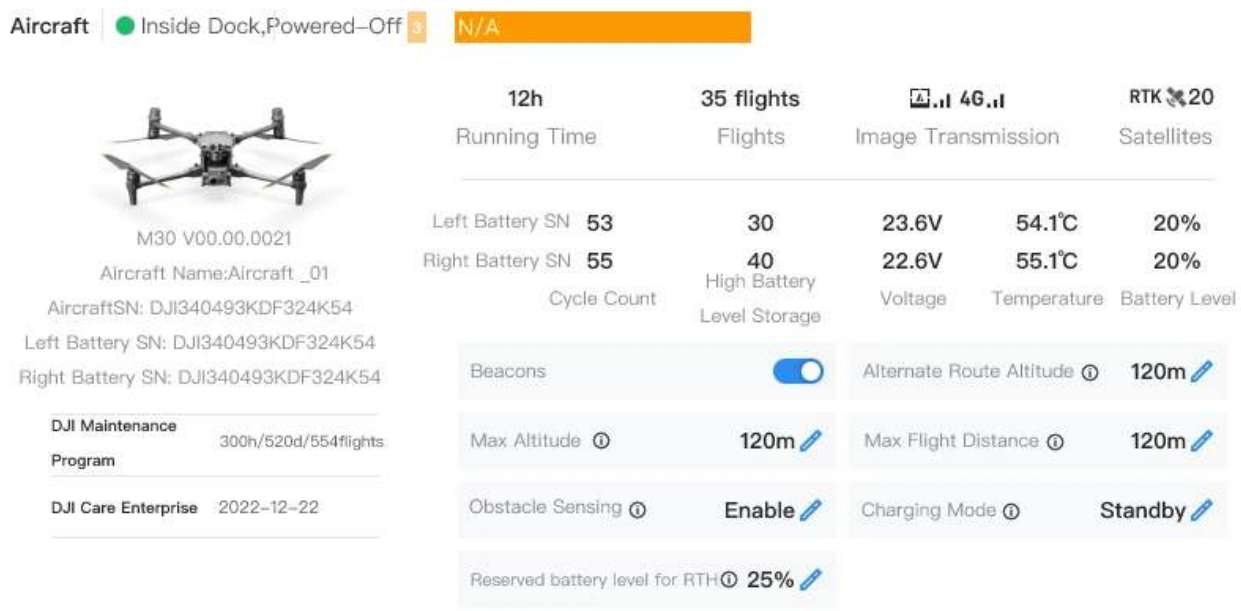
Dock Status Panel

Users can view the dock name, type, firmware version, SN, maintenance program, DJI Care Enterprise, and other status information on the dock status panel. If the entry/exit route has been set for the dock, the dock aircraft will first perform the entry/exit route before performing tasks to ensure safe departure. To modify the entry/exit route, contact your local dealer to use DJI Pilot 2 to reevaluate the site and redeploy the dock.



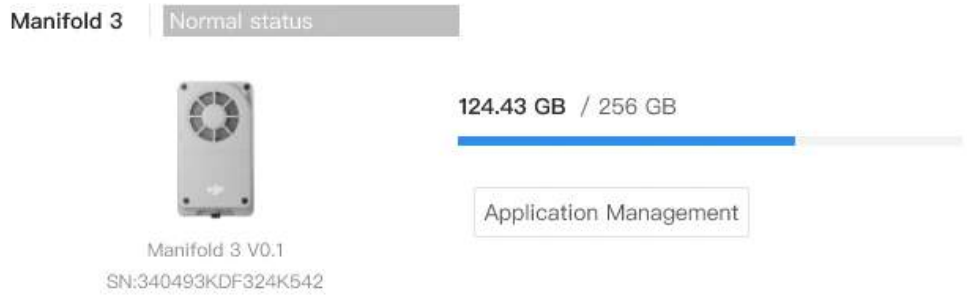
Aircraft Status Panel

Users can view the aircraft name, type, firmware version, SN, left/right battery SN, maintenance program, DJI Care Enterprise, and other status information on the aircraft status panel. The beacon status, maximum flight altitude and distance, obstacle sensing status, operating mode, and the reserve battery level for return-to-home can be modified.



Manifold 3 Information

The Manifold 3 information panel displays the status, firmware version, SN, and memory usage of the Manifold 3 device connected to the aircraft.

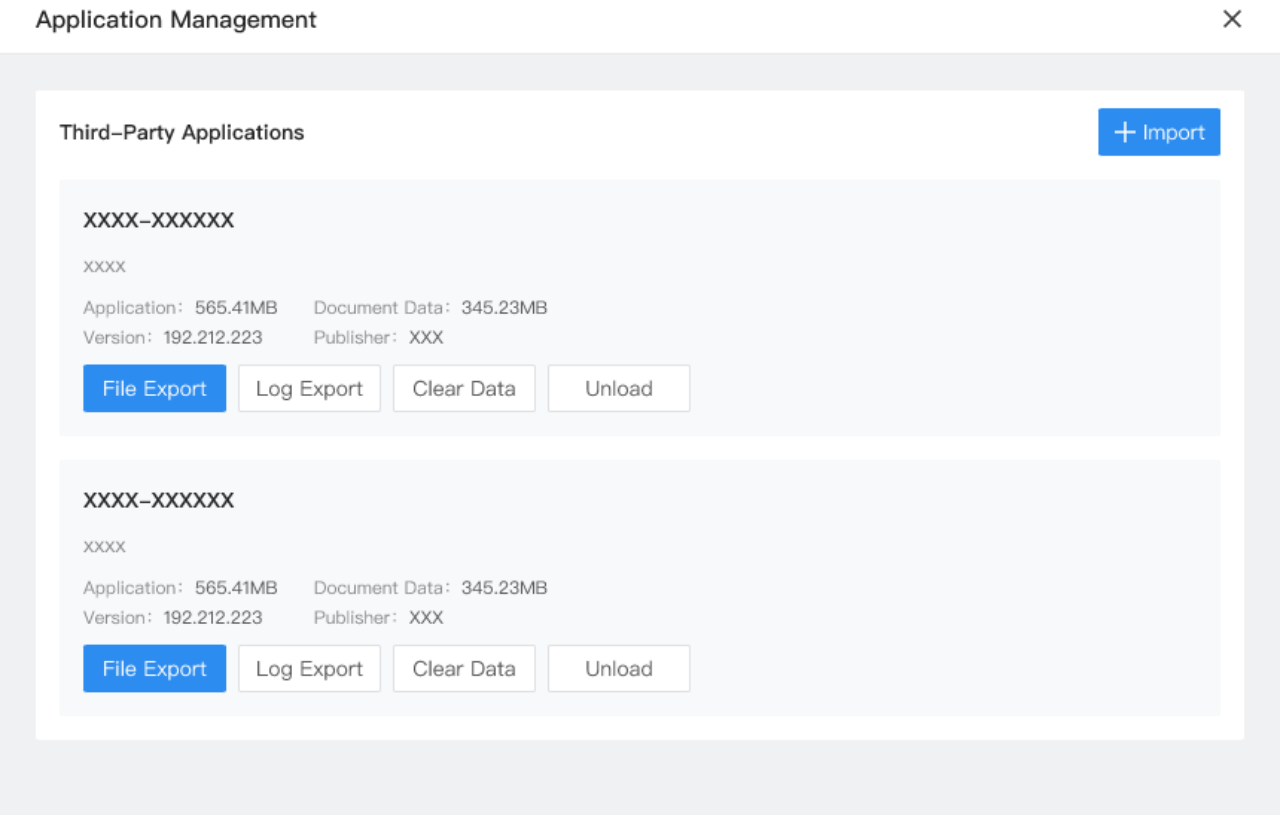


Application Management

The application management feature allows users to manage applications installed on the Manifold 3 device. The operation process is as follows:

1. Enter the application management page

In the Manifold 3 information panel, click `Application Management` to access the application management configuration page.



2. Application Management Operations

On the application management page, users can perform the following operations:

- Local Import: Supports importing application files in DPKG format.
  - Click + Import and select a local application file to upload. Once imported, the application will appear in the application panel.
- The application panel displays the following information:
  - Application Name: The name of the application.
  - Application Description: A brief description of the application.
  - Application Size: The size of the application file.
  - Document Data Size: The data space occupied by the application.
  - Application Version Number: The current version number of the application.
  - Publisher Information: The publisher information of the application.
- Application File Export:
  - Supports exporting files of installed applications.
- Log Export:
  - Supports exporting application log files for troubleshooting and analysis.
- Data Clearing:
  - Supports clearing application cache data and files.
- Application Uninstallation:

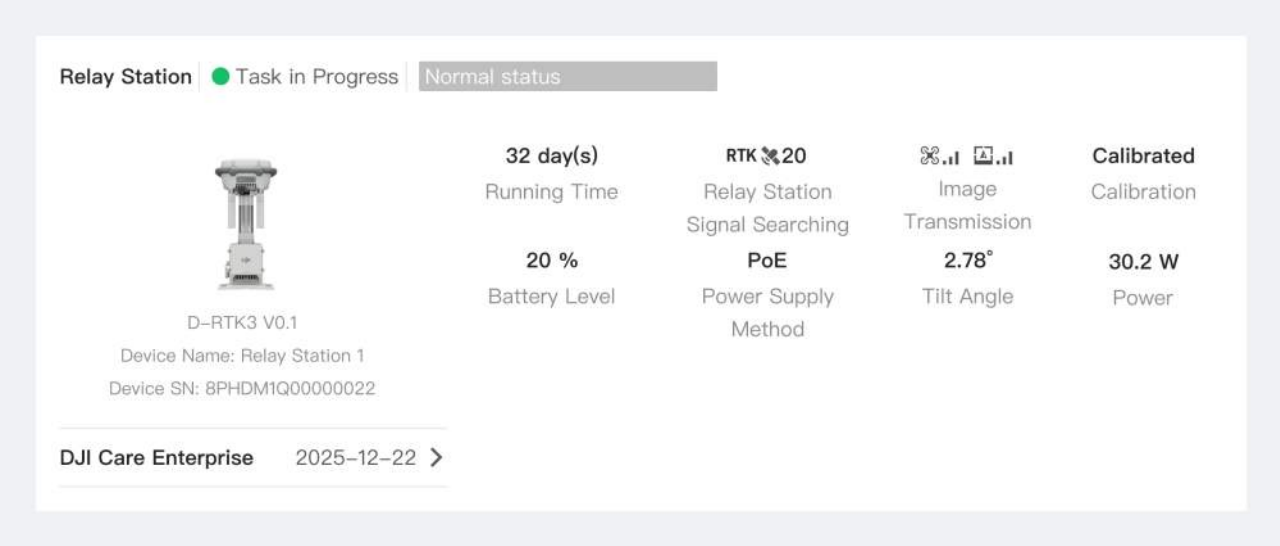
- Supports uninstalling installed applications from the Manifold 3 device.

3. Call Application

After importing the application, users can enter the virtual cockpit of the corresponding aircraft to activate and call the application.

Relay Station Information

Users can view the relay station name, firmware version, SN, DJI Care Enterprise, and other relay station data.



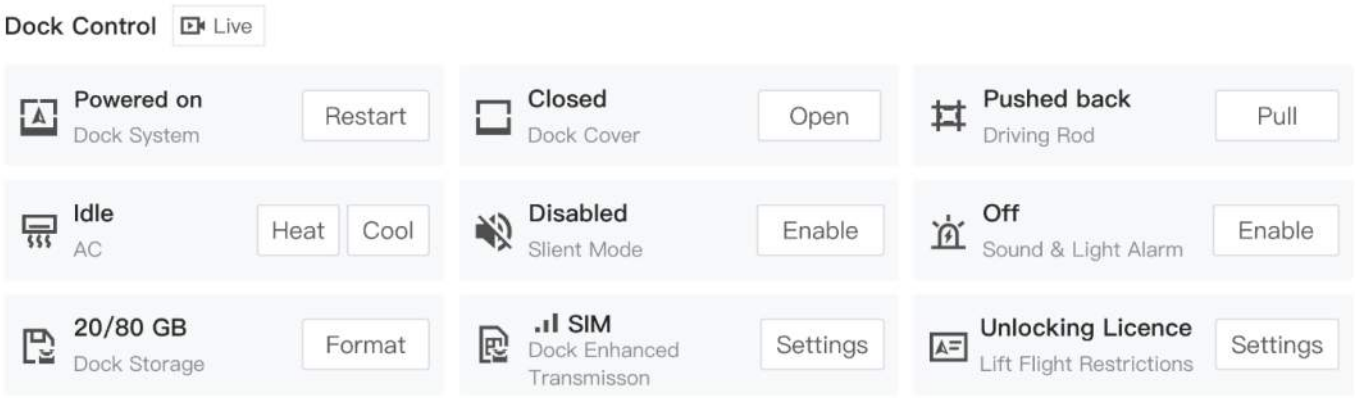
Remote Operations

Users can remotely operate the dock and aircraft and report device issues.

> Note: After Remote Operations is enabled, the dock will not be able to perform tasks.

Dock Control

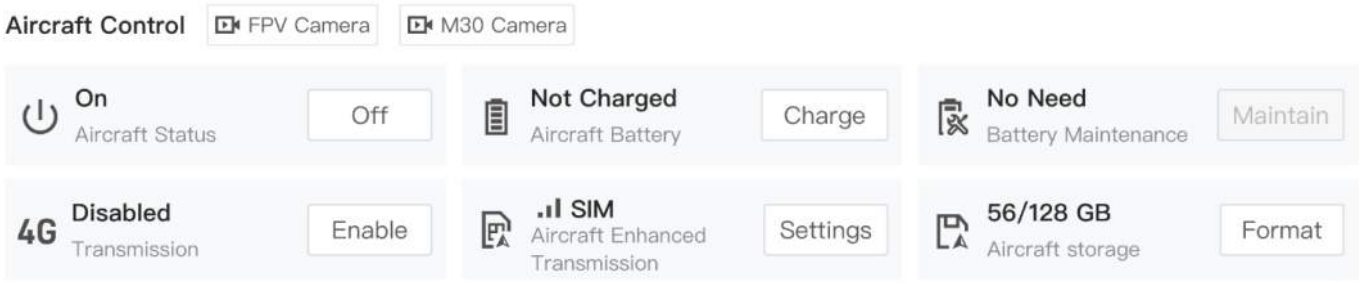
The dock control panel supports operating the dock system, dock cover, driving rods, and air conditioner, enabling the silent mode and sound-light alarm, formatting the dock storage, customizing the enhanced transmission settings, and setting the unlocking license details. The administrators can click Live to view the dock livestream.



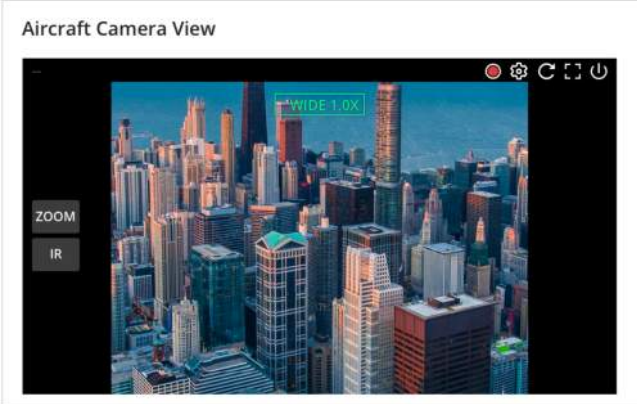
Note: Only DJI Dock supports operating the driving rods.

Aircraft Control

The aircraft control panel supports powering on the aircraft, charging the aircraft, customizing the enhanced transmission settings, and formatting the aircraft storage. The administrators can click the camera view buttons to view the FPV or the payload camera view.



Users can click the camera type to switch between camera views or click ● to start recording. The recorded video will automatically be stored to Media Files.

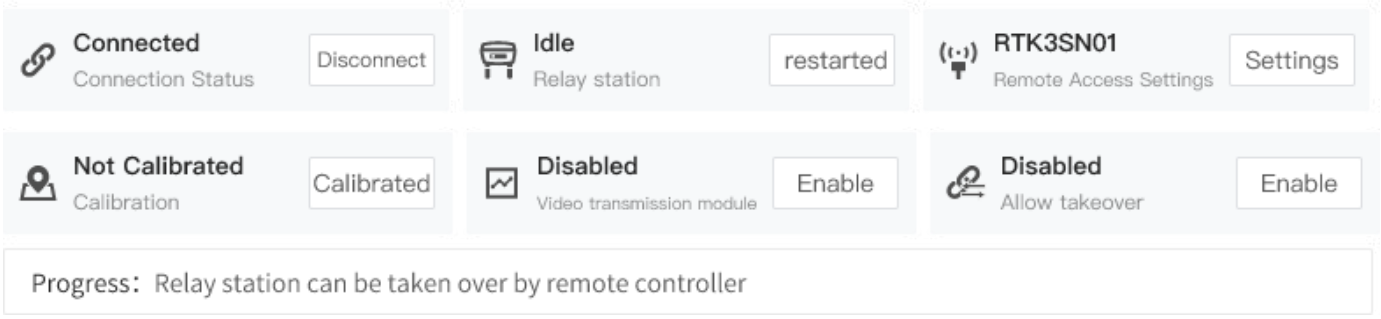


Relay Station Control

When the dock is not connected to a relay station, users can search for remote access signals from relays near DJI Dock 3, select a device, and then enter a password to connect. After the initial connection, it is recommended to change and remember your password.



After the dock connects to the relay, the relay station control panel includes relay system reboot, location calibration, video transmission switch, relay disconnection, remote relay access, and relay takeover settings. The relay remote access settings allow you to configure the name, password, and display or hide options for the relay remote access signal.



Trial Flight

Users can assess DJI Dock's task performance and media file transfer reliability.

Click Dock Aircraft Trial Flight and a trial flight task will be automatically created to test whether the dock can perform tasks.

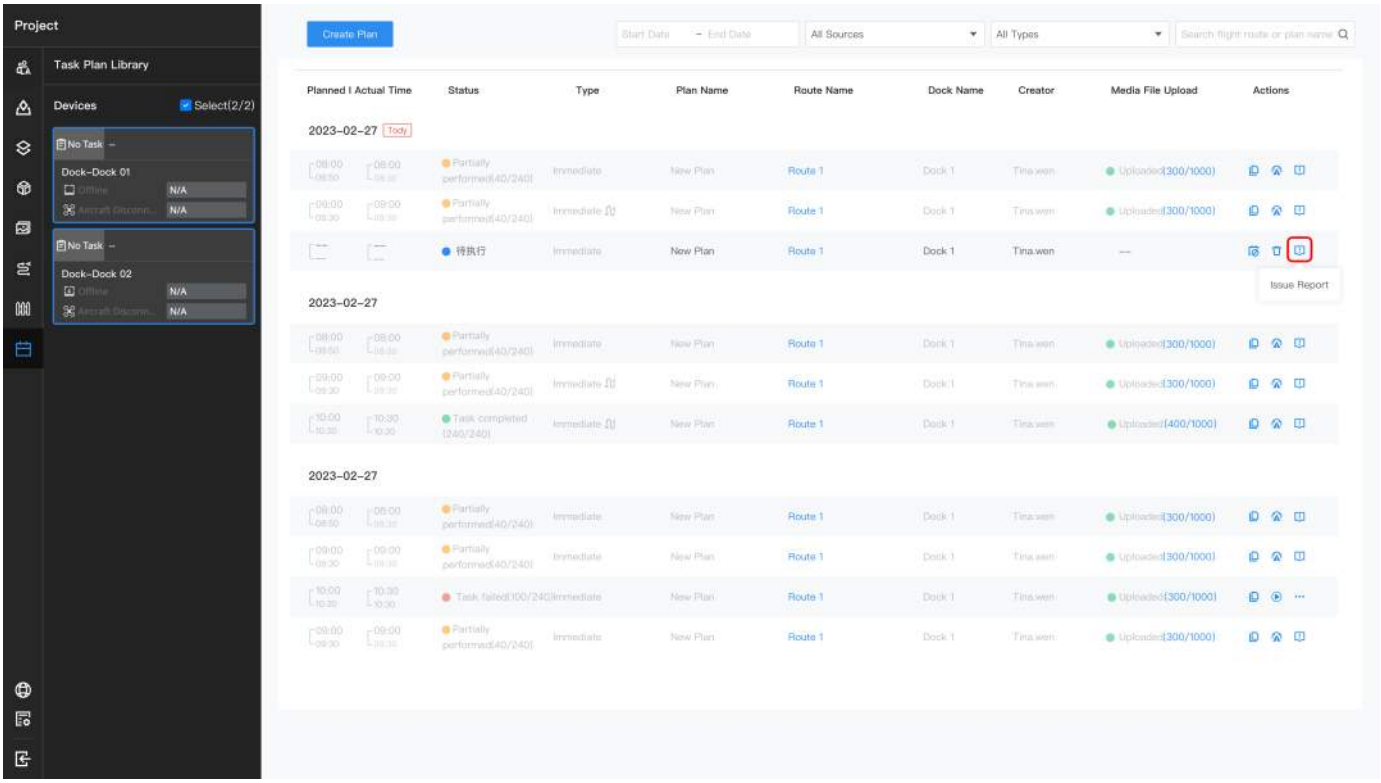
For DJI Dock and DJI Dock 2, the dock aircraft will ascend vertically to 60 meters, tilt the gimbal to -90°, take photos, and then return to home. For DJI Dock 3, if the entry/exit route has not been set for the dock, the dock aircraft will ascend vertically to 60 meters, tilt the gimbal to -90°, take photos, and then return to home. If the entry/exit route has been set for the current dock, the dock aircraft will perform the entry/exit route first, and then ascend vertically to a height of 5 m, tilt the gimbal to -90°, take photos, and then return to home.

> The following conditions should be met before starting a trial flight:

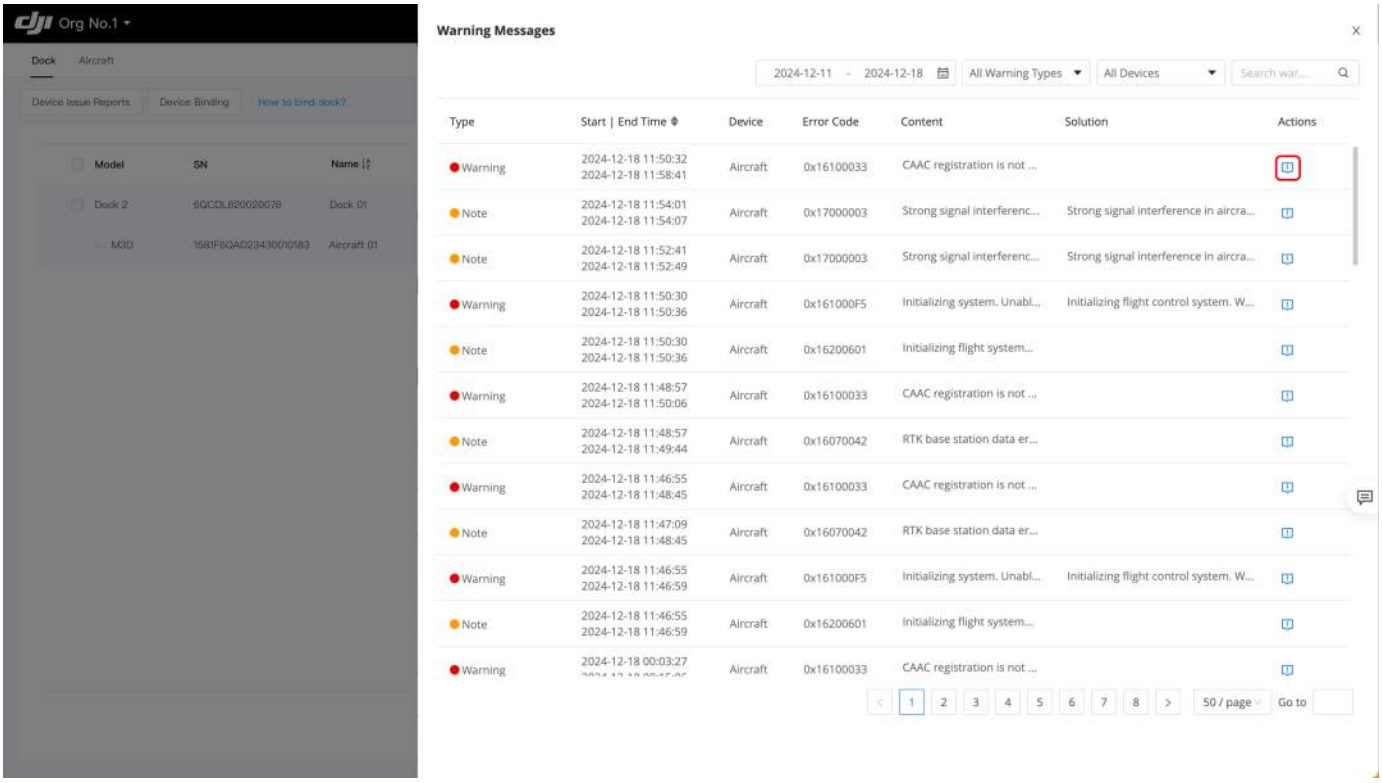
- The dock should be bound to a project.
- The operator should be a project administrator and have the device management permission.
- The dock is in an idle status.

Device Issue Report

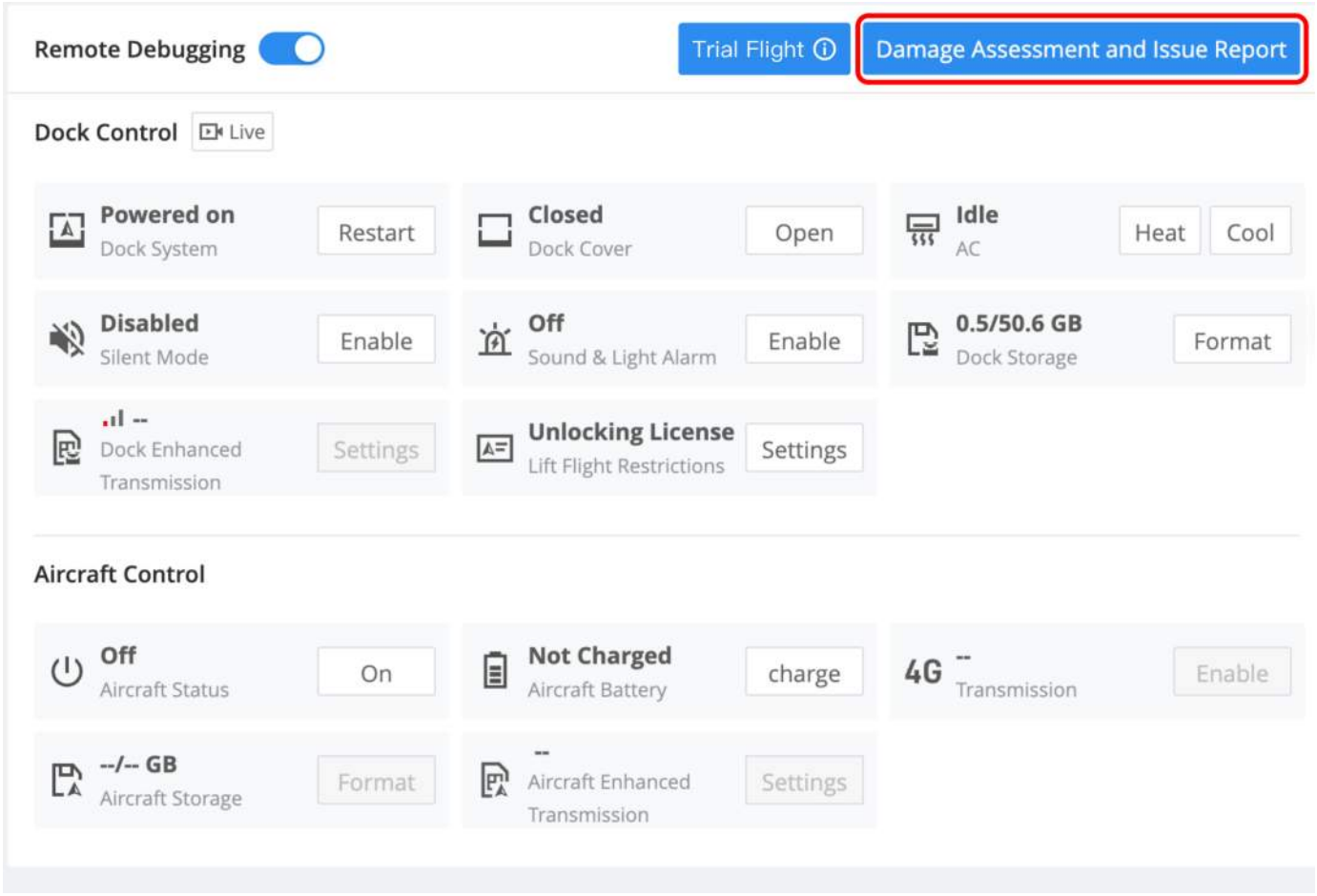
When a task fails, an issue report can be submitted directly in the task plan library and the error code and description will be automatically filled in.



If there is a device warning message, users can also directly click the message and submit an issue report. The error code and description will be automatically filled in.



If the issue cannot be reported using the above methods, administrators can click Damage Assessment and Issue Report > Create Report to submit the report.



Fill in detailed description, error code, and the time when the error occurs, and select the corresponding logs.

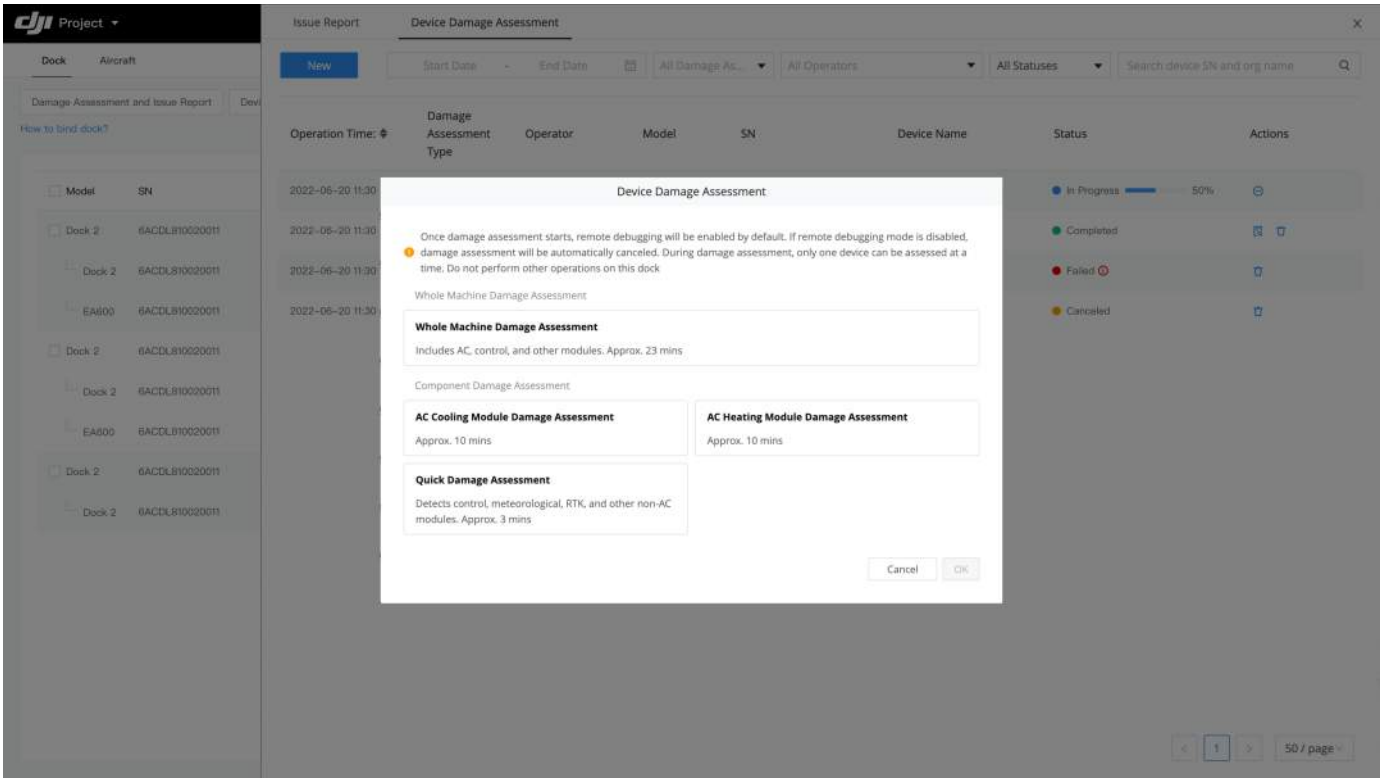
- When Synchronize Selection is enabled, device logs recorded at overlapping time periods will be automatically selected.
- Administrators should submit the issue report in time to avoid the device logs being overwritten and failure to identify the problem.
- After entering the Device Issue Report page, the aircraft will automatically power on if the aircraft was powered off previously.
- Users can click ↻ to refresh logs if the logs are not loaded.

After submission, please wait for feedback from DJI Support.Subsequently, you can view the assessment results in Device Damage Assessment.

Note: Visit DJI Dock User Manual and DJI Dock 2 User Manual to access more information about how to use docks.

Device Damage Assessment

If any errors occur to a dock or an aircraft, administrator can click Device Maintenance > Damage Assessment and Issue Report > Device Damage Assessment > New and select the damage type to submit the assessment.



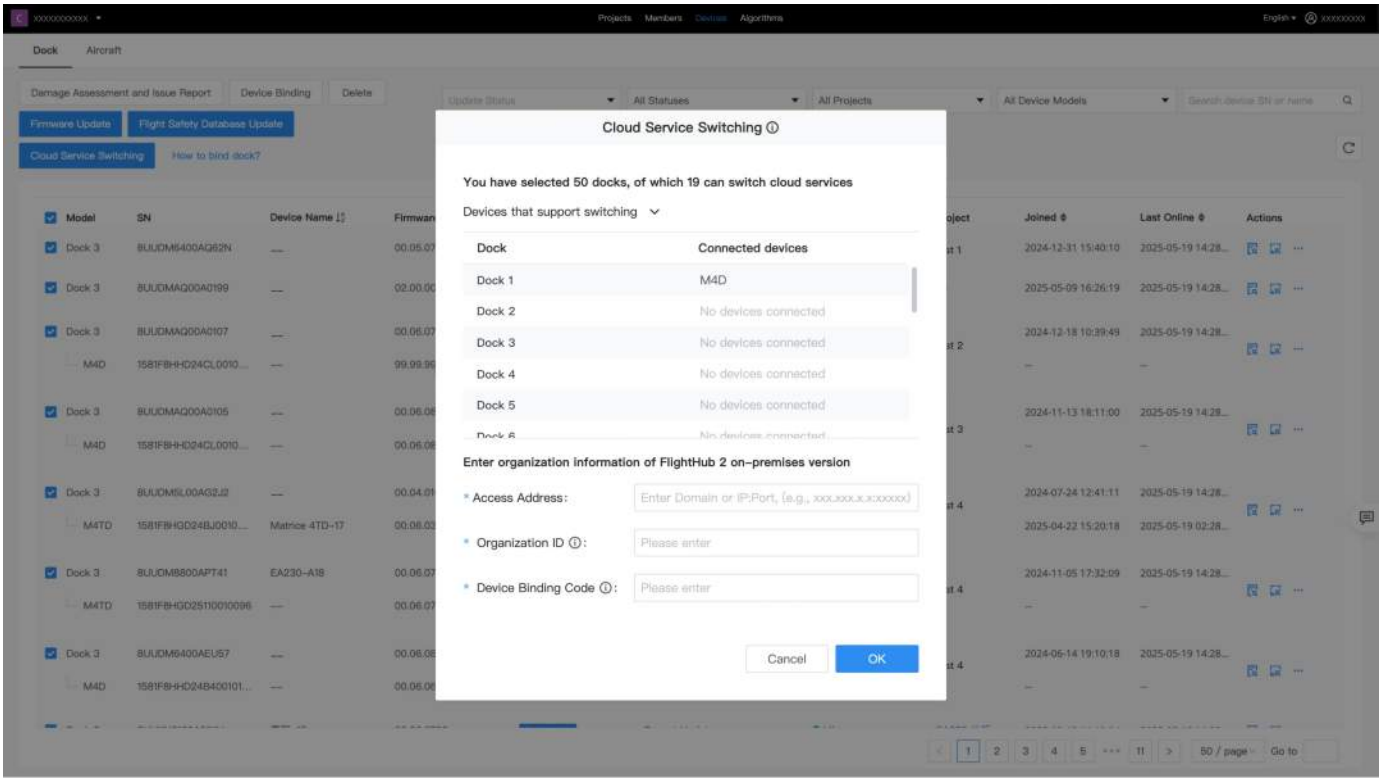
After the assessment is completed, contact the local dealer to maintain the device.

- Device damage assessment is only supported in Chinese mainland.
- After the assessment starts, remote debugging will be enabled by default. During the assessment, do not perform other operations on the dock. The assessment will be canceled after the remote debugging is disabled.
- Do not create multiple assessment requests for the same dock.

Cloud Service Switching

Cloud service switching supports switching cloud services between FlightHub public and on-premises versions, and between different on-premises environments.

Super admin and organization admin can go to Devices > Dock > Actions > More > Cloud Service Switching to remotely switch dock cloud services. Multiple docks can be operated in batches.



Notes:

- Currently only Dock 3 is supported.
- Please make sure that the media files generated by the flight are fully uploaded before switching cloud services to avoid data loss.
- The device must be idle to initiate a cloud service switch. The process takes about 1 to 2 minutes. Do not perform other operations during the switch.
- After switching, the following will migrate: aircraft and relay connected to the dock, dock data and devices (e.g., device damage assessment, alert information, algorithms on aircraft, flight safety database, real-name status, etc.).
- Free quotas for device binding will not migrate.

1. Successful switch: The device will be offline in the current organization and available in the new organization after an automatic restart.

2. Switch failure:

Error Code	Reason	Solution
324071	Server error	Please try again later
324072	Server error	Please try again later
324073	Server error	Please try again later

324074	Server error	Please try again later
324075	Incorrect information or network not connected	Check information and network connection
324076	Server error	Please try again later
325001	Server error	Please try again later
325005	Dock status is busy	Please try again later
325006	Dock is undergoing startup checks	Please try again later
325007	Dock is performing a task	Please try again later
325008	Dock is processing task results	Please try again later
325009	Dock is exporting logs	Please try again later
325010	Dock is updating custom flight area	Please try again later
325011	Dock is updating offline map	Please try again later
210229	Incorrect device binding code	Modify the code and try again
210230	Information error or server error	Check information and try again
210231	Server error	Please try again later
210232	Device bound to another organization	Remove device from current organization before switching
210233	Server error	Please try again later

Notes on On-premises Version

Bind to an Organization

1. Bind docks to the organization through the DJI Pilot 2 app: On the cloud service configuration page, select FlightHub 2 On-premises Version, and fill in the organization ID, address, device binding code, dock name, and aircraft name.
2. Bind docks to the organization through the DJI Enterprise app: On the cloud service configuration page, select FlightHub 2 On-premises Version, and fill in the organization ID,

address, device binding code, dock name, and aircraft name.

Firmware Manager and Update

The on-premises version requires device firmware update management to be performed through the firmware manager.

Go to Firmware Manager > Upload Firmware to upload the firmware installation package for the device. After uploading, click to activate the firmware installation package within the organization. Select a device for firmware update from the list in Devices > Dock.

Notes:

1. Only one firmware installation package can be stored on a device. The latest firmware will replace the previous version.
2. Obtain the corresponding device firmware package from the DJI official website under the respective product page.

View Dock and Aircraft Information

DJI Maintenance Program and DJI Care rely on DJI official online services. Therefore, DJI FlightHub 2 on-premises version does not support viewing related information for docks and aircraft.

Device Damage Assessment

Device damage assessment function relies on DJI official online services. Therefore, DJI FlightHub 2 on-premises version does not support device damage assessment.

Data Management

- Filtering by Project
- Copying Data Between Projects
- Annotation Management
- Model Management
- Flight Route Management
- Map Task Area
- Media File Management

Organization administrators and super administrators can use this feature to manage data for various projects within the organization, including annotations, models, and flight routes. You can view data from a specific project or copy it to others.

Filtering by Project

Use the Project Selector to filter the data you want to view or manage.

You can select any unarchived project or use the search bar to find a project by name.

Copying Data Between Projects

In any data module, select the items you need, then click Copy to Project and choose one or more target projects. After copying, the data is automatically placed in a dedicated folder within the target project's corresponding module. Map task areas will be automatically renamed with an -org suffix.

Annotation Management

Viewing Annotations

- Select a project to display all of its annotations (points, lines, and areas) in the annotation tab.
- Hiding annotations here will not affect their visibility in the original project.

Limitations

- Editing: You can only click an annotation to locate it on the map. To edit it, you must navigate to the original project.
- Management: You cannot add, rename, move, copy, or delete annotations.
- Search: You can search for annotations by name.
- Add: Currently you cannot add new annotations.

Model Management

Viewing Models

Click on a model file to open a preview window directly on the page.

Limitations

- Copying: If a model with the same name already exists in the target project, the new file will be automatically renamed to prevent overwriting.

Flight Route Management

Viewing Flight Routes

Select a flight route to see its path on the map. You can also download the flight route file from here.

Limitations

- Editing: Clicking Edit will redirect you to the flight route editor within the original project.

> Note: You must be a member of that project to make changes.

- Management: You cannot delete, merge, or move flight routes.

Map Task Area

Viewing Map Task Area

Select a map task area to view its boundaries on the map. Hiding map task areas will not affect their visibility in the original project.

Limitations

- Editing: You cannot rename, enable, or disable map task areas.

Media File Management

Viewing Media Files

Click on a media file to open it in the media browser.

- You can switch between full-screen and half-screen views.
- Limitations: Advanced features like adding photo markups, tagging, renaming, or loading media files on the map are not available here.
- Download: Supports downloading original files.

> Note: Copying media files is not supported in the current version. This feature is planned for a future release.

Algorithm Management

- Custom Algorithm
- Management of Algorithms on Aircraft
- Notes on On-premises Version

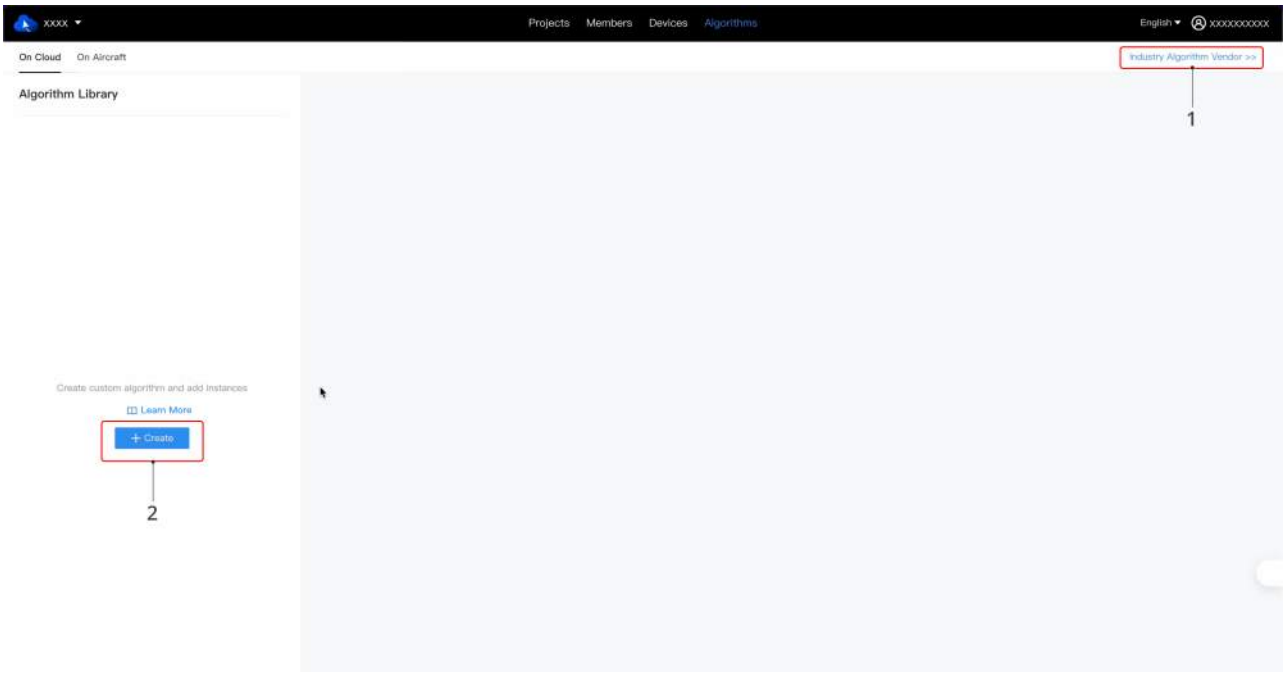
Custom Algorithm

Users can configure cloud intelligent algorithms on the Algorithms page, and call deployed algorithm instances in the virtual cockpit in real time.

Create Custom Algorithm

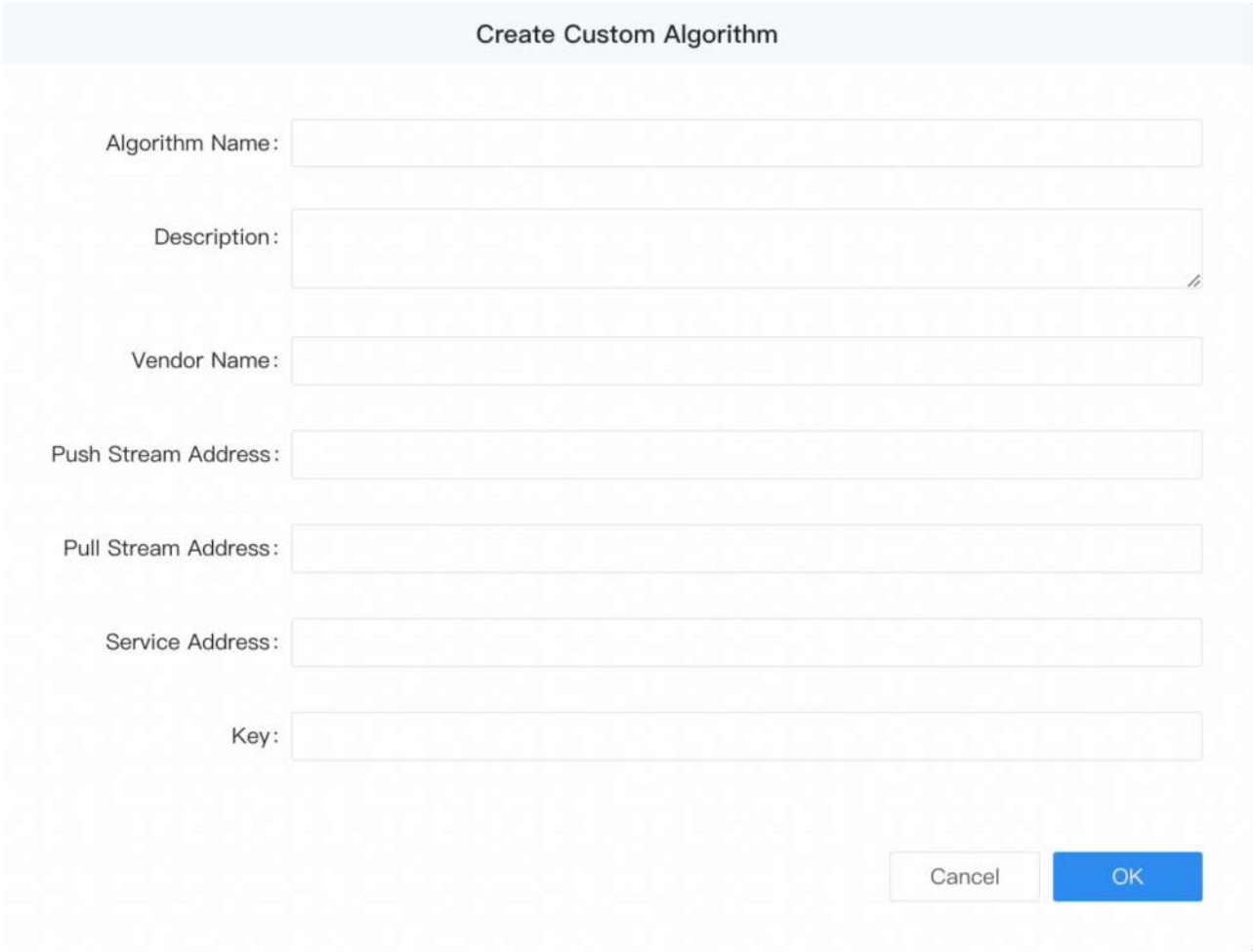
If the algorithm management feature is used for the first time, no algorithm is displayed after entering the Algorithms page. Users can create an algorithm through the following steps:

1. View the algorithms provided by vendors: Click Industry Algorithm Vendor and navigate to the DJI Developer website, and view the algorithms provided by vendors. Contact a vendor to obtain the configuration parameters of the desired algorithm, such as the addresses for stream pushing and pulling.

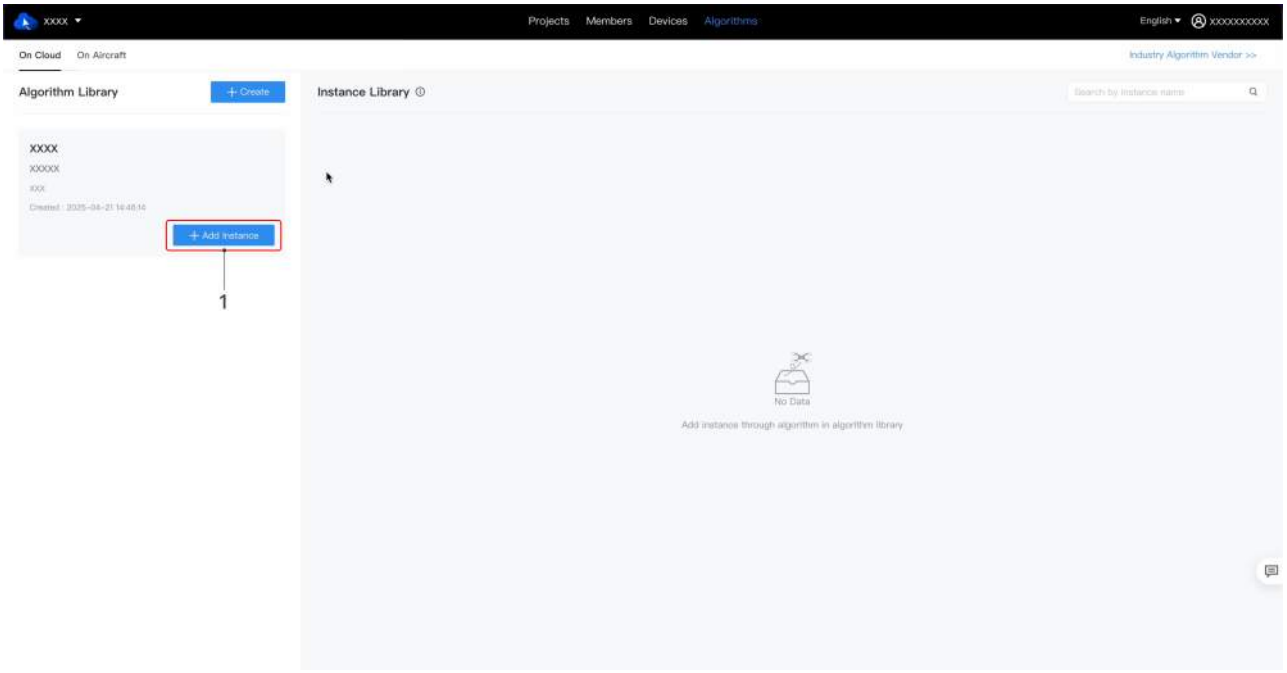


2. After obtaining the configuration information about the desired algorithm, click Create Custom Algorithm and fill in the following required fields:

- Algorithm Name: The name of the intelligent algorithm, which can be up to 128 characters in length.
- Description: The description and application scenarios of the algorithm, which can be up to 512 characters in length.
- Vendor Name: The name of the source vendor, which can be up to 128 characters in length.
- Push Stream Address: Formatted as rtmp://x.x
- Pull Stream Address: Formatted as https://x.x/x/x
- Service Address: Formatted as https://x.x
- Key: The key can be 32 to 64 characters in length, which supports only English letters, numbers, underscores, and hyphens.



After the algorithm is created, a corresponding card appears in the algorithm library, displaying the algorithm name, vendor, description, and creation time. The created algorithm can be edited or deleted.



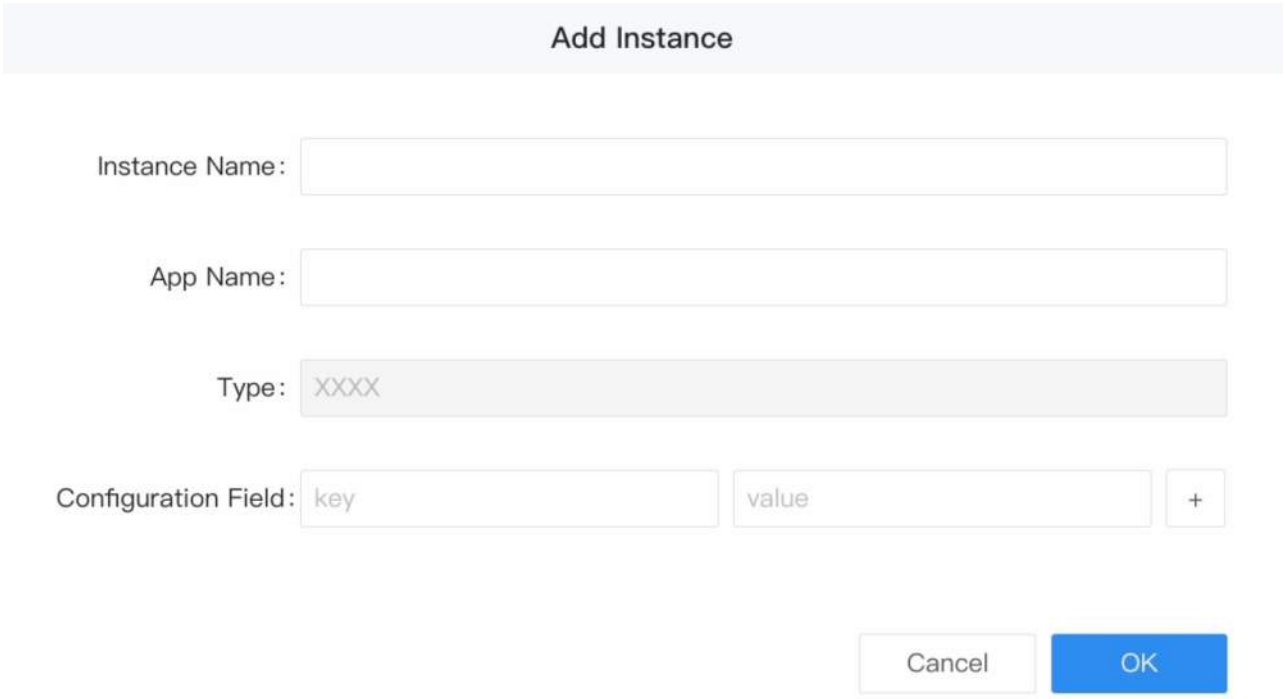
Create Algorithm Instance

Algorithm instances are used to configure scene-specific parameters, such as algorithm confidence level, counting threshold, and recognition type. Users need to create instances before they can call instances in the virtual cockpit.

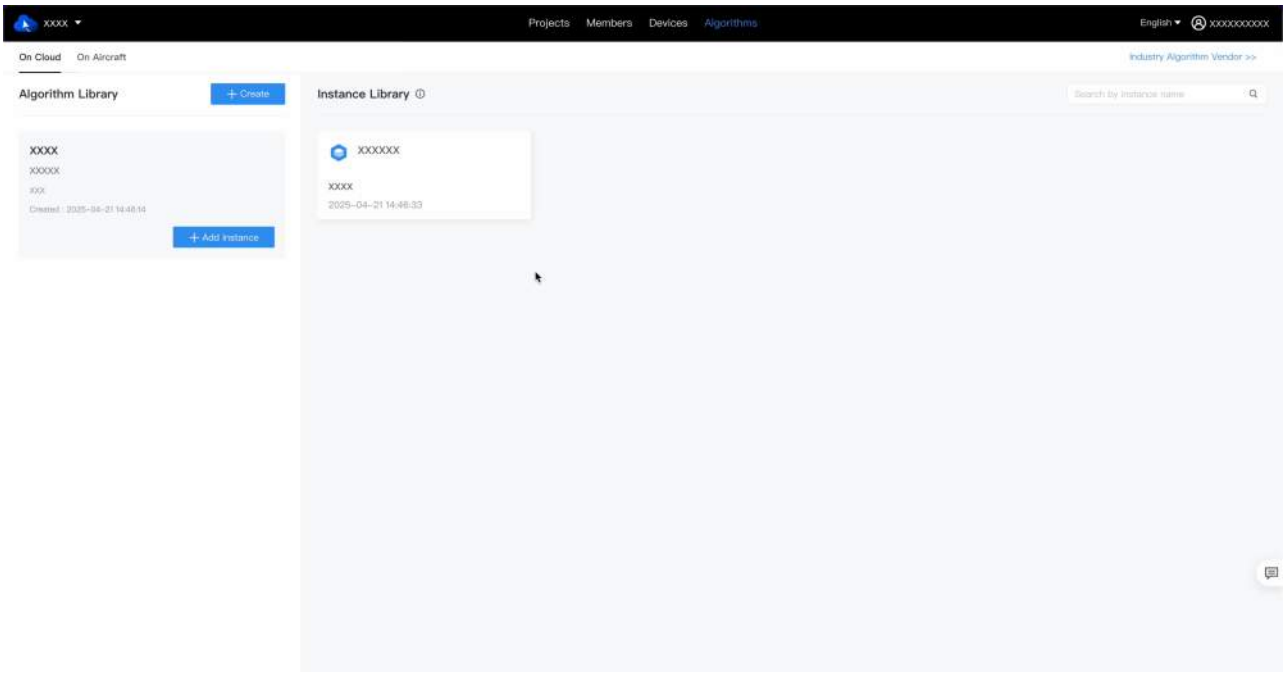
Procedure

1. Create an instance: After obtaining the configuration information about the corresponding algorithm instance, click Add Instance and fill in the following information:

- Instance Name: The custom name of the instance, which can be up to 128 characters in length.
- App Name: The unique identifier of the app, which can be up to 50 characters in length. Example: power_inspection_v1.
- Configuration Field: Optional. Customize the configuration as needed. The key must start with a letter and can only include letters, numbers, and underscores.



2. Manage the instance: After the instance is created, a corresponding card appears in the instance library, showing the name, algorithm, and creation time of the instance. The created instance can be edited or deleted. Successfully created instances are available to users in the virtual cockpit. Users can call an instance from the cloud intelligent algorithm instance list in real time.



Management of Algorithms on Aircraft

After successfully uploading a third-party infrared intelligent algorithm on the developer website and distributing it to the aircraft, the corresponding algorithm will appear with the Infrared label on the Algorithms > Algorithms on Aircraft page in FlightHub 2. Once the algorithm is loaded, you can call the algorithm for the respective aircraft device within the virtual cockpit.



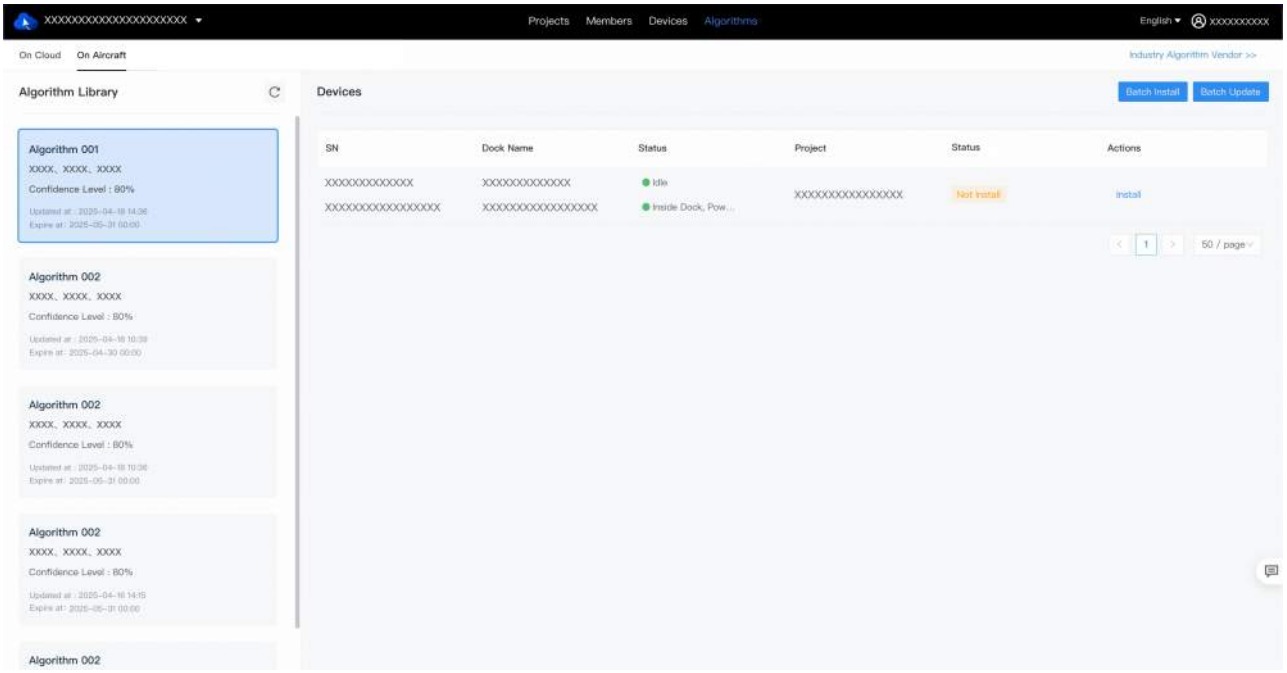
It supports loading third-party algorithms, distributed via the DJI Developer platform, onto aircraft connected to the dock. Successfully loaded algorithms can be used in the virtual cockpit.

1. View algorithm vendors: Click "Industry Algorithm Vendor>>" to jump to DJI Developer platform. Browse intelligent algorithm cases and contact the corresponding vendor to distribute algorithms to your aircraft.

2. Supports managing algorithms on aircraft that are distributed through the DJI Developer platform. You can view the latest information about algorithms on aircraft, load or update algorithms, and unload algorithms as needed.

Notes:

- Only super admins and organization admins can view and operate.
- Supported aircraft are Matrice 4D series and aircraft connected to the dock within the organization.
- When the device status is idle, you can load, update, or unload algorithms on aircraft. After starting any of these operations, do not perform other operations on the dock.



Notes on On-premises Version

Management of Algorithms on Aircraft

First, download the ZIP file of algorithms from the DJI Developer website, then import it into DJI FlightHub 2 on-premises version. Through the algorithm management feature, you can load or update algorithms onto the aircraft, as well as uninstall them when needed.

Notes:

- Only super administrators and organization administrators are allowed to view and operate.
- Supported aircraft are Matrice 4D series and aircraft connected to the dock within the organization.
- When the device status is idle, you can load, update, or unload algorithms on aircraft. After starting any of these operations, do not perform other operations on the dock.

Online Project Information

- Online Devices
- Docks

DJI FlightHub 2 users can view online project information, device details, and livestreams on the Team page.

After joining a project, project members can view the online devices, dock status, and member list on the left. Online members include users who have logged in to FlightHub 2 on the web and also whose remote controller is powered on but not yet connected to the aircraft.

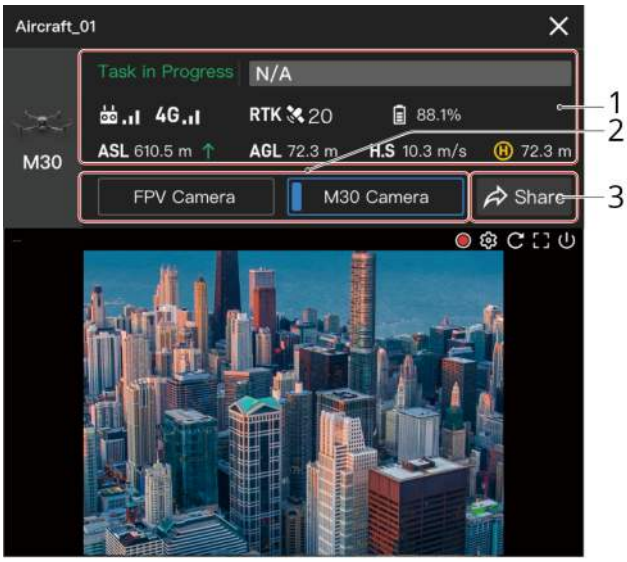
Online Devices

Project members can view online independent aircraft and its connected remote controller on the Online Devices panel.

> - When a device is online, its information will be displayed on the panel.
> - When a device is offline for less than five minutes, its information will be displayed in gray.
> - When a device is offline for more than five minutes, its information will not be displayed.



1. The aircraft statuses include Standby, Powering off, Powering on, Prepare to take off, Ready to take off, Manual flight, Auto takeoff, Task in progress, Returning to home, Landing, Updating firmware, Auto avoidance, Forced landing, and Not connected.
2. Click to view device details and share livestream views.



1. Aircraft status details include the aircraft status, video transmission, satellite status, battery level and status, altitude, horizontal speed, and distance to the Home Point.

> Note: When the aircraft is disconnected, the last recorded time and coordinates of the aircraft will be displayed. Users can click the information to center the aircraft location on the map and then right-click to create a PinPoint to help locate the aircraft during searching.

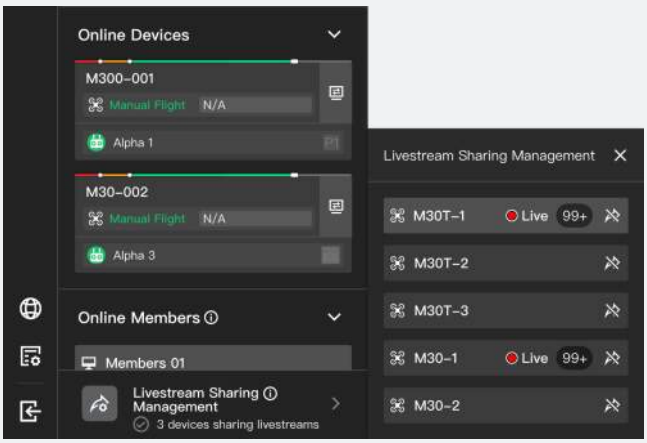
2. Click the camera view button to view the FPV or payload camera view.

> Note: PinPoints will be projected on the camera view when using DJI Mavic 3 with a firmware version of v09.02.07.04 or later.

3. During the livestream, users can click to customize the sharing settings and share the livestream view to others and click to record the livestream. The recorded video will automatically be stored in Media Files.

> - Click Livestream Sharing Management in the lower left corner to view the name of the devices that are broadcasting livestream views and the number of online viewers, or cancel

the sharing.

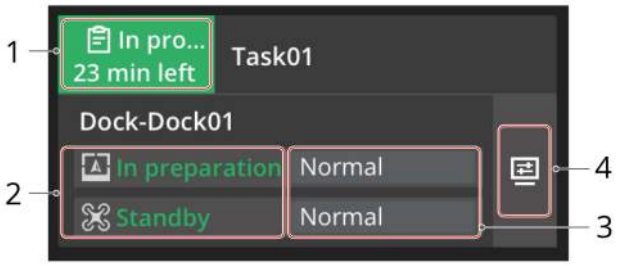


- Livestream sharing will consume the organization livestream minutes. The consumed minutes are calculated based on the total watch time of the viewers.

Docks

Users can view the task status, the dock and connected aircraft statuses, and the warning messages and open the device status window. When there is more than one dock online, the status panel of the offline dock will be displayed on the top.

> Note: The information on the webpage may vary depending on the dock models.



1. Dock statuses include planned flight task and Live Flight Controls statuses.

1.1 Planned flight task statuses include No task, To be performed, In progress, Task failed, and Task ended. The task start time will be displayed on the panel when the task is to be performed, and the remaining time will be shown when the task is in progress. Users can click the flight task status to view the task schedule of the day.

1.2 Live Flight Controls statuses include Live Flight Controls, Live Flight Controls (Manual Flight), and Live Flight Controls (Auto Flight).

- Live Flight Controls: When the aircraft control is obtained by a user.
- Live Flight Controls (Manual Flight): When the aircraft control is obtained by a user and the user is operating the aircraft with keyboard commands.
- Live Flight Controls (Auto Flight): When the aircraft control is obtained by a user and the aircraft is automatically performing tasks.

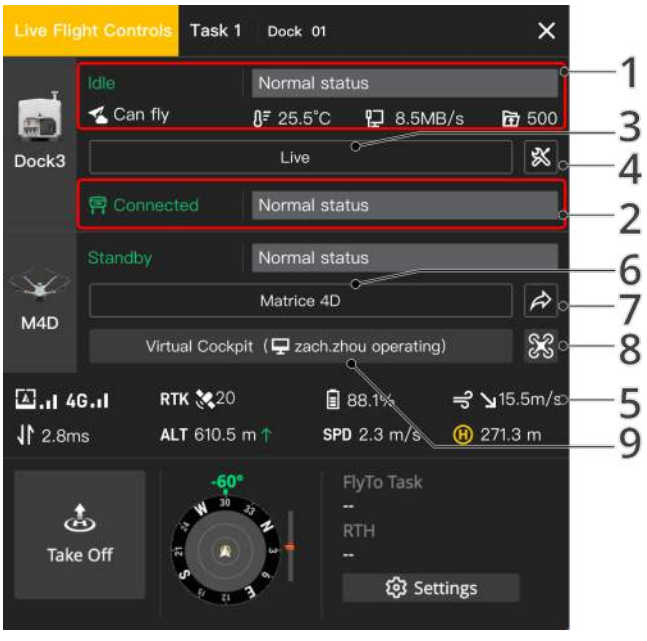
2. The dock statuses include Idle, In preparation, Task in progress, Task completed and closing dock cover, and Offline. The aircraft statuses include Standby, Powering off, Powering on, Prepare to take off, Ready to take off, Manual flight, Auto takeoff, Task in progress, Returning to home, Landing, Updating firmware, Auto avoidance, Forced landing, and Not connected. Users can double-click the status bar to center the dock or aircraft location on the map.

The dock and aircraft statuses when performing flight tasks are shown below.

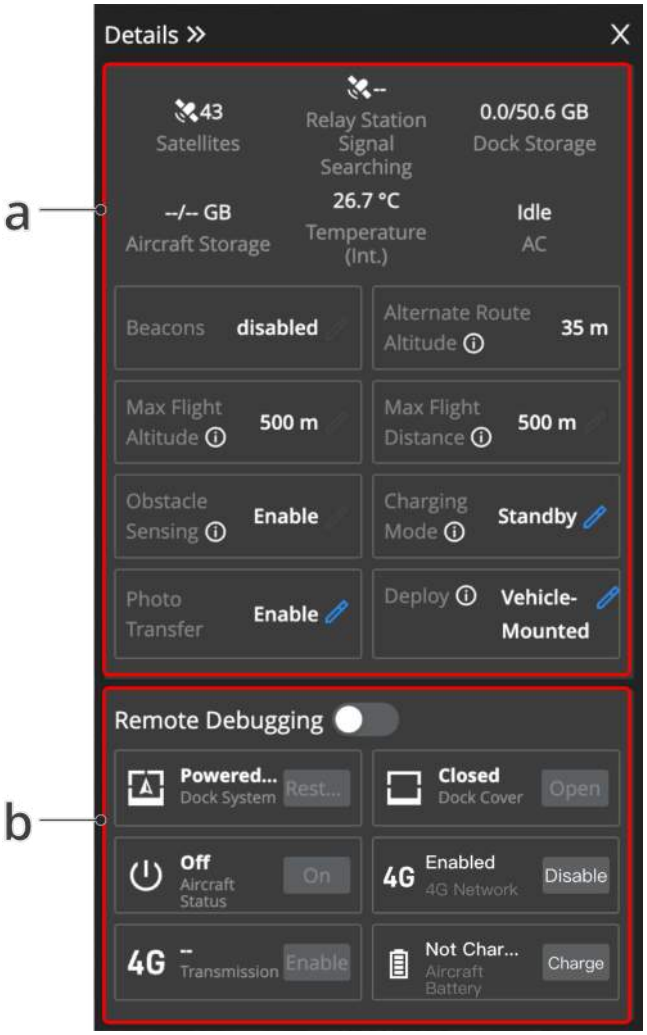
Status	Task Preparation	Task in Progress	Task Completion
Dock Status	Idle > In preparation	Task in progress	Task completed and closing dock cover > Idle
Aircraft Status	Powering off > Powering on > Standby > Prepare to take off > Ready to take off	Auto takeoff > Task in progress	Returning to home > Landing > Standby > Powering off

3. The warning messages include the message description and number. Users can click to view the history of warning messages.

4. Click to view device details and livestreams.



5. Dock status details include the dock status, flight advice, wind speed, ambient temperature, rainfall scale, internet speed, media file upload status, and warning messages. For the media file upload status, FlightHub 2 will display the number of files that are stored in the dock and waiting to be uploaded to the cloud. Users can hover the mouse over the flight advice to view the weather conditions and the dock icon to view the dock model and SN. Users can also double-click the dock icon to center the dock location on the map.
6. Relay station details include relay station status and warning messages.
7. Live: Project members can click Live to view the dock livestream.
8. Actions: Users can click Actions to view more information about the dock and aircraft. Administrators can operate the devices remotely.



a. Users can view the detailed information about the dock and aircraft on the Details panel. The beacon status, maximum flight altitude and distance, obstacle sensing status, and charging mode can be modified. Also, users can complete the dock location calibration during vehicle-mounted deployment.

b. Administrators can click to enable Remote Debugging. The operator can remotely control the dock cover, driving rods, and dock system, enable the LTE transmission, and change the aircraft battery and charging status. After Remote Debugging is enabled, yellow and black stripes will appear around the dock and aircraft images. Users can hover the mouse over the image to view the operator account.

- Only DJI Dock supports operating the driving rods.
- The dock and aircraft can only be remotely operated by one user at a time.

9. The dock aircraft status details include the aircraft status, video transmission, satellite status, battery level and status, altitude, horizontal speed, and distance to the Home Point. Users can hover the mouse over the aircraft icon to view the aircraft model and SN, and double-click to center the aircraft location on the map.

- Notes on the RTK icon color:
  - When both the RTK icon and the satellite number are white, it indicates that the aircraft can perform tasks with high-precision RTK positioning.
  - When the RTK icon is red and the satellite number is white, it indicates that RTK positioning is not available but tasks with relatively low positioning accuracy can be performed.
  - When both the RTK icon and the satellite number are red, it indicates that the aircraft cannot take off to perform tasks.
- ASL means the absolute altitude of the aircraft represented in the EGM96 model, and AGL means the aircraft's altitude relative to the ground of the 2.5D map. When Building Model is enabled or 2D or 3D models are overlaid on the map, AGL stands for the aircraft altitude relative to the building models or the 2D or 3D models.
- The wind direction and speed relative to the aircraft will be displayed after takeoff. Users can refer to the information to ensure flight safety.

10. Livestream: When the aircraft is powered on, users can click the camera view button to view the FPV or payload camera livestream. During the livestream, users can click the camera type to switch between camera views and click ⏺ to start recording. The recorded video will automatically be stored to Media Files.

11. Share: Users can click Share and customize the sharing settings before sharing the livestream view to others.
12. Aircraft Control: Project administrators can click to remotely operate the aircraft. See Live Flight Controls for more details.
13. Virtual Cockpit: Project administrators can click Virtual Cockpit to enter the virtual cockpit. See Virtual Cockpit for more details.

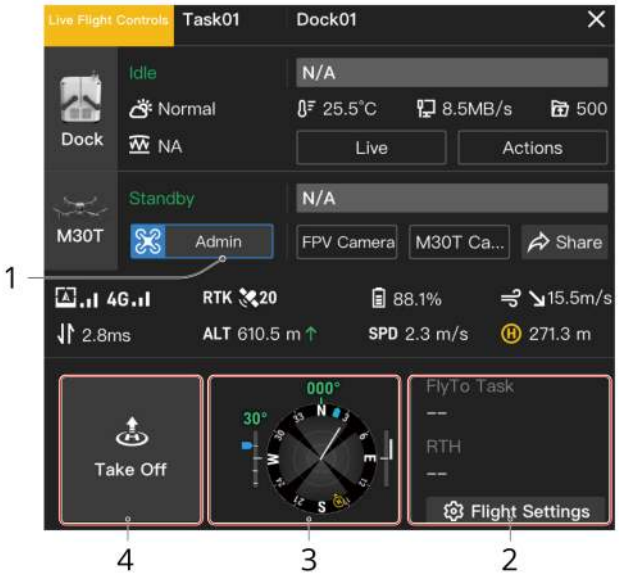
Device Status Window

- Aircraft Control
- Gimbal Camera Control
- PSDK Control

FlightHub 2 enables remote control of aircraft at DJI Dock, DJI Dock 2, and DJI Dock 3 via the device status window, allowing for command transmission and task performance.

> Note: The DJI Dock firmware version should be later than v01.03.0902, and the aircraft version should be later than v06.02.0803 before using Live Flight Controls.

Aircraft Control



1. Obtain Aircraft Control

Project administrators can right-click the dock or aircraft icon on the map or click Aircraft Control in the device status window to enable Live Flight Controls.

> - When Live Flight Controls is enabled, the remote control latency will be displayed. Users can hover the mouse over ⇵ to view the uplink and downlink latency. Uplink means

transferring data from the aircraft to the cloud, while downlink refers to the data transmission from the cloud to the aircraft.
- Users can click the FPV or camera view button to view livestreams.

2. Flight Settings

2.1 Optimal Route Planning:

- When the environment is suitable for the vision system to work properly or Obstacle Data is enabled, the aircraft will automatically plan an optimal route to improve task efficiency and preserve battery life.
- When the environment is not suitable for the vision system to work properly and Obstacle Data is disabled, the aircraft will fly based on the task altitude and RTH altitude settings.

- When Optimal Route Planning is enabled, the aircraft will intelligently adjust the flight altitude and speed based on the obstacle data and the environment conditions such as the wind speed and direction, so that the aircraft can reach the FlyTo destination or the Home Point with improved efficiency.
- It is recommended to enable Obstacle Data in Task Area Management to improve the route planning performance. See Obstacle Data for more details.
- When the environment is not suitable for the vision system to work properly or other issues occur when the aircraft is performing FlyTo tasks or returning to home, the aircraft will not be able to plan an optimal route. If Obstacle Data is also disabled, the aircraft can only fly based on the set altitude and will not be able to avoid obstacles along the route. Therefore, users should set appropriate task altitude and RTH altitude before starting FlyTo tasks or returning to home.
- When Optimal Route Planning is disabled but the environment is suitable for the vision system to work properly or Obstacle Data is enabled, the aircraft can still fly horizontally or vertically to avoid obstacles.
- If the maximum flight altitude is lower than the current aircraft altitude, the aircraft will descend directly to the maximum flight altitude before continuing tasks. If the maximum altitude is higher than the current aircraft altitude, the aircraft will stop ascending when the aircraft reaches the maximum flight altitude.

⚠️

- When there are obstacles such as wires and electric towers that are hard for the vision sensors to detect, users should disable Optimal Route Planning and make sure the set task altitude and RTH altitude are higher than the obstacle altitude along the route.

2.2 Task Altitude (ALT):

The lowest altitude (relative to the takeoff point) of the aircraft when performing FlyTo tasks. DJI FlightHub 2 will display a prompt when the aircraft altitude is lower than the task altitude.

Note: For the DJI Dock aircraft with the firmware version earlier than v08.00.0003, DJI FlightHub 2 will display a prompt when the aircraft altitude is lower than the task altitude.

2.3 RTH Altitude (ALT):

The aircraft altitude relative to the dock when the aircraft is returning to the dock. The RTH altitude should be set based on the actual flight condition, surrounding environment, and GEO information. It is recommended that the altitude is set higher than the highest geographical point in the flight area and should be lower than the maximum flight altitude.

- For DJI Dock 2
  - When Optimal Route Planning is enabled, the aircraft will intelligently plan an optimal route based on the obstacle data or the vision system data when the environment is suitable for the vision system to work properly.
  - When Optimal Route Planning is disabled but the environment is suitable for the vision system to work properly or Obstacle Data is enabled, the aircraft can still fly horizontally or vertically to avoid obstacles.
  - When the dock aircraft is more than 5.5 meters away from the Home Point horizontally, the aircraft will ascend to the RTH altitude and return to home. When the dock aircraft is 5.5 meters or less than 5.5 meters away from the Home Point horizontally, the aircraft will maintain the current altitude (when it is higher than 15 meters) or ascend to 15 meters (when it is lower than 20 meters) before returning to home.
- For DJI Dock
  - When the dock aircraft is more than 5.5 meters away from the Home Point horizontally, the aircraft will ascend to the RTH altitude and return to home. When the dock aircraft is 5.5 meters or less than 5.5 meters away from the Home Point horizontally, the aircraft will maintain the current altitude (when it is higher than 20 meters) or ascend to 20 meters (when

it is lower than 20 meters) before returning to home. When the environment is suitable for the vision system to work properly, the aircraft can still fly horizontally or vertically to avoid obstacles.
- For the DJI Dock aircraft with the firmware version earlier than v08.00.0003, the aircraft will not be able to bypass obstacles and GEO Zones. Check the surrounding environment when the aircraft is returning to home.

2.4 On Signal Lost: Users can choose from Return to Home, Hover, or Continue. The dock aircraft will perform the signal lost action when the aircraft is disconnected from the dock. To ensure flight safety, it is recommended to set the signal lost action as Return to Home.

2.5 Destination Altitude (AGL): The default altitude above the ground of the FlyTo destination.

> Note: All parameters can be set when the dock aircraft is powered off.

3. Situation Awareness

Users can view the Home Point location, aircraft and payload orientation, and obstacle sensing information in the Navigation Display.

4. Take Off

When the aircraft is inside the dock, users can click Take Off, and the aircraft will ascend to the task altitude and hover.

5. Keyboard Commands

When the Live Flight Controls status is Manual Flight, users can click the buttons or press the keyboard keys to control aircraft movements.

[W]: Forward	[S]: Backward
[C]: Ascend	[Z]: Descend
[A]: Roll left	[D]: Roll right
[Q]: Yaw left	[E]: Yaw right
[Space]: Pause	

6. FlyTo Tasks

Right-click on the map to set a FlyTo destination. Users can also set a PinPoint or the search result on the map as the FlyTo destination. After the FlyTo destination is set, a virtual flight route will be displayed on the map. Users can click Start, and the aircraft will fly directly to the destination.

- When the aircraft starts the FlyTo task from DJI Dock 2:
  - When Optimal Route Planning is enabled, the aircraft will plan an optimal route, ascend 20 meters, and then perform the FlyTo task.
  - When Optimal Route Planning is disabled and the FlyTo altitude is higher than the task altitude, the aircraft will ascend to the task altitude before performing the FlyTo task. When the FlyTo altitude is lower than the task altitude, the aircraft will fly at the task altitude, reach above the FlyTo destination, and descend to the FlyTo altitude.
- When the aircraft starts the FlyTo task from DJI Dock:
  - When the FlyTo altitude is higher than the task altitude, the aircraft will ascend to the task altitude before performing the FlyTo task. When the FlyTo altitude is lower than the task altitude, the aircraft will fly at the task altitude, reach above the FlyTo destination, and descend to the FlyTo altitude.
  - For the aircraft with the firmware version earlier than v08.00.0003, the aircraft will ascend to the task altitude and directly fly to the FlyTo destination.

During a FlyTo task, users can select a new FlyTo destination, and the aircraft will fly to the destination directly.

> Note: To change the destination, the DJI Dock firmware version should be v01.06.17.02 or later, while the dock aircraft version should be v09.01.00.05 or later. As for DJI Dock 2, the firmware version should be v09.02.01.08 or later, while the Dock 2 aircraft version should be v09.02.01.08 or later.

If Live Flight Controls is enabled when the aircraft is performing a flight task, users can click Resume to resume the task, or click RTH to disable Live Flight Controls and the aircraft will return to home automatically.

> - To ensure flight safety, a reasonable task altitude, RTH altitude, and FlyTo destination altitude should be set based on the surrounding environment and task requirements and at least 5 meters lower than the maximum flight altitude allowed in Altitude Zone. Users should also make sure that there are no obstacles during flight.

- The aircraft will bypass GEO Zones and obstacles during FlyTo tasks. If there is a GEO Zone with a maximum width of more than 400 meters between the current aircraft position and the FlyTo destination, the aircraft may not be able to bypass the area and will hover at the area boundary. Users should pay close attention to the the livestream view and fly the aircraft manually to bypass the GEO Zone.

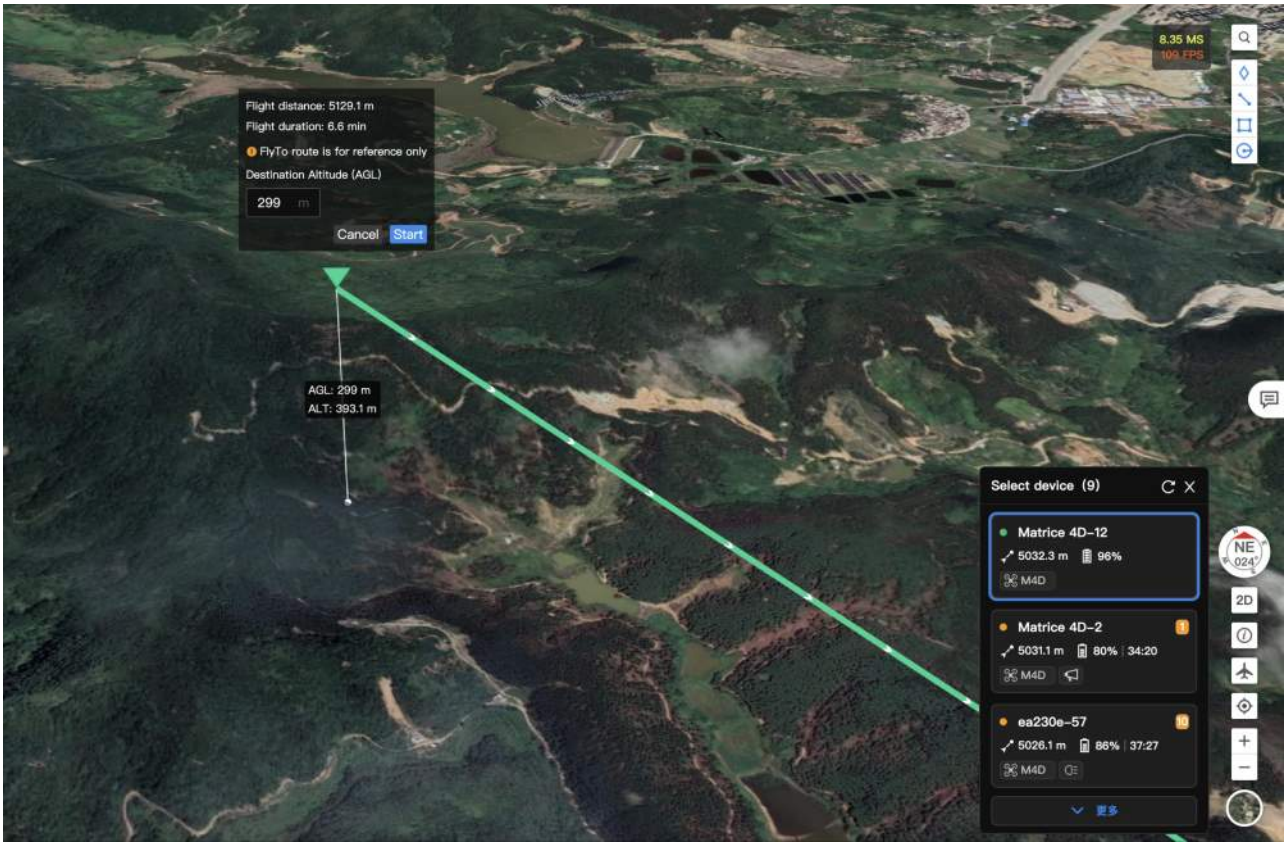
⚠️

- When Low Battery RTH is triggered, DO NOT cancel RTH or enable Live Flight Controls during RTH, otherwise the aircraft will exit RTH and may not be able to return to the dock.
- When the aircraft battery is critically low, the aircraft will land automatically, and the landing cannot be canceled.
- DO NOT control the aircraft to land on the dock using keyboard commands, otherwise the aircraft will not be able to stop propellers after landing and return to the dock automatically.

When no device is selected, right-click on the destination point on the map, and the menu will show the FlyTo option. After confirmation, the device recommendation list panel will expand on the right side of the map, and the system will display available aircraft in recommended order.



After selecting the most suitable device for the current task, fill in the destination altitude, and click Start to begin the flight. The aircraft will start flying to the destination point.



7. POI

FlightHub 2 users can select any location or PinPoint on the map and start a POI task when DJI Dock is in the Live Flight Controls mode. After the FlyTo destination is set, the dock aircraft will face the FlyTo destination, and a virtual flight trajectory will be displayed on the map. Users can set the POI direction and speed and use the keyboard shortcuts to adjust the aircraft altitude and distance to the FlyTo destination. The task panel will display the estimated time needed for completing the POI task. Users can click Start to start the POI task.



Users can click buttons on the device status window or use the keyboard shortcuts to adjust the aircraft direction and speed during POI. Click Exit or press the Space key to exit POI.

- Users need to obtain the flight and gimbal control before starting POI tasks.
- To start POI, the DJI Dock firmware version should be v01.06.17.02 or later, and the dock aircraft version should be v09.01.00.05 or later.
- If the aircraft approaches a GEO Zone or detects obstacles during POI, the aircraft will hover. Pay attention to the aircraft status and livestream view. Fly with caution.
- The aircraft will fly sideways during POI. When the environment is not suitable for the vision system to work properly, the aircraft may not be able to bypass obstacles. Users should check the surrounding environment on-site or the flight trajectory on the cloud before starting POI.
- FlightHub 2 will intelligently adjust the maximum speed of POI based on the distance between the aircraft and the point of interest.
- During POI, when the user double-clicks the livestream view, the aircraft will not be able to face the clicked point. Dragging the livestream view or using the keyboard shortcuts to adjust the gimbal angle are also not supported.

8. One-Click Multi-Aircraft Return-to-Home

Right-click on the map and select Return All to Home from the menu. After confirmation, the system will send return instructions to all aircraft currently performing flight tasks within the project. For aircraft performing automatic tasks, the current task will be immediately interrupted and the aircraft will initiate automatic return-to-home. For aircraft under manual control, the operator with control authority will receive a return request and must manually confirm execution.



Note: Before sending the Return All to Home command, make sure that all aircraft within the project are at a safe altitude and have set an appropriate return height to avoid collision risks during the return process.

Gimbal Camera Control

1. Obtain Camera Control

Users can click the camera view button to start livestream and click to obtain the gimbal camera control.

2. Switch Cameras

Depending on the device model, users can switch between wide-angle, zoom, and infrared cameras. Below is the introduction of the zoom camera view of Matrice 30 Series (Dock Version).



1. Camera Settings: Click to customize the camera settings.
2. Camera Parameters: Displays the ISO, shutter, and EV values.
3. Focus Mode: Click to switch between MF (manual focus), AFC (continuous autofocus), and AFS (single autofocus) modes.
4. Photo/Video Mode:
   - Users can take single, smart low-light, and panoramic photos or start recording. Only the zoom camera supports taking smart low-light photos.

     When taking panoramic photos:
     - Users are unable to start FlyTo tasks nor double-click on the livestream view to center the view around the clicked point. Enabling Face PinPoint or the subject zoom is also not supported.
     - Users are unable to drag the livestream view or press [←] [→] [↑] [↑] to fine-tune the gimbal angle.
     - Operating the aircraft will stop the process but will not affect the panorama stitching if stitching is in progress.

   - Media files captured by the dock aircraft after obtaining the aircraft control will be transferred to the cloud in real time. Users can change the settings for DJI Dock 2 in the Details panel.

     To transfer media files in real time:

- The DJI Dock firmware version should be v01.06.17.02 or later, and the aircraft version should be v09.01.00.05 or later.
- The DJI Dock 2 firmware version should be v09.02.01.08 or later, and the aircraft version should be v09.02.01.08 or later. If the aircraft is recording or using PSDK functions, the transfer will be interrupted.

Media file naming rules:

- When the aircraft is performing a planned task and the aircraft control is enabled, media files captured or videos recorded will be stored in a subfolder of the corresponding flight folder in the media file library. The name of the subfolder is "Remote Control".
- When the aircraft is performing a FlyTo task, media files captured or videos recorded will be stored in a separate folder in the media file library. The folder name follows the naming convention of starting with "the dock name-", followed by "FLY-TO-" and then the time when the task is performed.

5. Zoom: Users can adjust the zoom slider or scroll the mouse to zoom in or out on the livestream view.
6. Laser Rangefinder: Click  to obtain the coordinates and altitude of the subject on the focal point, as well as the distance between the subject and the dock aircraft.
7. PinPoint: Click  to add a PinPoint of the object on the focal point. Users can also right-click the PinPoint on the map and choose to Face PinPoint.
8. Gimbal Control:
   - Users can switch from gimbal free and lock modes.
     - Free Mode: Users can adjust the gimbal angle freely, and the aircraft orientation will not follow the gimbal angle.
     - Lock Mode: When users double-click or drag the livestream view to change the gimbal angle, the aircraft will adjust its orientation to keep consistent with the gimbal. Users can enable the gimbal lock mode to achieve enhanced flight safety.

     Note: When adjusting the gimbal angle of the DJI Dock 2 aircraft, the aircraft orientation will be adjusted simultaneously. When the aircraft orientation reaches limit, some of the gimbal control features will not be available. For example, gimbal control is not supported when DJI Dock 2 is in the Live Flight Controls mode.

   - Users can also use shortcut keys to switch between following gimbal modes:

        - Recenter
        - Gimbal Down
        - Recenter Gimbal Pan (for DJI Dock only)
        - Gimbal Tilt Down (for DJI Dock only)
    - Gimbal control also supports:
        - Double-click on the livestream view to center the view around the clicked point.
        - Drag the livestream view or press [←] [→] [↑] [↑] to fine-tune the gimbal angle.
        - Press and hold the right mouse button and select a subject to zoom in. The camera in use will be switched from the wide-angle to zoom camera when zooming in the subject in the wide-angle view.



> Note: Only DJI Dock 2 supports the subject zoom. To use the feature, the DJI Dock 2 firmware version should be v09.02.01.08 or later, and the dock aircraft version should be v09.02.01.08 or later.

9. PSDK Control: DJI FlightHub 2 supports remotely operating the PSDK devices. See PSDK Control for more information.

This section introduces the infrared camera view, and only the differences from the zoom camera view will be explained.



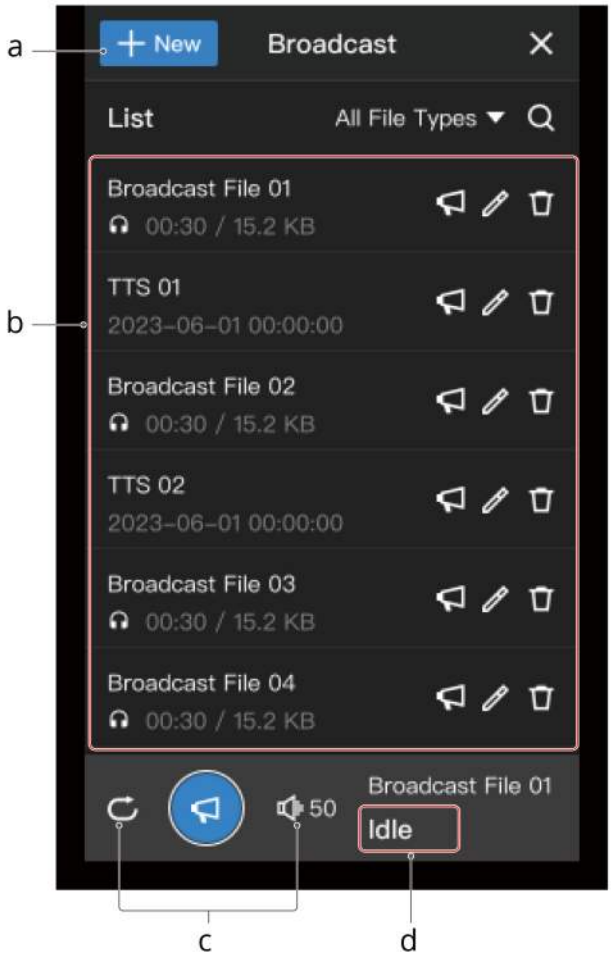
1. Camera Parameters:
   - IR Palette: Click to change the IR palette color.
   - High Temperature Alarm: Click to customize the high temperature alarm settings.
2. SBS: Click to display the infrared and zoom camera views side by side.
3. Temperature Bar: Displays the highest and lowest temperatures of the objects within the camera view.
4. Gain Mode: Click to switch between high- and low-gain modes. The high-gain mode provides more accurate temperature measurements, while the low-gain mode supports a wider temperature measurement range.
5. Spot Temperature Measurement: Displays the temperature of the object at the focus point. Click anywhere on the camera view, and the camera will measure the temperature of the object at the clicked point.
6. Area Temperature Measurement: Click to enable the area temperature measurement and adjust or drag the temperature measurement frame to change its size or location.

PSDK Control

Click PSDK to enter the PSDK control interface.

- Main Interface: Displays the PSDK functions, including but not limited to the speaker, lighting device, and gimbal control, depending on the PSDK device installed.
- Settings: Click to customize the PSDK device settings.

Take a third-party PSDK speaker as an example.



a. Create Broadcast Task

Click New to select from Record & Broadcast, Text to Speech, or Import Audio File.

b. Broadcast List

Displays all cloud files in the current project. Files stored in the PSDK speaker are not included.

c. Broadcast Settings

Users can set the loop play and adjust the broadcast volume.

d. Broadcast Status

Displays the current status of the speaker.

Click to preview the audio. Click and the dock aircraft will broadcast the audio.

- Users need to allow DJI FlightHub 2 to access the microphone and install a voice input device if necessary.

- Users should contact the PSDK device manufacturer to upgrade the device to the latest version if the PSDK device version is too early.

Virtual Cockpit

- Overview
- Feature Introduction
- Feature List
- Sound Effects and Voice Prompts

Overview

Project administrators can click Virtual Cockpit to enter the virtual cockpit. When the aircraft is powered on, entering the virtual cockpit will by default start the FPV and gimbal camera views, and the project administrator will automatically gain the flight control.

- Devices supported by the virtual cockpit include DJI Dock, DJI Dock 2, DJI Dock 3, DJI AS1 Speaker, DJI AL1 SpotLight, DJI Mavic 3 enterprise series, DJI Matrice 4 enterprise series, and Matrice 400.
- When using DJI Dock, make sure to update the firmware of the dock to v01.03.0902 or later, and the firmware of the aircraft to v06.02.0803 or later.
- Make sure to update the firmware of the Mavic 3 enterprise series to v10.01.00.14 or later to control the gimbals remotely.
- When using the DJI Matrice 4 enterprise series to remotely control the aircraft and the gimbal camera, it is necessary to update the aircraft firmware version to 12.0.0 or later.
- To use the FlyTo, gimbal camera, and PSDK control features, the Matrice 400 firmware version must be v14.1.0 or later.

Feature Introduction



Aircraft Information

Includes the aircraft status, the warning messages related to the aircraft, and the overall operation latency status.

- Aircraft Status: The current status of the aircraft will be displayed during Live Flight Controls.
- Warning Messages: Displays the warning messages of the aircraft when there are any.
- Overall Operation Latency Status: Displays the latency data for the control loop from the cloud to the aircraft. The link data is affected by network bandwidth and video transmission signal.

Gimbal Camera View

When the aircraft is powered on, the camera view will be enabled automatically after users enter the virtual cockpit.

Switch Cameras

Depending on the device model, users can switch between wide-angle, zoom, and infrared cameras. Below is the introduction of the zoom camera view.

- Keyboard Shortcuts:

[1]: Switch to the wide-angle camera	[2]: Switch to the zoom camera
[3]: Switch to the infrared camera if available	[F]: Take photos
[X]: Switch the speed modes	[R]: Start/Stop recording
[T]: Add PinPoints	[V]: Enable the Mouselook feature. Press [V] or [ESC] to exit
[B]: AI recognition	[G]: Smart Track

- Camera Settings: Click on camera settings to enter the settings panel and view common camera functions.
  - Mechanical Shutter: Users can disable the mechanical shutter to extend the device's operational life.
  - Distortion Correction: Users can enable distortion correction to ensure proper display of the camera view.
  - Watermark: Users can enable the watermark feature to display watermark information on the liveview and media files captured by the camera.

    > Note: Enabling the watermark may affect the mapping results.

  - Lens Defog: Users can manually enable the lens electronic defog feature.
- Camera Parameters: Display ISO, shutter, and exposure data.
  - Auto mode allows for setting the camera exposure parameters (EV), while M mode allows for setting the ISO, shutter speed, and aperture.
- Focus Mode: Click to adjust the zoom camera's focus mode, supporting MF (manual focus), AFC (auto continuous focus), and AFS (auto single-point focus).
- Photo/Video Mode: Users can take single, timed, smart low-light, and panoramic photos or start recording.

  - Panoramic Photo Mode:
    - Users are unable to start FlyTo tasks nor double-click on the livestream view to center the view around the clicked point. Enabling Face PinPoint or the subject zoom is also not supported.

- Users are unable to drag the livestream view or press [←] [→] [↑] [↓] to fine-tune the gimbal angle.
- Operating the aircraft will stop taking panoramas.

- Media files captured by the dock aircraft after obtaining the aircraft control will be transferred to the cloud in real time. Users can change the settings in the Details panel.

  To transfer media files in real time:
  - The DJI Dock firmware version should be v01.06.17.02 or later, and the aircraft version should be v09.01.00.05 or later.
  - The DJI Dock 2 firmware version should be v09.02.01.08 or later, and the aircraft version should be v09.02.01.08 or later. If the aircraft is recording or using PSDK functions, the transfer will be interrupted.

  Media file naming rules:
  - When the aircraft is performing a planned task and the aircraft control is enabled, media files captured or videos recorded will be stored in a subfolder of the corresponding flight folder in the media file library. The name of the subfolder is "Remote Control".
  - When the aircraft is performing a FlyTo task, media files captured or videos recorded will be stored in a separate folder in the media file library. The folder name follows the naming convention of starting with "the dock name-", followed by "FLY-TO-" and then the time when the task is performed.

- Resolution Settings: Users can set the resolution of videos captured by the visible light camera.
- Storage Settings: Display the remaining storage space in the current mode. Users can set the photo or video storage type. Users can choose storage types such as Current Lens (C), Visible Light (V), and Infrared (I). In the SBS mode, the infrared photos are video transmission screenshots.
- Night Scene Mode: In low-light environments, enabling night scene mode can enhance the image quality, providing clearer and more accurate visual information, thereby ensuring efficiency and accuracy during nighttime operations.

Note: This feature is only supported by DJI Dock 3.

- Adjust Zoom Scale: Users can adjust the zoom slider or scroll the mouse to zoom in or out on the livestream view. Link Zoom is now supported by DJI Dock 2. Users can control the zoom scale of the visible light and infrared camera views at the same time.

  > Note: To use the Link Zoom feature, the DJI Dock 2 firmware version should be v10.01.32.05 or later, and the aircraft version should be v10.01.32.05 or later.

- Laser Rangefinder: Click  to obtain the coordinates and altitude of the subject on the focal point, as well as the distance between the subject and the dock aircraft.
- PinPoint: Click  to add a PinPoint of the object on the focal point. Users can also right-click the PinPoint on the map and choose to Face PinPoint.

  > Note: Users can add PinPoints based on the camera orientation and terrain data for DJI Dock 2.

- Gimbal Control:
  - Users can switch from gimbal free and lock modes.
    - Free Mode: Users can adjust the gimbal angle freely, and the aircraft orientation will not follow the gimbal angle.
    - Lock Mode: When users double-click or drag the livestream view to change the gimbal angle, the aircraft will adjust its orientation to keep consistent with the gimbal. Users can enable the gimbal lock mode to achieve enhanced flight safety.

    > Note: When adjusting the gimbal angle of the DJI Dock 2 aircraft, the aircraft orientation will be adjusted simultaneously. When the aircraft orientation reaches limit, some of the gimbal control features will not be available. For example, gimbal control is not supported when DJI Dock 2 is in the Live Flight Controls mode.

  - Users can also use shortcut keys to switch between following gimbal modes:
    - Recenter
    - Gimbal Down
    - Recenter Gimbal Pan (for DJI Dock only)
    - Gimbal Tilt Down (for DJI Dock only)

- Gimbal control also supports:
  - Double-click on the livestream view to center the view around the clicked point.
  - Drag the livestream view or press [←] [→] [↑] [↑] to fine-tune the gimbal angle.
  - Press and hold the right mouse button and select a subject to zoom in. The camera in use will be switched from the wide-angle to zoom camera when zooming in the subject in the wide-angle view.



- Beacons: Users can turn on or off beacons within the virtual cockpit.
- Discreet Mode: Users can enable the Discreet mode to turn off the beacons, aircraft status indicators, and battery level LEDs.

> Note: Turning on the beacons will automatically exit the Discreet mode.

Differences Between Infrared and Zoom Cameras



1. Camera Parameters:
    - IR Palette: Click to change the IR palette color.
    - High Temperature Alarm: Click to customize the high temperature alarm settings.
2. SBS: Click to display the infrared and zoom camera views side by side.
3. Temperature Bar: Displays the highest and lowest temperatures of the objects within the camera view.
4. Gain Mode: Click to switch between high- and low-gain modes. The high-gain mode provides more accurate temperature measurements, while the low-gain mode supports a wider temperature measurement range.
5. Spot Temperature Measurement: Displays the temperature of the object at the focus point. Click anywhere on the camera view, and the camera will measure the temperature of the object at the clicked point.
6. Area Temperature Measurement: Click  to enable the area temperature measurement and adjust or drag the temperature measurement frame to change its size or location.

Mouselook Mode

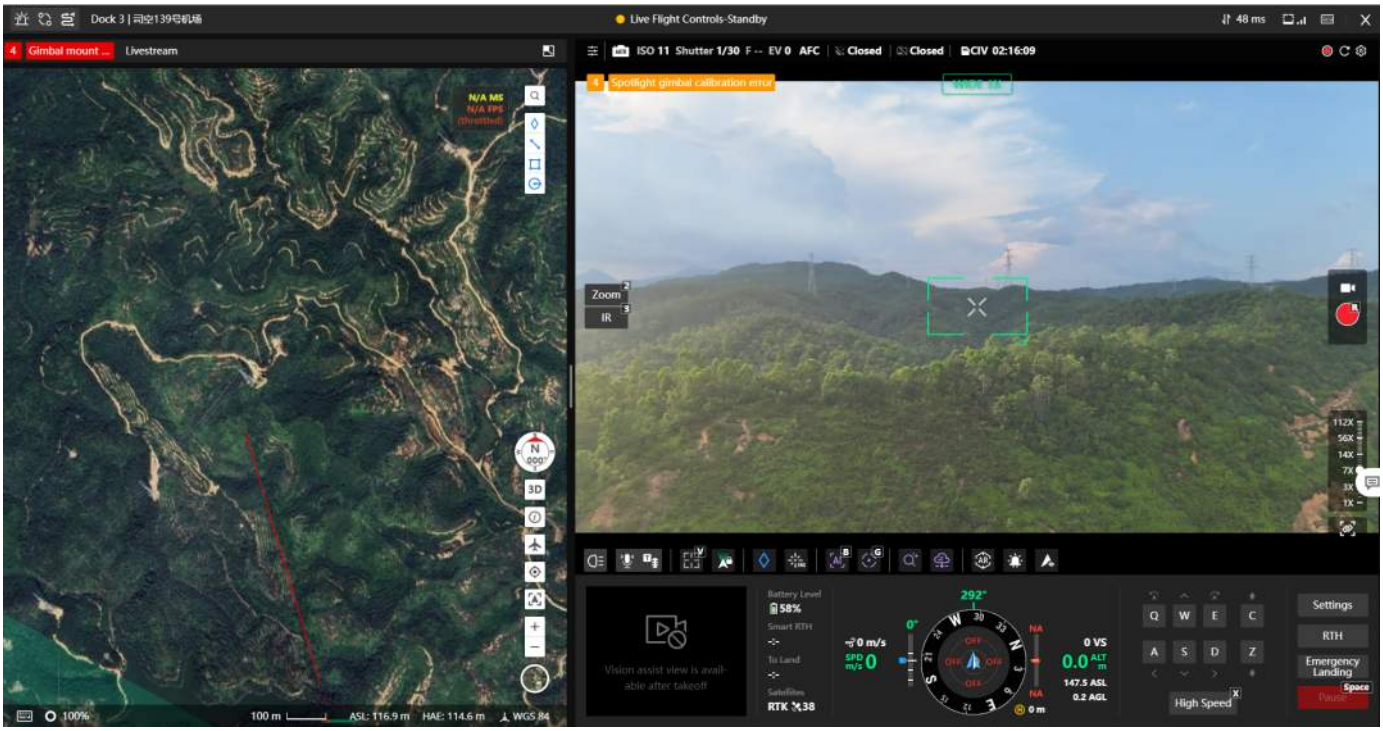
Users can click  or press [V] to enable mouselook and track subjects. When enabled, the mouse shape will become circular, and the cursor will be centered in the middle of the camera view. A circle will also be displayed in the center. Users can move the cursor, and the aircraft or gimbal will face the subject at the cursor position.

- When using mouselook and the gimbal movement is not limited, the gimbal will face the subject at the cursor position. When the movement is limited, the aircraft will change its orientation accordingly.
- If the cursor only moves inside the circle, the aircraft or gimbal will not change its orientation.
- Users are unable to click buttons on the interface after enabling mouselook. To operate the aircraft or gimbal, users can use the keyboard shortcuts or mouse. To use the buttons on the interface, users should press [ESC] or [V] to exit mouselook first.
- See Gimbal Camera Control for more details.
- Note: Browsers that support the current feature should be Chrome 92 and above.

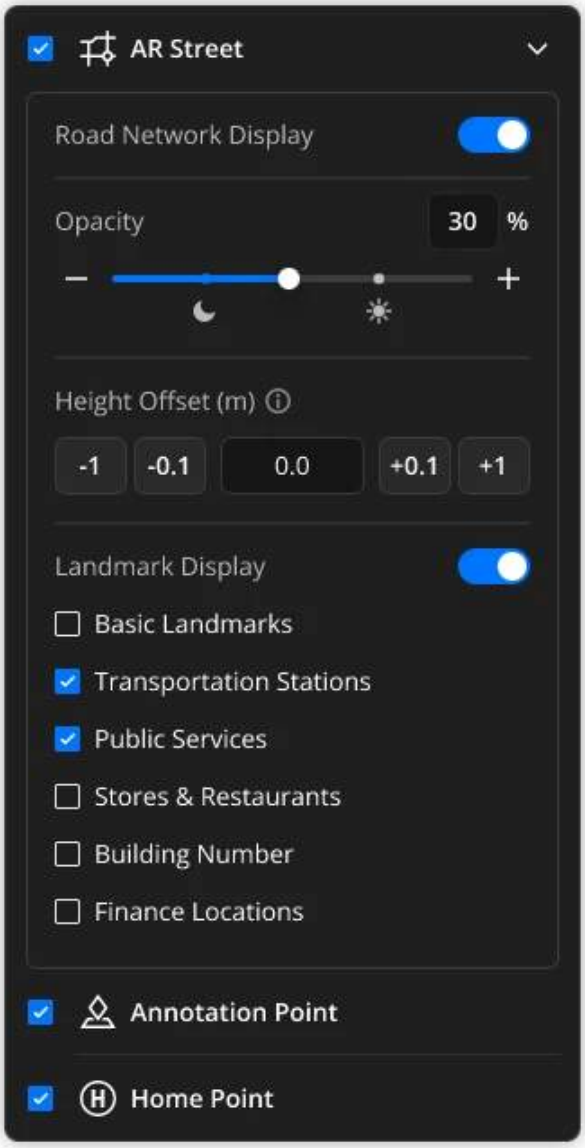
AR Projection

The AR Projection feature displays virtual elements in the virtual cockpit, including annotation points, lines, and areas, as well as the aircraft's Home Point and AR streets.

> Note: Currently, only annotation lines and areas drawn in DJI Pilot 2 can be synced and displayed on FlightHub 2.



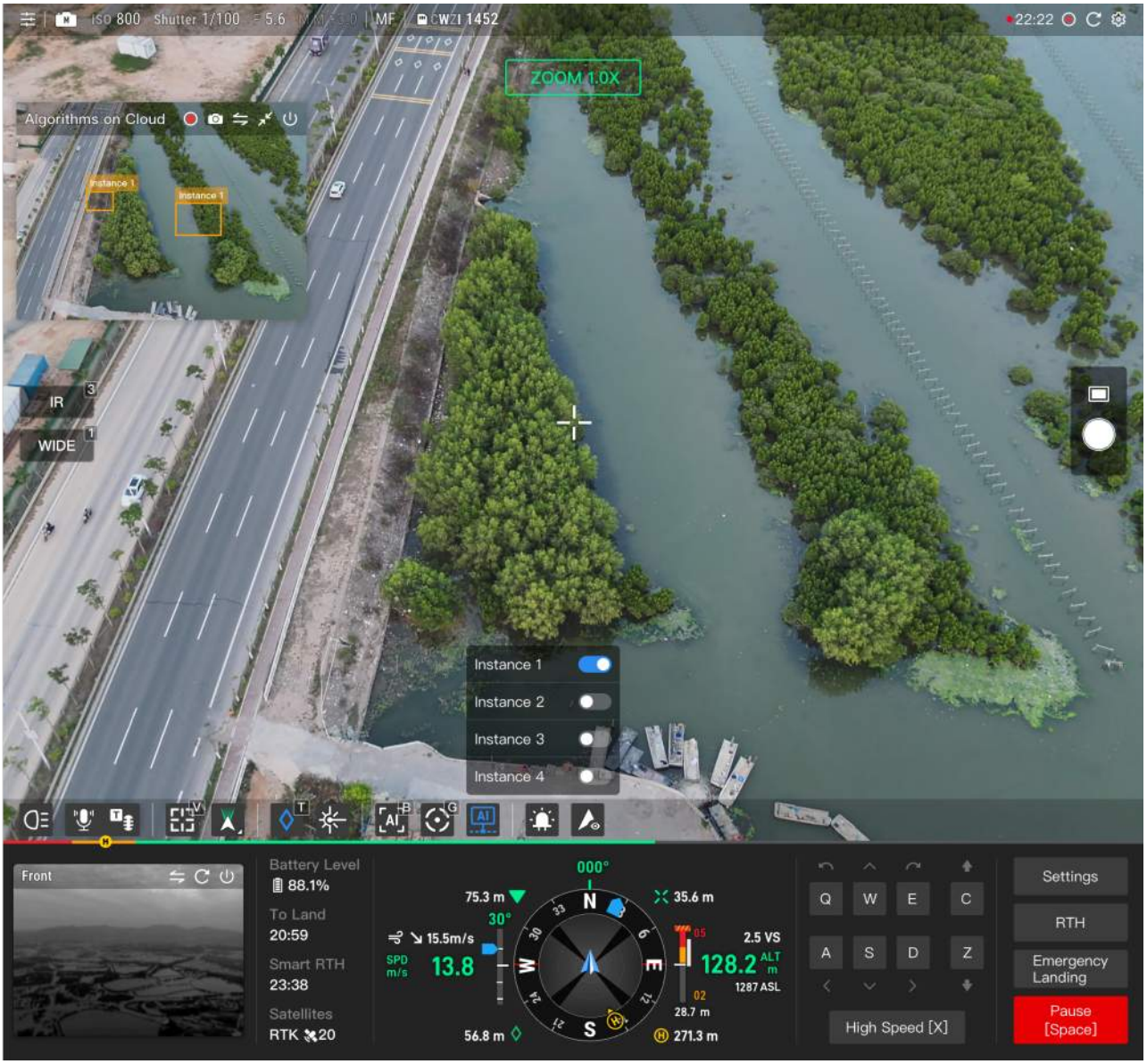
To use AR projection, open the settings panel and select the types of projections you wish to display. The selected elements will appear in the livestream. You can enable or disable AR Street using a shortcut, and customize parameters such as opacity, height offset, and landmark display.



- Note: This feature requires Chrome browser version 92 or above.

AI Recognition

After enabling the AI recognition feature, the livestream will display the recognized objects in real time. You can select DJI Visible Light Recognition, an algorithm that supports the recognition of people, vehicles, and boats.



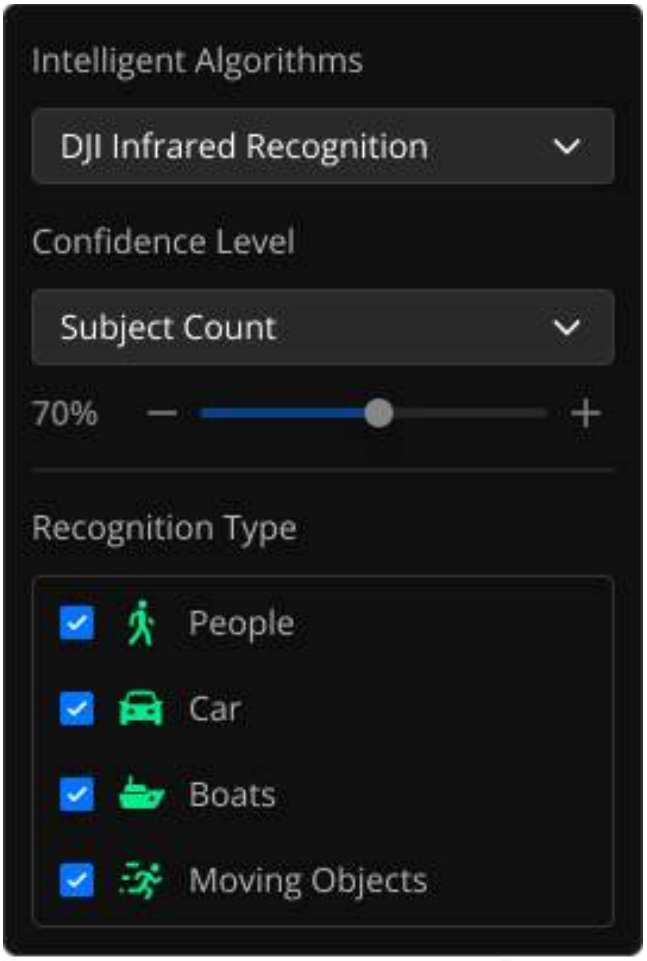
Or you can select DJI Infrared Recognition, an algorithm that supports the recognition of people, vehicles, boats, and moving objects. You can enable different types of AI recognition algorithms based on the scenario.



When Alert is enabled, a breathing light effect will occur when an object is identified, and an alert sound will also be played automatically.

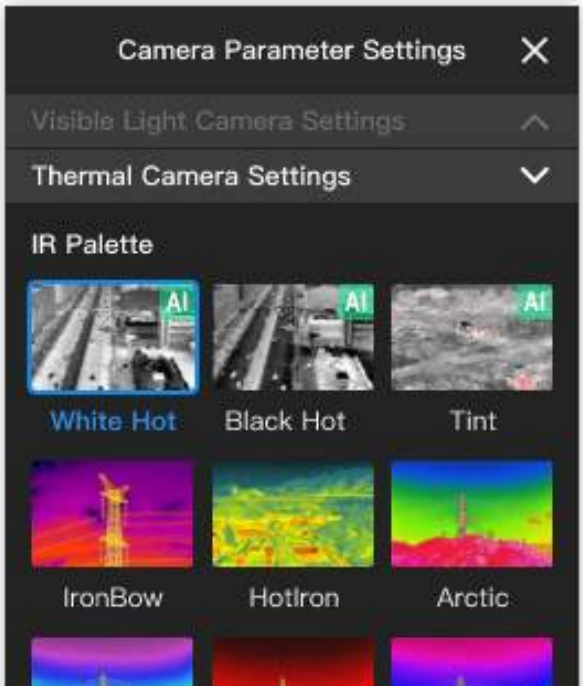


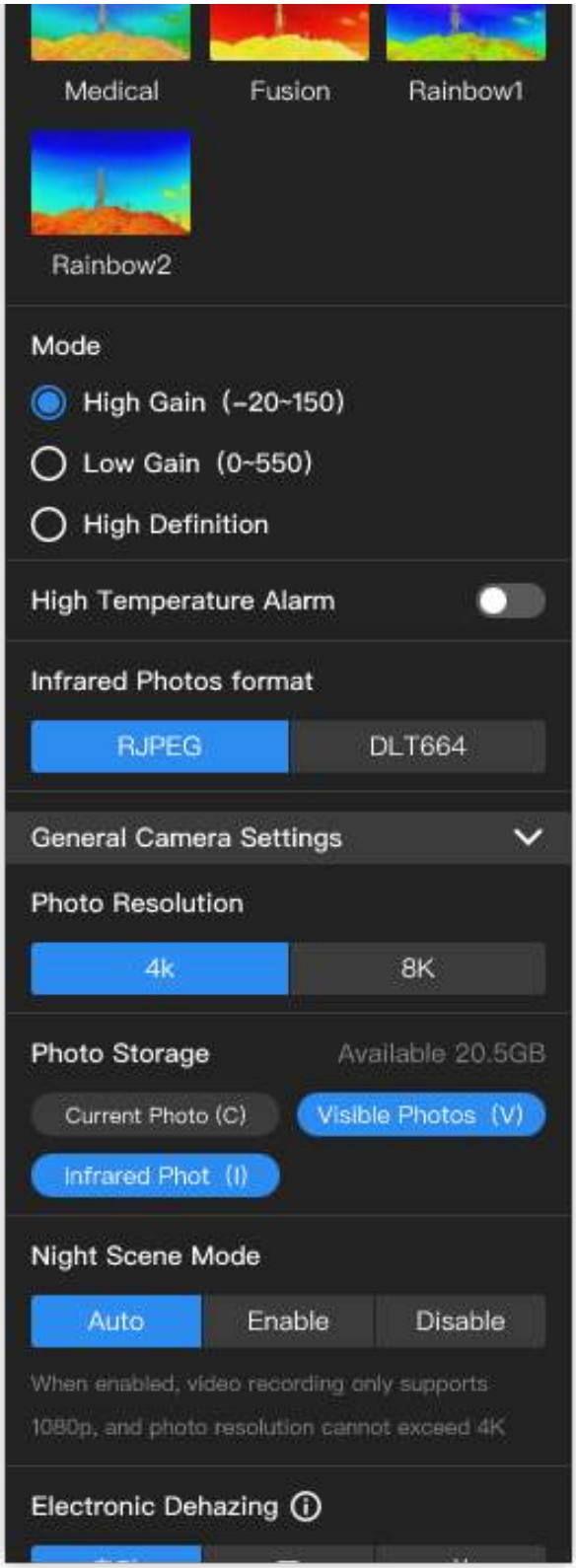
If the aircraft is equipped with third-party AI algorithms, a Third-Party Algorithms tab will appear in the pull-up menu. Users can select the corresponding third-party model for recognition.





Select either a DJI or third-party infrared recognition algorithm. The system will automatically switch to the recommended compatible infrared color palette.





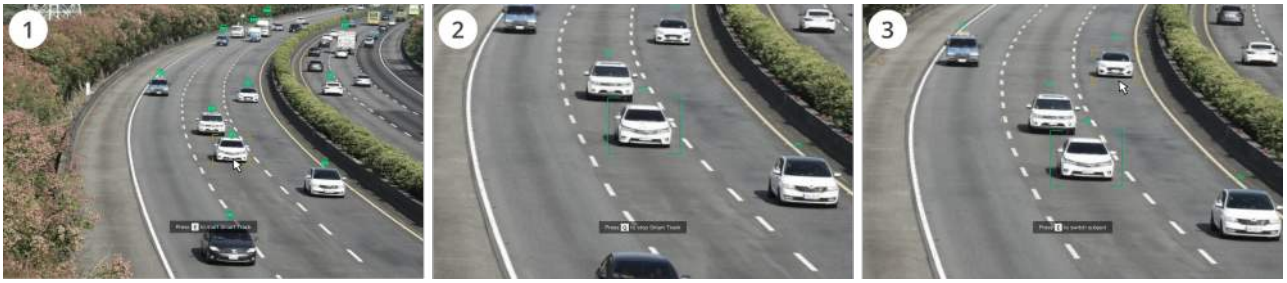
- Note: Browsers that support the current feature should be Chrome 92 and above.

Smart Track

When enabled, hover mouse over subject and press [E] or right-click and select subject for continuous tracking.

While in the locked state, you can cancel the subject lock tracking by pressing the shortcut key [Q].

During the subject tracking process, you can move the mouse to another identified subject and press the shortcut key [E] to quickly switch the tracking subject. If the subject is lost during tracking, the system will attempt to automatically track again.



- Note: Browsers that support the current feature should be Chrome 92 and above.

DJI AS1 Speaker, DJI AL1 SpotLight, and Third-Party Accessories

DJI Dock 3 aircraft and Matrice 400 support mounting the DJI AS1 Speaker and DJI AL1 SpotLight. These accessories can be operated within the virtual cockpit. After installing accessories, flight propulsion or vision system performance may be affected. Pay attention to flight safety.

(1) DJI AS1 Speaker After entering the virtual cockpit, click to start file broadcasting and click to broadcast in real time.

- File broadcasting includes uploading voice files and inputting text for broadcasting. The speaker only supports audio files in AAC, MP3, and WAV formats, and each audio file must be within 10 MB in size.
- For real-time broadcasting, a voice input device needs to be configured, and the browser must be authorized for voice permissions.

(2) DJI AL1 SpotLight After entering the virtual cockpit, click to open the spotlight control panel and set the spotlight working mode. The spotlight is by default linked with the camera gimbal, which can enhance the aircraft's operational capability at night.

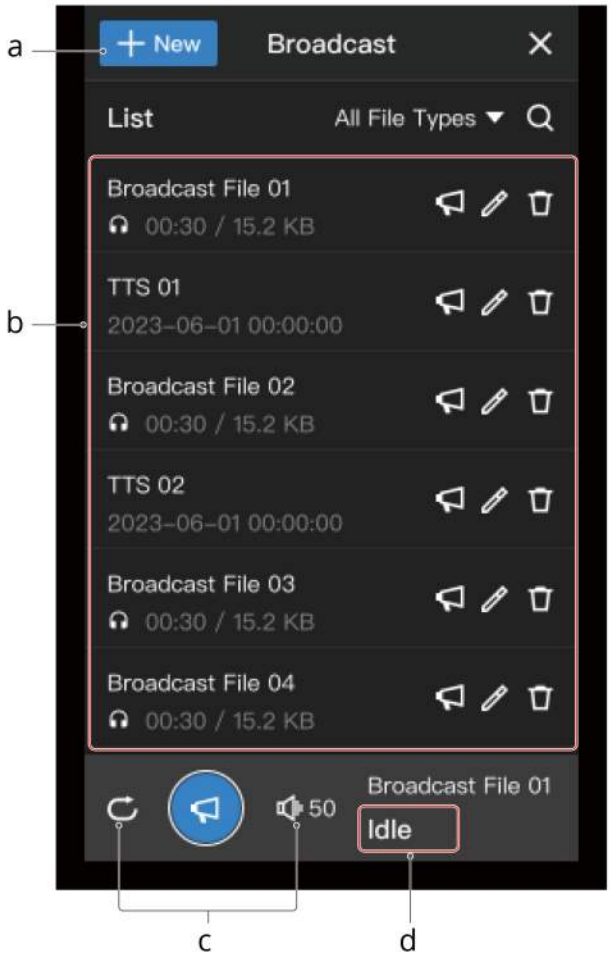
- The spotlight supports two modes: constant light and strobe.

- It is recommended to appropriately reduce the brightness of the spotlight and turn the spotlight on as needed to minimize the impact on the aircraft's endurance.

The virtual cockpit supports control of third-party PSDK accessories. Once third-party PSDK accessories are successfully connected, click PSDK to enter the PSDK main interface.

- Main Interface: Displays the PSDK functions, including but not limited to the speaker, lighting device, and gimbal control, depending on the PSDK device installed.
- Settings: Click ⚙ to customize the PSDK device settings.

Take a third-party PSDK speaker as an example.



a. Create Broadcast Task

Click New to select from Record & Broadcast, Text to Speech, or Import Audio File.

b. Broadcast List

Displays all cloud files in the current project. Files stored in the PSDK speaker are not included.

c. Broadcast Settings

Users can set the loop play and adjust the broadcast volume.

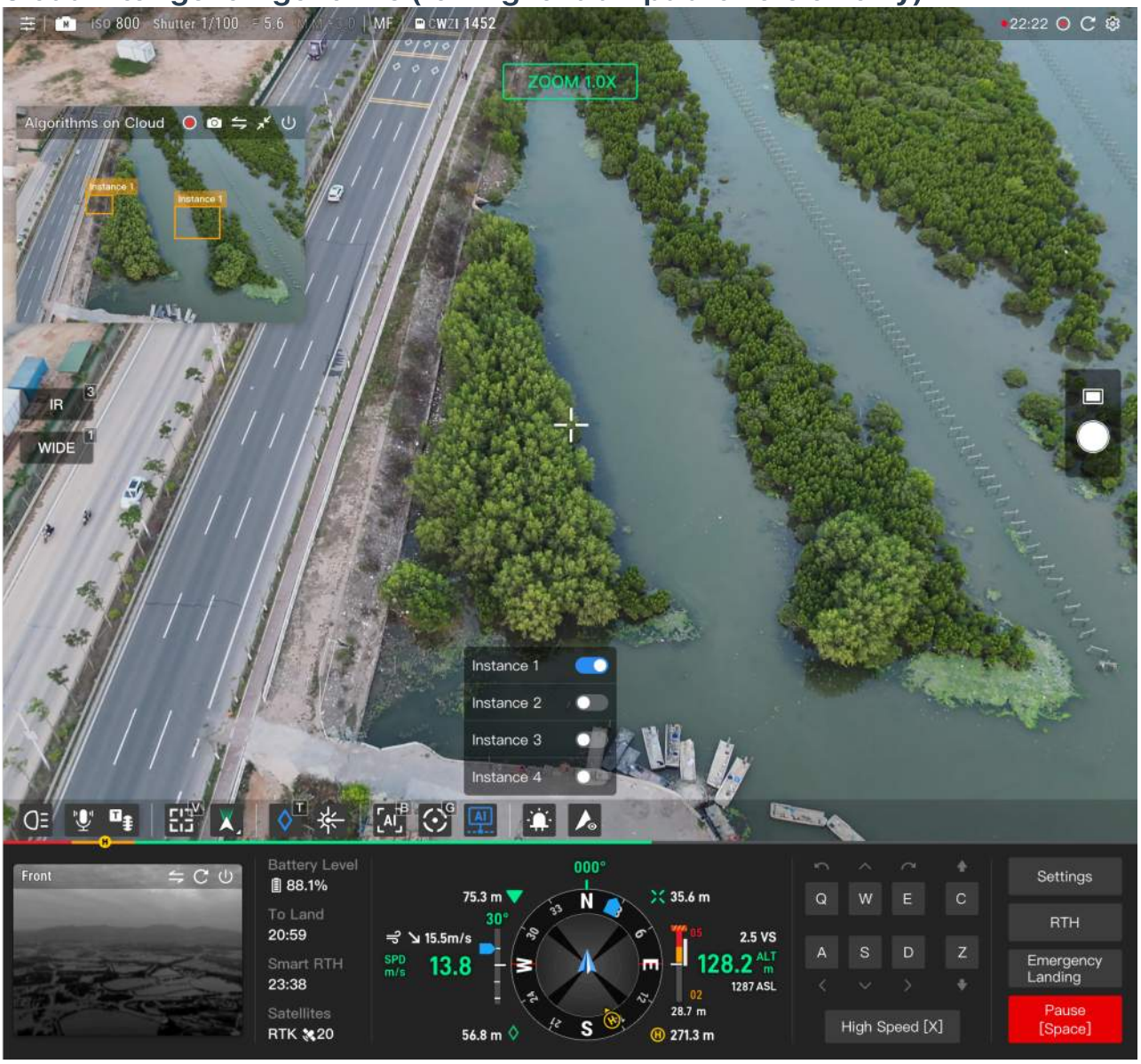
d. Broadcast Status

Displays the current status of the speaker.

Click 🎧 to preview the audio. Click 📣 and the dock aircraft will broadcast the audio.

- Users need to allow DJI FlightHub 2 to access the microphone and install a voice input device if necessary.
- Users should contact the PSDK device manufacturer to upgrade the device to the latest version if the PSDK device version is too early.

Cloud Intelligent Algorithms (for FlightHub 2 public version only)

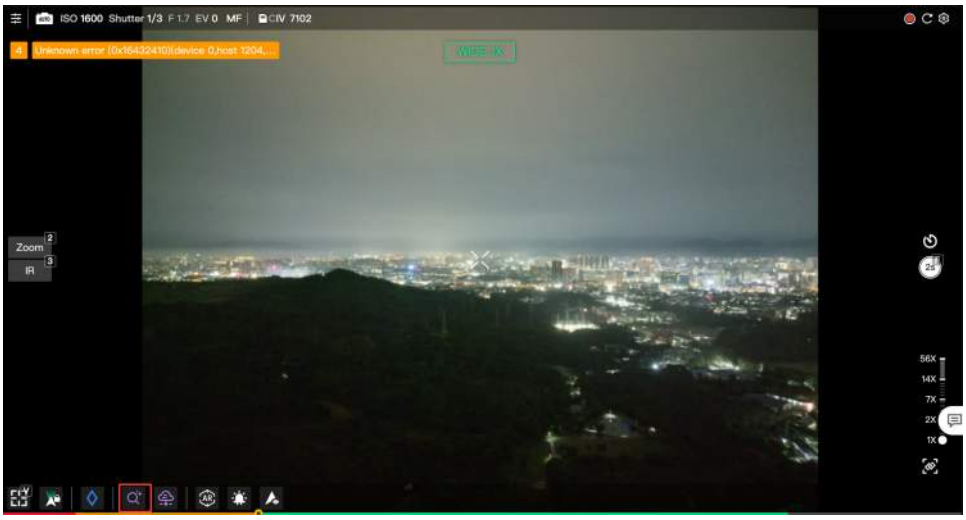


1. Select an algorithm instance: In the virtual cockpit, click the cloud intelligent algorithm call button to view all successfully created algorithm instances in the expanded list. For details, refer to Organization Management > Algorithm Management .
2. Enable the algorithm instance: When enabled, a real-time livestream window will be displayed in the upper left corner of the livestream screen, allowing users to view the live video processed by the cloud algorithm. Users can switch views, minimize the window, or end the livestream.
3. Note: Due to the delay in calling the cloud algorithm, which depends on the service performance of third-party vendors, it is necessary to pay attention to flight safety after switching the livestream screen of the cloud intelligent algorithm to the main view.

Multimodal Object Observation

How to Access

After obtaining payload control in the virtual cockpit and switching to the visible light camera, you can access multimodal object observation. Click  to open the object search input panel.

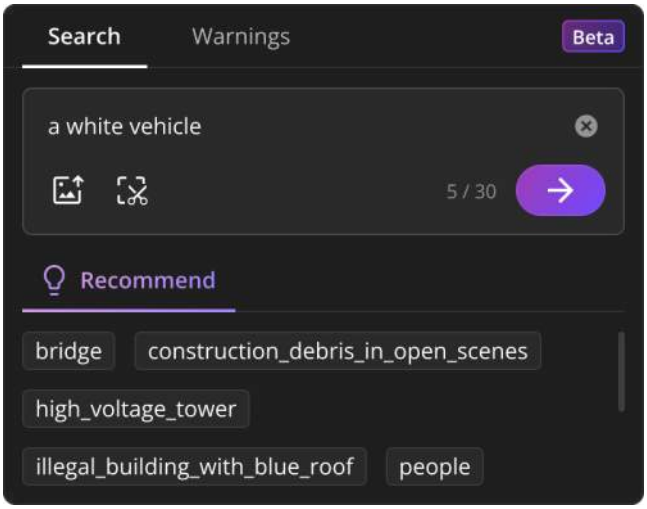


Intent Recognition

There are three ways to input your object search:

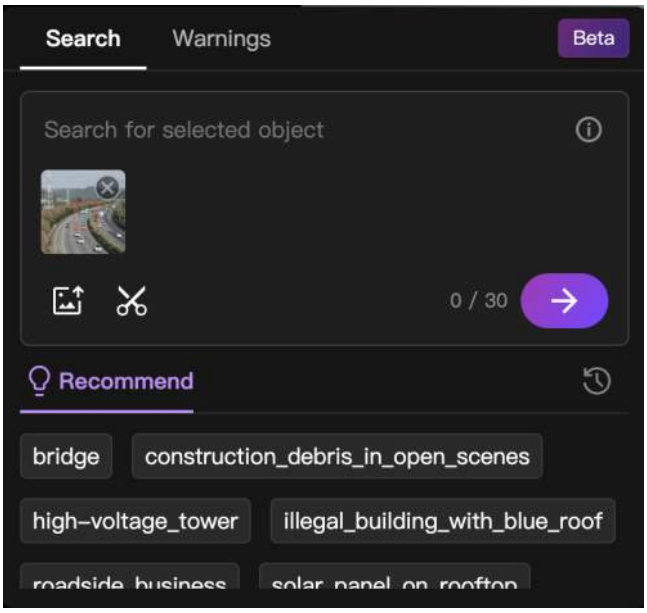
1. Text Description

Enter a description of the object you wish to find (e.g., "Small black car"), up to 60 characters. You may also select from recommended high-frequency scene prompts, which will auto-fill the text box.



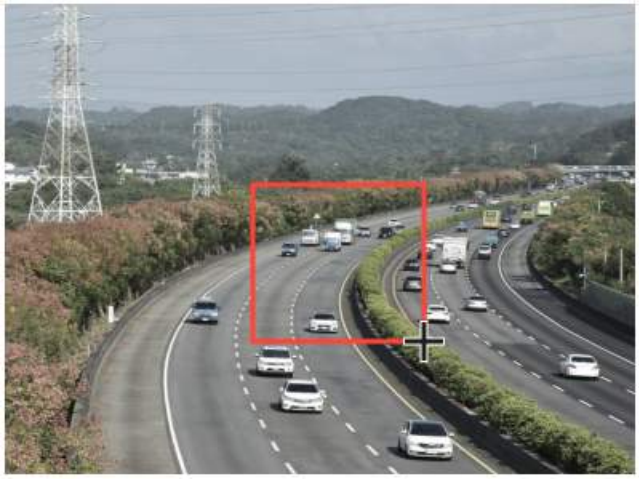
2. Image Upload

Click to upload a photo, select the file, and then choose the object within the image. Once uploaded successfully, the text box will automatically fill with the copy "Search for object in photo," which you can further edit.



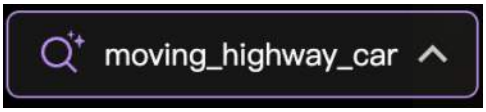
3. Livestream View Capture

Capture the current livestream view and select the object within the captured image. After confirming the object, click the Next button. The AI model will analyze your input and generate up to three tags (each up to 20 characters), which you can edit or delete. Once confirmed, click Start Search to begin object detection. The panel will close automatically.



Object Search

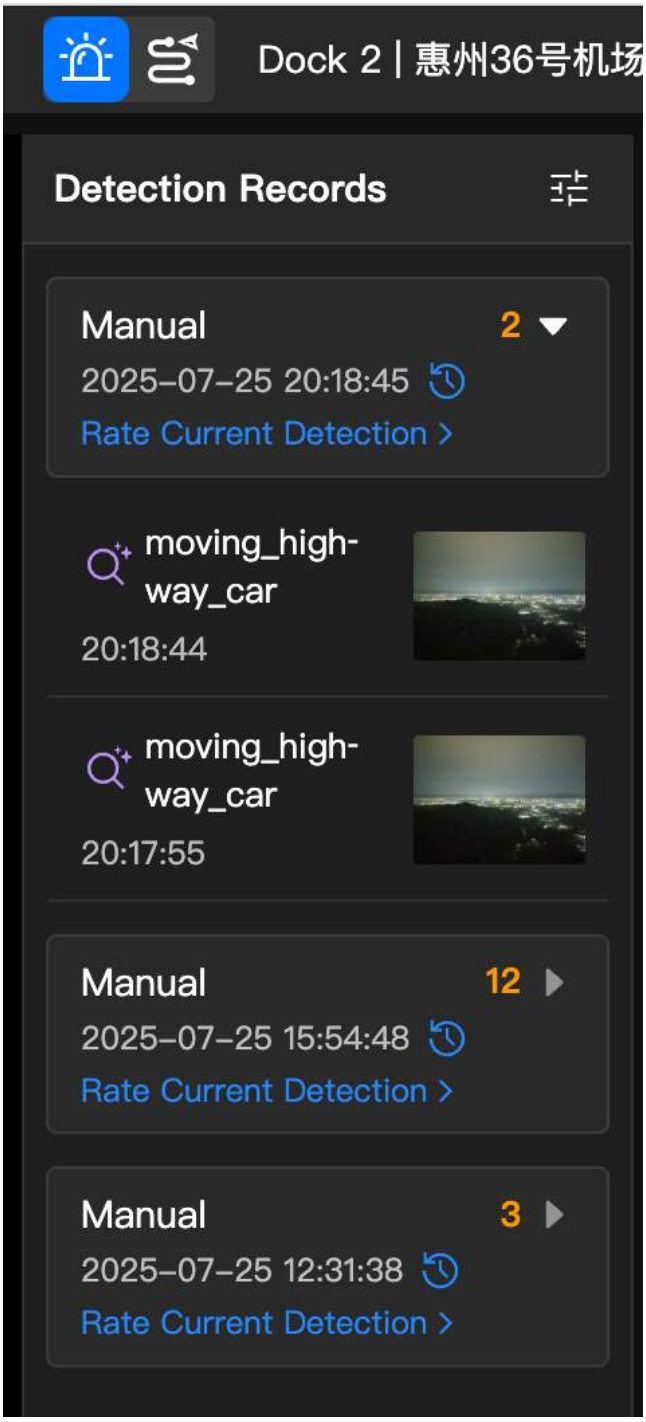
Once the search begins, the multimodal object detection module will maintain a dynamic display effect.



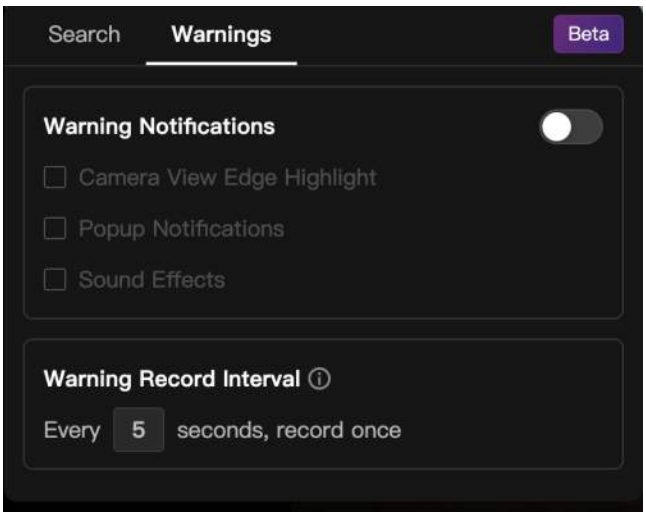
Object Detection Alerts

1. Notification Configuration

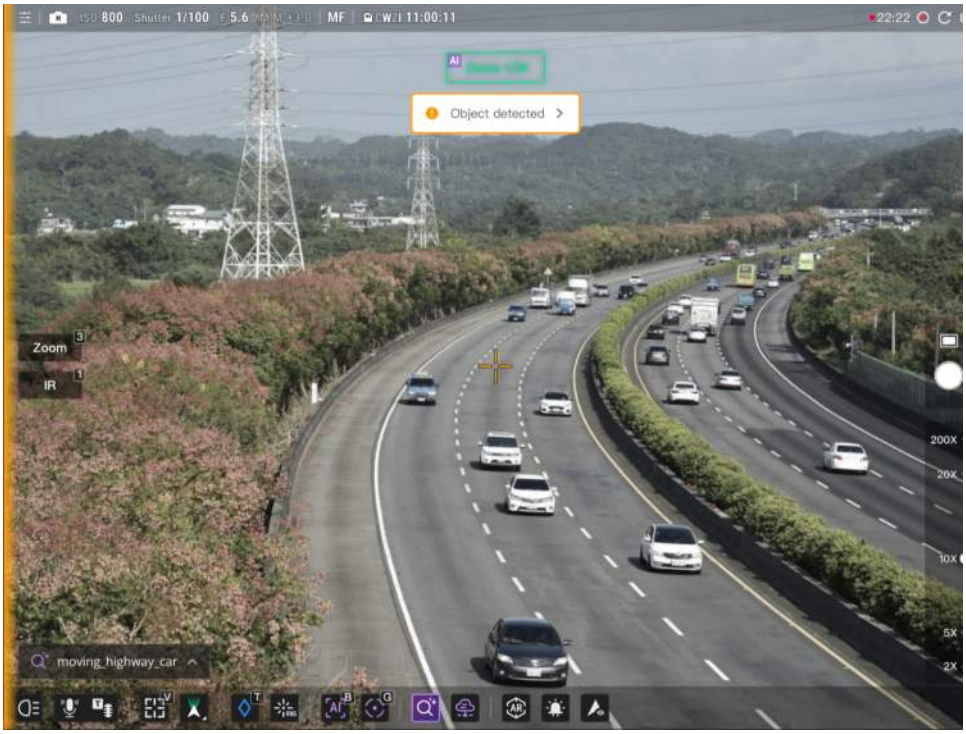
- When not enabled, detected objects will only be recorded in the AI warning record list.



- When enabled, you can select additional notification categories.



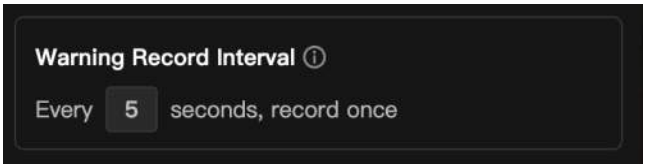
- Edge Highlight: A flashing effect appears on both sides of the livestream screen when an object is detected.
- Popup Notification: When a object is detected, a window pops up on the livestream screen; clicking it expands the AI warning record list.



- Sound Effect: A buzzing sound plays when a object is detected.

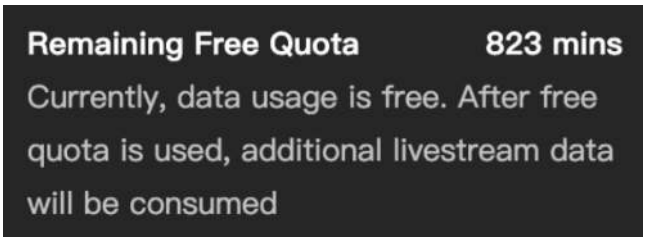
2. Warning Record Interval Configuration

- You can set the minimum interval between alerts, with a minimum of 2 seconds.



Resource Consumption

Using the multimodal object observation feature consumes organizational livestream minutes. Each organization receives a default free quota of 1,000 minutes. After exceeding this quota, additional usage will be billed based on livestream minutes consumed. You can view detailed resource consumption under the Livestream (Multimodal object Observation) category in your organization's payment list.



Launching Manifold 3 Applications

After importing the application and successfully connecting to the virtual cockpit of the aircraft equipped with Manifold 3, you will see the Manifold 3 application entry. Click it to expand the application menu.



Once the application is launched, third-party PSDK controls will be automatically activated. If the application is AI-related, the camera view will display AI recognition effects and labels in real time.



Notes:

- Currently, only DJI Dock 3 aircraft are supported.
- For the best experience, it is recommended to use the latest version of Chrome.

Multi-Aircraft Control

To manage multiple aircraft, expand the multi-aircraft control panel and add available aircraft to the Grouped Aircraft list. You can then configure what happens when you switch between aircraft, including:

- Automatically taking control of the selected aircraft.
- Automatically starting the livestream from the selected aircraft.

Clicking an aircraft's device card allows you to instantly switch control to that aircraft. The card also provides one-click commands for critical functions like Return to Home (RTH) and emergency stop.

Recommended Configuration Requirements：

>>Control 1 to 2 devices simultaneously：

- Processor: Intel Core i5-1135G7 or higher
- Memory: 16 GB or more
- Network Bandwidth: 50 Mbps or higher

>>Control 3 to 4 devices simultaneously：

- Processor: Intel Core i7-12700K or higher
- Memory: 32 GB or more
- Network Bandwidth: 150 Mbps or higher

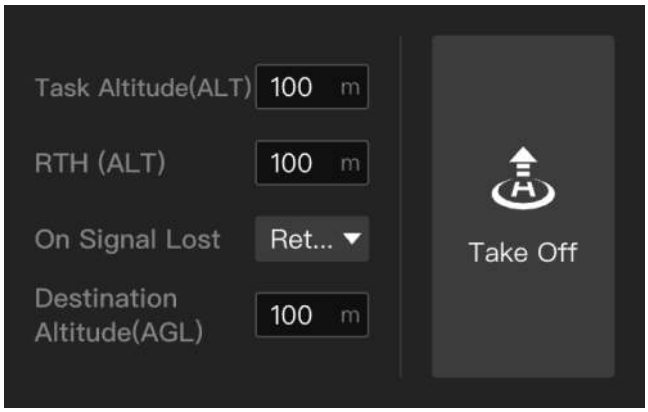
Please note that low-power processors (such as the i5-7200U) are not recommended for simultaneous control. Additionally, to ensure a better user experience, make sure the device is connected to a power source and the signal is stable throughout the operation.

Operation Panel

Displays different information when the aircraft is in different status.

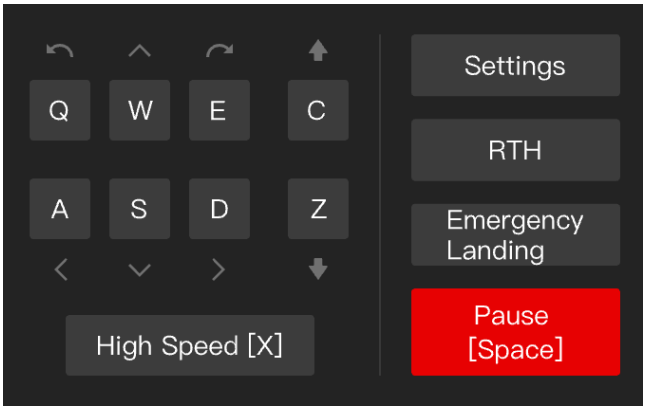
- When the aircraft is powered off or idle, the panel will display the basic parameters and the Take Off button.

  Take Off: When the aircraft is inside the dock, users can click Take Off, and the aircraft will ascend to the task altitude and hover.

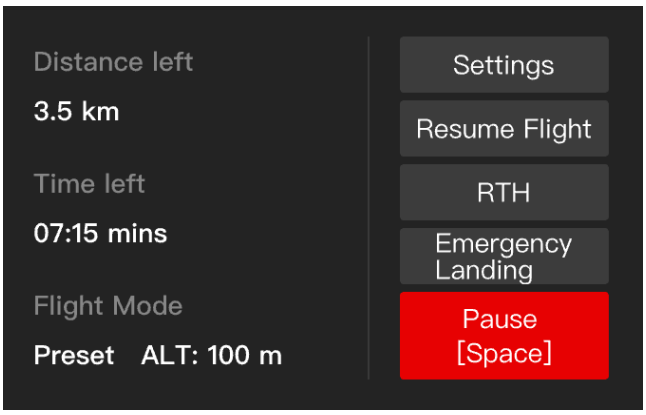


- When the aircraft is in the manual flight mode, the panel will display buttons for switching the flight speed mode and operating the aircraft to fly forward and backward, descend, ascend, and

rotate. When users click the High Speed button or press [X], the horizontal speed of the aircraft will change from 5 m/s to 15 m/s.



- When the aircraft is performing the FlyTo tasks, the panel will display the remaining flight distance and time, as well as the flight mode. Users can customize the flight parameters, operate the aircraft to return home, and pause or resume the flight.

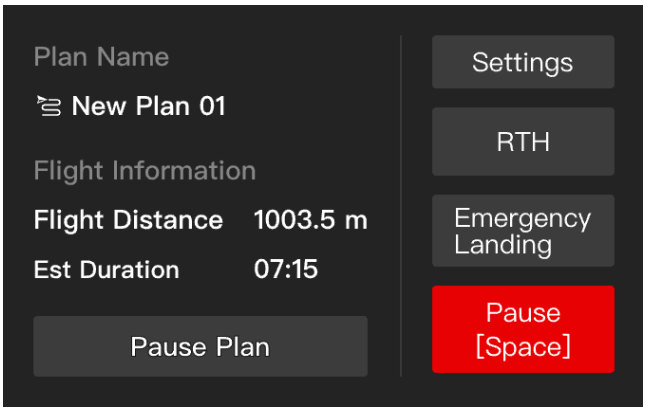


FlyTo Tasks: Right-click on the map to set a FlyTo destination. Users can also set a PinPoint or the search result on the map as the FlyTo destination. After the FlyTo destination is set, a virtual flight route will be displayed on the map. Users can click Start, and the aircraft will fly directly to the destination.

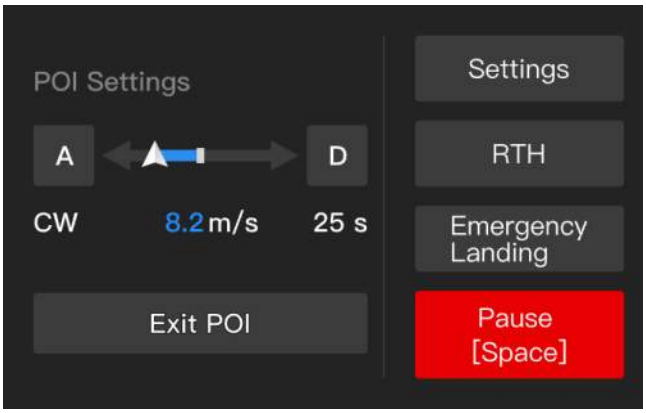
- When the aircraft starts the FlyTo task from DJI Dock 2:
  - When Optimal Route Planning is enabled, the aircraft will plan an optimal route, ascend 20 meters, and then perform the FlyTo task.
  - When Optimal Route Planning is disabled and the FlyTo altitude is higher than the task altitude, the aircraft will ascend to the task altitude before performing the FlyTo task. When the FlyTo altitude is lower than the task altitude, the aircraft will fly at the task altitude, reach above the FlyTo destination, and descend to the FlyTo altitude.
- When the aircraft starts the FlyTo task from DJI Dock:
  - When the FlyTo altitude is higher than the task altitude, the aircraft will ascend to the task altitude before performing the FlyTo task. When the FlyTo altitude is lower than

the task altitude, the aircraft will fly at the task altitude, reach above the FlyTo destination, and descend to the FlyTo altitude.
    - For the aircraft with the firmware version earlier than v08.00.0003, the aircraft will ascend to the task altitude and directly fly to the FlyTo destination.
    - During a FlyTo task, users can select a new FlyTo destination, and the aircraft will fly to the destination directly.
  - To change the destination, the DJI Dock firmware version should be v01.06.17.02 or later, while the dock aircraft version should be v09.01.00.05 or later. As for DJI Dock 2, the firmware version should be v09.02.01.08 or later, while the Dock 2 aircraft version should be v09.02.01.08 or later.
  - To ensure flight safety, a reasonable task altitude, RTH altitude, and FlyTo destination altitude should be set based on the surrounding environment and task requirements and at least 5 meters lower than the maximum flight altitude allowed in Altitude Zone. Users should also make sure that there are no obstacles during flight.
  - The aircraft will bypass GEO Zones and obstacles during FlyTo tasks. If there is a GEO Zone with a maximum width of more than 400 meters between the current aircraft position and the FlyTo destination, the aircraft may not be able to bypass the area and will hover at the area boundary. Users should pay close attention to the the livestream view and fly the aircraft manually to bypass the GEO Zone.
  - When Low Battery RTH is triggered, DO NOT cancel RTH or enable Live Flight Controls during RTH, otherwise the aircraft will exit RTH and may not be able to return to the dock.
  - When the aircraft battery is critically low, the aircraft will land automatically, and the landing cannot be canceled.
  - DO NOT control the aircraft to land on the dock using keyboard commands, otherwise the aircraft will not be able to stop propellers after landing and return to the dock automatically.

- When the aircraft is performing planned tasks, the panel will display the basic flight information. Users can customize the flight parameters, operate the aircraft to return home, and pause or resume the flight.



- When the aircraft is performing the POI tasks, the panel will display the POI speed. Users can customize the flight parameters, operate the aircraft to return home, and pause or resume the flight.



POI

FlightHub 2 users can select any location or PinPoint on the map and start a POI task when DJI Dock is in the Live Flight Controls mode. After the FlyTo destination is set, the dock aircraft will face the FlyTo destination, and a virtual flight trajectory will be displayed on the map. Users can set the POI direction and speed and use the keyboard shortcuts to adjust the aircraft altitude and distance to the FlyTo destination. The task panel will display the estimated time needed for completing the POI task. Users can click Start to start the POI task.

Users can click buttons on the device status window or use the keyboard shortcuts to adjust the aircraft direction and speed during POI. Click Exit or press the Space key to exit POI.

- Users need to obtain the flight and gimbal control before starting POI tasks.
- To start POI, the DJI Dock firmware version should be v01.06.17.02 or later, and the dock aircraft version should be v09.01.00.05 or later.
- If the aircraft approaches a GEO Zone or detects obstacles during POI, the aircraft will hover. Pay attention to the aircraft status and livestream view. Fly with caution.

- The aircraft will fly sideways during POI. When the environment is not suitable for the vision system to work properly, the aircraft may not be able to bypass obstacles. Users should check the surrounding environment on-site or the flight trajectory on the cloud before starting POI.
- FlightHub 2 will intelligently adjust the maximum speed of POI based on the distance between the aircraft and the point of interest.
- During POI, when the user double-clicks the livestream view, the aircraft will not be able to face the clicked point. Dragging the livestream view or using the keyboard shortcuts to adjust the gimbal angle are also not supported.

- Emergency Landing: Users can land the aircraft in case of an emergency. Users can cancel landing at any time or control the aircraft manually to avoid obstacles.

  - The aircraft is unable to take off again after the emergency landing. Use with caution.
  - The DJI Dock 2 firmware version should be v10.01.32.05 or later, and the aircraft version should be v10.01.32.05 or later.

- Optimal Route Planning:
  - When the environment is suitable for the vision system to work properly or Obstacle Data is enabled, the aircraft will automatically plan an optimal route to improve task efficiency and preserve battery life.
  - When the environment is not suitable for the vision system to work properly and Obstacle Data is disabled, the aircraft will fly based on the task altitude and RTH altitude settings.

  - When Optimal Route Planning is enabled, the aircraft will intelligently adjust the flight altitude and speed based on the obstacle data and the environment conditions such as the wind speed and direction, so that the aircraft can reach the FlyTo destination or the Home Point with improved efficiency.
  - It is recommended to enable Obstacle Data in Task Area Management to improve the route planning performance. See Obstacle Data for more details.
  - When the environment is not suitable for the vision system to work properly or other issues occur when the aircraft is performing FlyTo tasks or returning to home, the aircraft will not be able to plan an optimal route. If Obstacle Data is also disabled, the aircraft can only fly based on the set altitude and will not be able to avoid obstacles along the route.

Therefore, users should set appropriate task altitude and RTH altitude before starting FlyTo tasks or returning to home.

- When Optimal Route Planning is disabled but the environment is suitable for the vision system to work properly or Obstacle Data is enabled, the aircraft can still fly horizontally or vertically to avoid obstacles.
- If the maximum flight altitude is lower than the current aircraft altitude, the aircraft will descend directly to the maximum flight altitude before continuing tasks. If the maximum altitude is higher than the current aircraft altitude, the aircraft will stop ascending when the aircraft reaches the maximum flight altitude.

⚠️

- When there are obstacles such as wires and electric towers that are hard for the vision sensors to detect, users should disable Optimal Route Planning and make sure the set task altitude and RTH altitude are higher than the obstacle altitude along the route.

a. Task Altitude (ALT): The lowest altitude (relative to the takeoff point) of the aircraft when performing FlyTo tasks. DJI FlightHub 2 will display a prompt when the aircraft altitude is lower than the task altitude.

Note: For the DJI Dock aircraft with the firmware version earlier than v08.00.0003, DJI FlightHub 2 will display a prompt when the aircraft altitude is lower than the task altitude.

b. RTH Altitude (ALT): The aircraft altitude relative to the dock when the aircraft is returning to the dock. The RTH altitude should be set based on the actual flight condition, surrounding environment, and GEO information. It is recommended that the altitude is set higher than the highest geographical point in the flight area and should be lower than the maximum flight altitude.

- For DJI Dock 2
  - When Optimal Route Planning is enabled, the aircraft will intelligently plan an optimal route based on the obstacle data or the vision system data when the environment is suitable for the vision system to work properly.
  - When Optimal Route Planning is disabled but the environment is suitable for the vision system to work properly or Obstacle Data is enabled, the aircraft can still fly horizontally or vertically to avoid obstacles.

        - When the dock aircraft is more than 5.5 meters away from the Home Point horizontally, the aircraft will ascend to the RTH altitude and return to home. When the dock aircraft is 5.5 meters or less than 5.5 meters away from the Home Point horizontally, the aircraft will maintain the current altitude (when it is higher than 15 meters) or ascend to 15 meters (when it is lower than 20 meters) before returning to home.
    - For DJI Dock
        - When the dock aircraft is more than 5.5 meters away from the Home Point horizontally, the aircraft will ascend to the RTH altitude and return to home. When the dock aircraft is 5.5 meters or less than 5.5 meters away from the Home Point horizontally, the aircraft will maintain the current altitude (when it is higher than 20 meters) or ascend to 20 meters (when it is lower than 20 meters) before returning to home. When the environment is suitable for the vision system to work properly, the aircraft can still fly horizontally or vertically to avoid obstacles.
        - For the DJI Dock aircraft with the firmware version earlier than v08.00.0003, the aircraft will not be able to bypass obstacles and GEO Zones. Check the surrounding environment when the aircraft is returning to home.

    c. On Signal Lost: Users can choose from Return to Home, Hover, or Continue. The dock aircraft will perform the signal lost action when the aircraft is disconnected from the dock. To ensure flight safety, it is recommended to set the signal lost action as Return to Home.

    d. Destination Altitude (AGL): The default altitude above the ground of the FlyTo destination.

> Note: All parameters can be set when the dock aircraft is powered off.

Aircraft Status Information

- Basic status information: Includes the satellite status, battery level, smart RTH time, and time before aircraft lands.
    - Smart RTH: The time when the aircraft starts smart RTH due to low battery. The aircraft will start smart RTH when the battery is low, and will land in its current location when the battery is critically low.
    - To Land: The time when the aircraft starts to land due to low battery.

> Note: Pay attention to the time when the aircraft starts landing, and make sure the aircraft can return home safely.

- Navigation Display: Includes the aircraft and gimbal orientations, aircraft altitude, horizontal and vertical speeds, wind speed, distance between the aircraft and Home Point, and warning messages for the obstacle sensing.

FPV View/Vision Assist

1. Click ⇆ to switch between the FPV view/Vision Assist and gimbal camera views.
2. Click ↻ to refresh the FPV view/Vision Assist.
3. Click ⏻ to close the FPV view/Vision Assist.

> - The FPV view for DJI Dock only.
> - To use Vision Assist, the DJI Dock 2 firmware version should be v10.01.32.05 or later, and the aircraft version should be v10.01.32.05 or later.
> - When the aircraft has not taken off and is in the low-power state, Vision Assist is disabled by default.

Map Information

Users can view all the annotations and device information of the project on the map. Users can also start the FlyTo or POI tasks or double-click on the map and the aircraft will face the clicked point.

> Note: See Map Details for more details.

Dock Information

Includes the dock livestream view and the warning messages related to the dock.

- Dock Livestream View: The dock livestream view will be enabled automatically after project administrators enter the virtual cockpit or when the aircraft is returning home. Users can click ⛶ to expand the view.
- Warning Messages: Displays the warning messages of the dock when there are any.

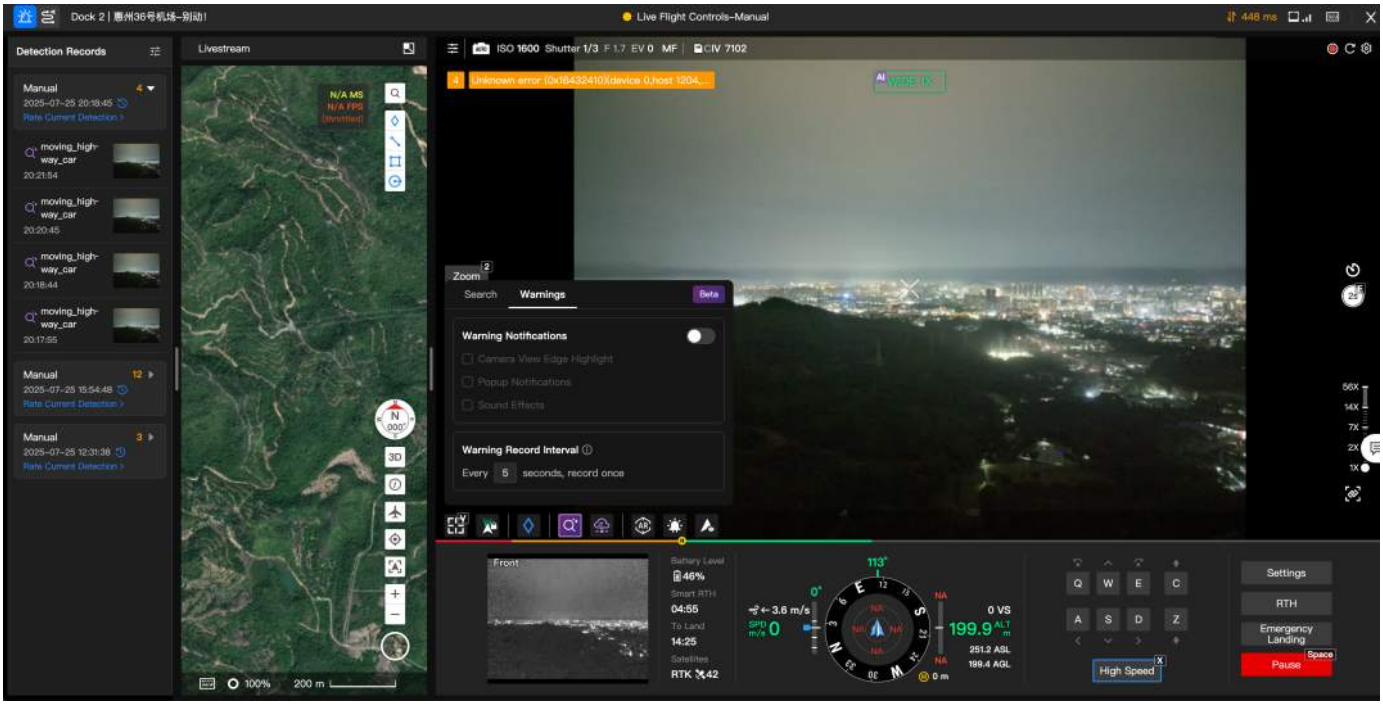
AI Warning Records

Real-time AI Warnings

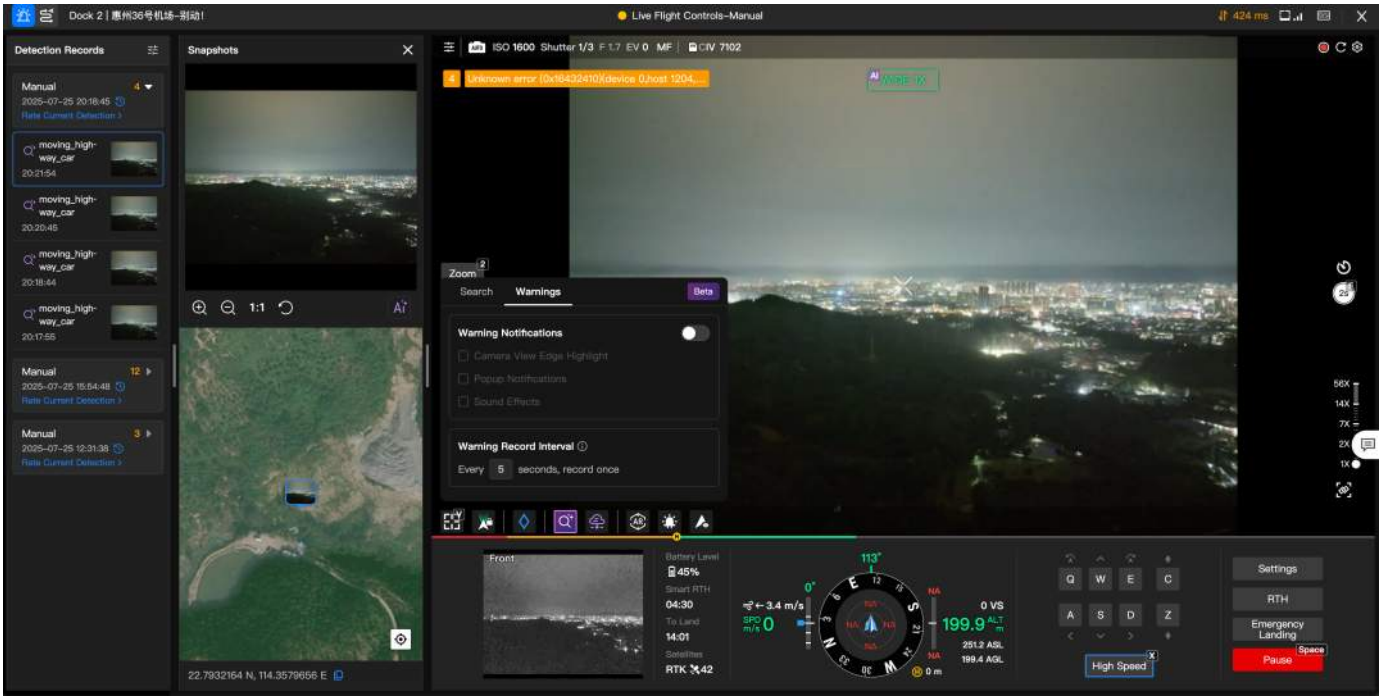
When AI functions are enabled in the virtual cockpit and an alert is triggered, relevant information and snapshots are displayed in the AI warning record list. You can filter records by date, warning category, and object type. Completed flights can be reviewed via a shortcut in the flight records.

Automated Flight Route AI Warnings

When a Smart Capture waypoint route triggers a warning and in-web notifications are enabled, you can use the notification link to jump directly to the virtual cockpit, where you can manually take over the aircraft for task intervention.

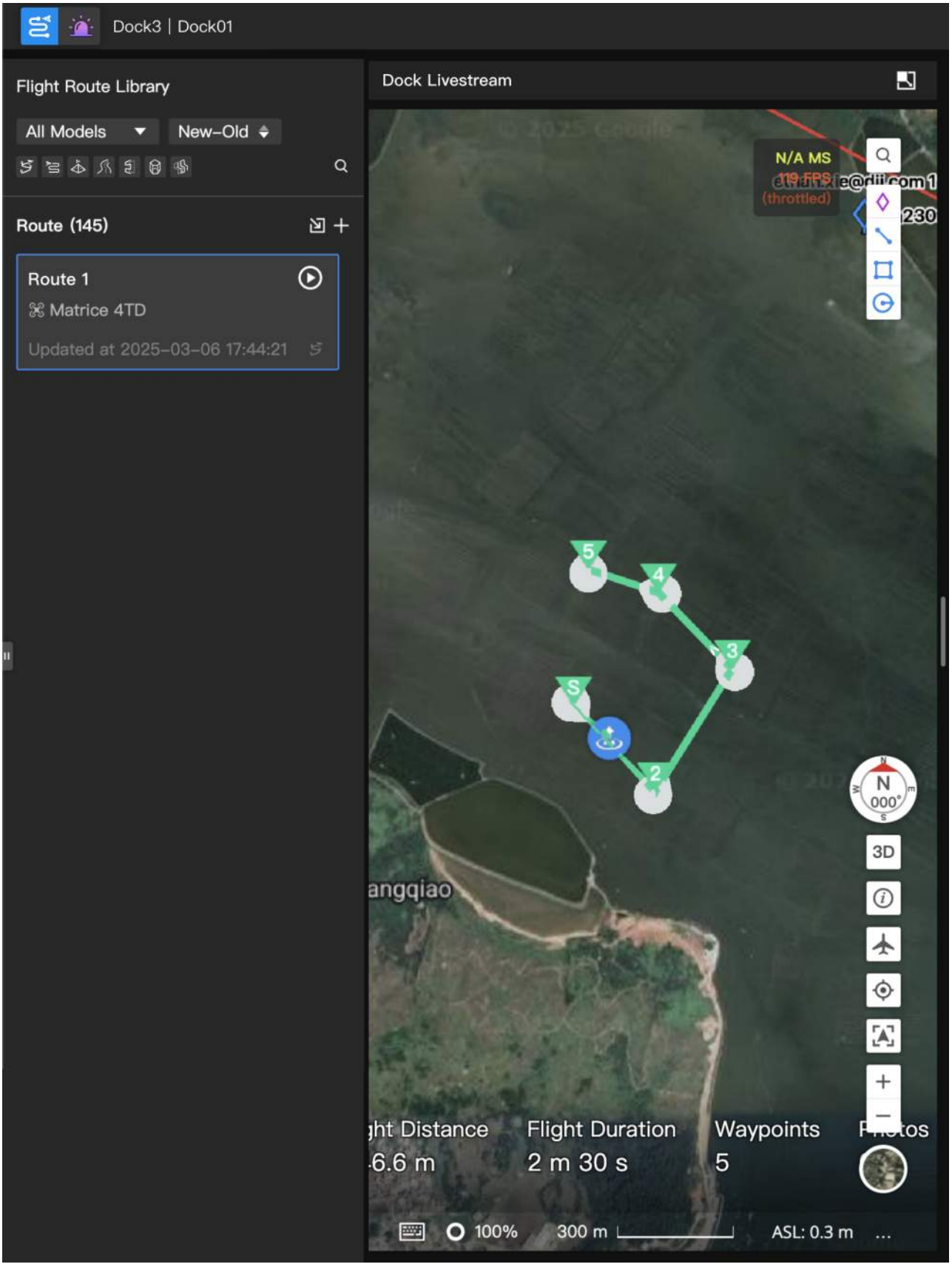


The virtual cockpit displays AI automated flight route warning records, providing quick access to alert trigger times, conditions, object locations, and snapshots.



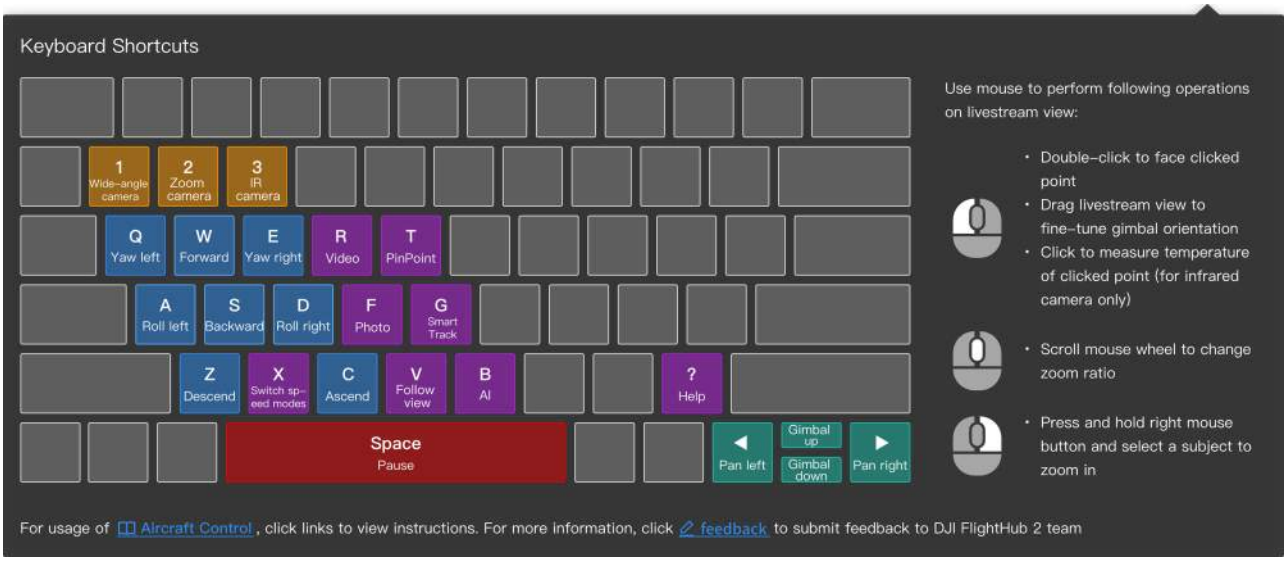
Distribute Flight Route via Virtual Cockpit

Users can expand the flight route list in the virtual cockpit interface, select, and distribute the required flight route task in real time.



Keyboard Shortcuts

Click ⌨ or press [?] to display the keyboard shortcuts instructions.



Note: The keyboard layout may be different in different countries or regions, and users should follow the actual interface guidance. To change the keyboard layout, go to User Center > Preferences > Keyboard Layout to customize the settings.

Feature List

Users can refer to the following table to view the details of the features supported by different aircraft models.

Feature Category	Feature Name	Dock aircraft				
		DJI Dock		DJI Dock 2		DJI Dock 3
		Matrice 30	Matrice 30T	Matrice 3D	Matrice 3TD	Matrice 4D
Flight Control	Obtain flight control	✔	✔	✔	✔	✔
Flight Control	Take off	✔	✔	✔	✔	✔
Flight Control	FlyTo Task	✔	✔	✔	✔	✔
Flight Control	Keyboard Controls	✔	✔	✔	✔	✔

	(WASD/QE/CZ)					
Flight Control	Flight Parameter Settings	✔	✔	✔	✔	✔
Flight Control	One-click RTH	✔	✔	✔	✔	✔
Flight Control	Emergency/one-click landing	✔	✔	✔	✔	✘
Flight Control	Emergency stop	✔	✔	✔	✔	✔
Flight Control	High speed mode	✔	✔	✔	✔	✔
Flight Control	Resume flight	✔	✔	✔	✔	✔
Flight Control	Pause flight	✔	✔	✔	✔	✔
Flight Control	Exit flight	✔	✔	✔	✔	✔
Flight Control	Distribute Flight Route	✘	✘	✔	✔	✔
Flight Control	Automatic Swap	✘	✘	✘	✘	✔
Payload Control	Obtain payload control	✔	✔	✔	✔	✔
Payload Control	Switch camera using shortcut key	✔	✔	✔	✔	✔
Payload Control	Mechanical Shutter	✘	✘	✔	✘	✘
Payload Control	Dewarp	✘	✘	✔	✘	✘
Payload Control	Watermark	✘	✘	✔	✔	✔
Payload Control	Lens Defog	✘	✘	✔	✔	✔
Payload Control	Reset camera settings	✘	✘	✘	✘	✔

Payload Control	Adjust camera settings	✘	✘	✔	✔	✔
Payload Control	Focus mode	✔	✔	✔	✔	✔
Payload Control	Single Shot	✔	✔	✔	✔	✔
Payload Control	Timed	✘	✘	✔	✔	✘
Payload Control	Smart Low-Light	✔	✔	✔	✔	✔
Payload Control	Take a panorama	✔	✔	✔	✔	✔
Payload Control	Record	✔	✔	✔	✔	✔
Payload Control	Resolution settings	✘	✘	✔	✔	✘
Payload Control	Storage settings	✘	✘	✔	✔	✘
Payload Control	Zoom	✔	✔	✔	✔	✔
Payload Control	Link Zoom	✘	✘	✘	✔	✘
Payload Control	Laser rangefinder	✔	✔	✘	✘	✔
Payload Control	Add PinPoint using laser technology	✔	✔	✘	✘	✔
Payload Control	Recenter Gimbal	✔	✔	✔	✔	✔
Payload Control	Gimbal Down	✔	✔	✔	✔	✔
Payload Control	Recenter Gimbal Pan	✔	✔	✘	✘	✘
Payload Control	Gimbal Tilt Down	✔	✔	✘	✘	✘
Payload Control	Double-click to center view	✔	✔	✔	✔	✔

	around clicked point					
Payload Control	Fine-tune gimbal orientation	✔	✔	✔	✔	✔
Payload Control	Select subject and zoom in	✘	✘	✔	✔	✔
Payload Control	Beacons	✘	✘	✔	✔	✔
Payload Control	Discreet Mode	✘	✘	✔	✔	✔
Payload Control	Switch IR palette	✘	✔	✘	✔	✘
Payload Control	High temperature alarm	✘	✔	✘	✔	✘
Payload Control	SBS	✘	✔	✘	✔	✘
Payload Control	Temperature bar	✘	✔	✘	✔	✘
Payload Control	Gain	✘	✔	✘	✔	✘
Payload Control	Spot/area temperature measurement	✘	✔	✘	✔	✘
Payload Control	Mouselook	✔	✔	✔	✔	✔
Payload Control	AR projection	✘	✘	✔	✔	✘
Payload Control	AI recognition	✘	✘	✘	✘	✔
Payload Control	Smart Track	✘	✘	✘	✘	✔
Payload Control	Night Scene Mode	✘	✘	✘	✘	✔
Payload Control	Algorithms on Cloud	✔	✔	✔	✔	✔

Sound Effects and Voice Prompts

After users enter the virtual cockpit, the system will play sound effects or voice prompts to help users better know about the aircraft status and warning issues.

Support List:

Scenario	Description	Type
Low battery	When the aircraft battery level starts to fall into the yellow zone of the battery level indicator	Voice prompt
Critically low battery	When the aircraft battery level starts to fall into the red zone of the battery level indicator	Voice prompt
Low or critically low battery	When the aircraft battery level falls into the yellow or red zone of the battery level indicator	Sound effect
Obstacle sensing	Warning sounds will be played at different frequencies based on the distance between the aircraft and obstacles	Sound effect
Return home	When the aircraft is returning home	Voice prompt
Landing	When the aircraft is landing	Voice prompt
Return home/Landing	When the aircraft is returning home or landing	Sound effect
Reached max flight altitude	When the aircraft reached the maximum flight altitude	Voice prompt
Reached max flight distance	When the aircraft reached the maximum flight distance	Voice prompt
Take a photo	When the aircraft is taking photos	Sound effect
Record a video	When the aircraft starts or stops recording	Sound effect
Take a panorama	When the aircraft starts or stops taking panorama, or when the process is interrupted	Voice prompt
AI recognition	When an object is identified	Sound

		effect

Note: It is recommended to enable the audio on computer after entering the virtual cockpit. To disable the voice prompts and sound effects, go to User Center > Preferences > Sound Effects/Voice Prompts.

Livestream Management

- How to Access
- Device Information
- Livestream Window
- Exit Livestream
- Notes

DJI FlightHub 2 supports simultaneous livestreams for multiple devices within a project. Supported devices include the security cameras of the docks and the gimbal cameras of the aircraft. When the user clicks Livestream, the browser will open a new tab and automatically navigate to the livestream page.

- Multi-Grid Layout: Users can customize and choose various layouts based on the devices in the project to meet different livestream needs.
- Recenter Map: Click Recenter Map in the livestream view, the corresponding device will automatically be recentered and highlighted on the map.
- Keyboard Shortcuts: Users can press keyboard shortcuts to switch between livestream views.
- Display Mode: Users can switch between adaptive and full screen display modes, as well as disable the on-screen display information.

Before using simultaneous livestreams, make sure that your computer or device meets the following configuration requirements.

>>Minimum Configuration Requirements:

- Processor: Intel Core i3-8100 or higher
- Memory: 8 GB or more
- Network Bandwidth: 50 Mbps or higher

>>Recommended Configuration Requirements:

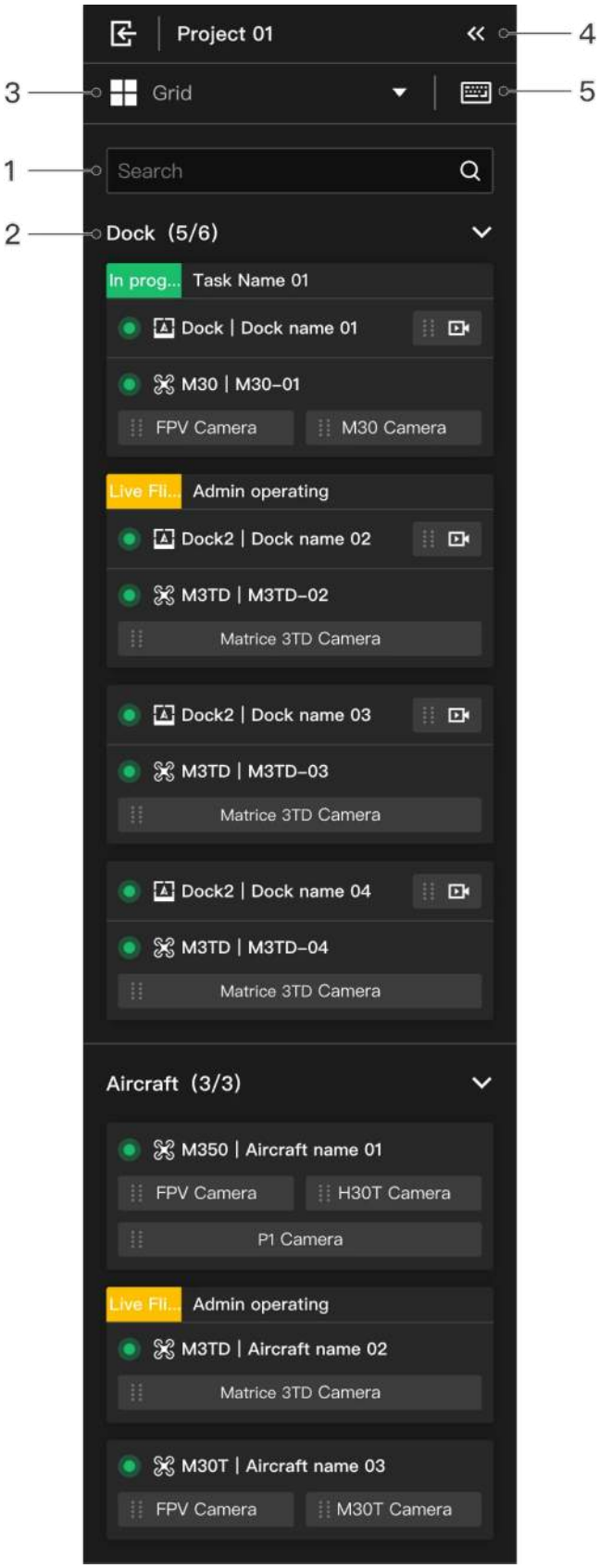
- Processor: Intel Core i5-8500 or higher
- Memory: 16 GB or more
- Network Bandwidth: 100 Mbps or higher

  Please note that low-power processors (such as the i5-7200U) are not recommended for simultaneous livestreams. Additionally, to ensure a better user experience, make sure the device is connected to a power source or has sufficient battery throughout use.

How to Access

When a user clicks Livestream at the bottom of the device list, the browser will open a new tab and automatically navigate to the livestream page. The layout settings will be saved, and the livestream layout will remain the same the next time the user enters Livestream.

Device Information



1. Search Bar

Enter the device name or keywords to search for the device that is livestreaming.

2. Device Type

The device type includes docks and aircraft. Devices that can start livestreams include the security cameras of the docks and the gimbal cameras of the aircraft, and the independent aircraft that are connected to DJI Pilot 2 and logged into FlightHub 2 cloud service on the remote controllers.

2.1 Docks

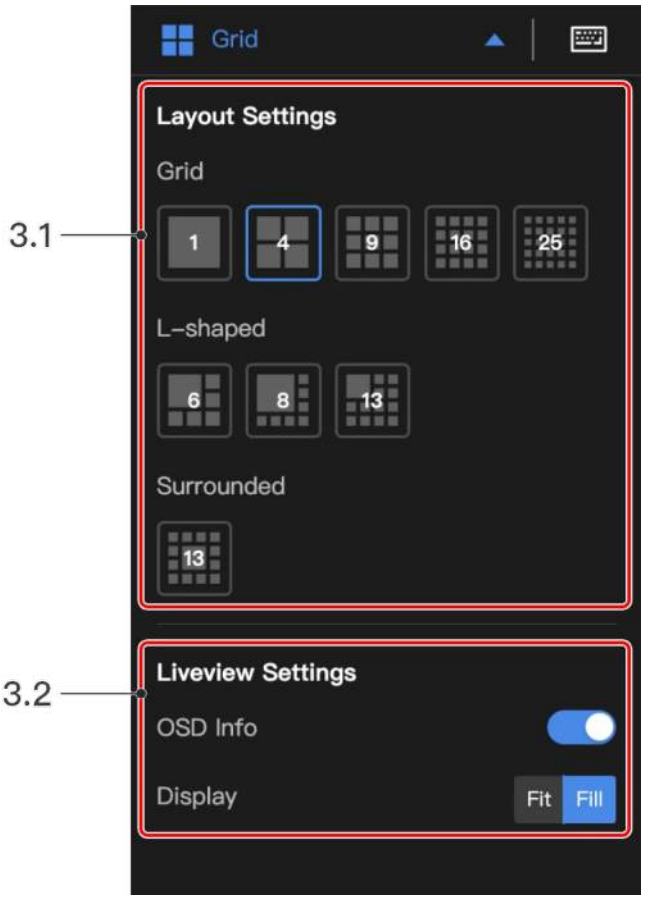
- Device Statuses: Include Task in Progress and Live Flight Controls. When a task is in progress, the task name will be displayed. When Live Flight Controls is enabled, the operator name will be displayed.
- Online Status and Device Name: When a device is online, the status indicator will be displayed in green. When offline, the indicator is gray. Next to the indicator, the device model and name will be displayed.
- Livestream Camera: Users can click or drag the camera button to the livestream window to start the livestream.
    - Click: Click the camera buttons and the camera views will be open in the livestream window by order.
    - Drag: Drag the camera button to a specific window to start the livestream.

2.2 Aircraft

- Device Status: Users can obtain the aircraft control on the cloud, and the Live Flight Controls status will be displayed here.
- Online Status and Device Name: When a device is online, the status indicator will be displayed in green. When a device is offline for less than five minutes, its information will be displayed in gray. When a device is offline for more than five minutes, its information will not be displayed. Next to the indicator, the device model and name will be displayed.
- Livestream Camera: Users can click or drag the camera button to the livestream window to start the livestream.
    - Click: Click the camera buttons and the camera views will be open in the livestream window by order.
    - Drag: Drag the camera button to a specific window to start the livestream.

3. Change Layout

When users first enter the livestream page, the livestreams will be displayed in a four-grid layout. Users can expand the layout switch menu in the sidebar to switch between Grid, L-shaped, and Surrounded modes. When the layout changes, the livestream order will remain the same, displaying livestreams from left to right and top to bottom.(As shown in Figure 3.1)



4. Expand and Collapse

Click to collapse or expand the list.

5. Keyboard Shortcuts

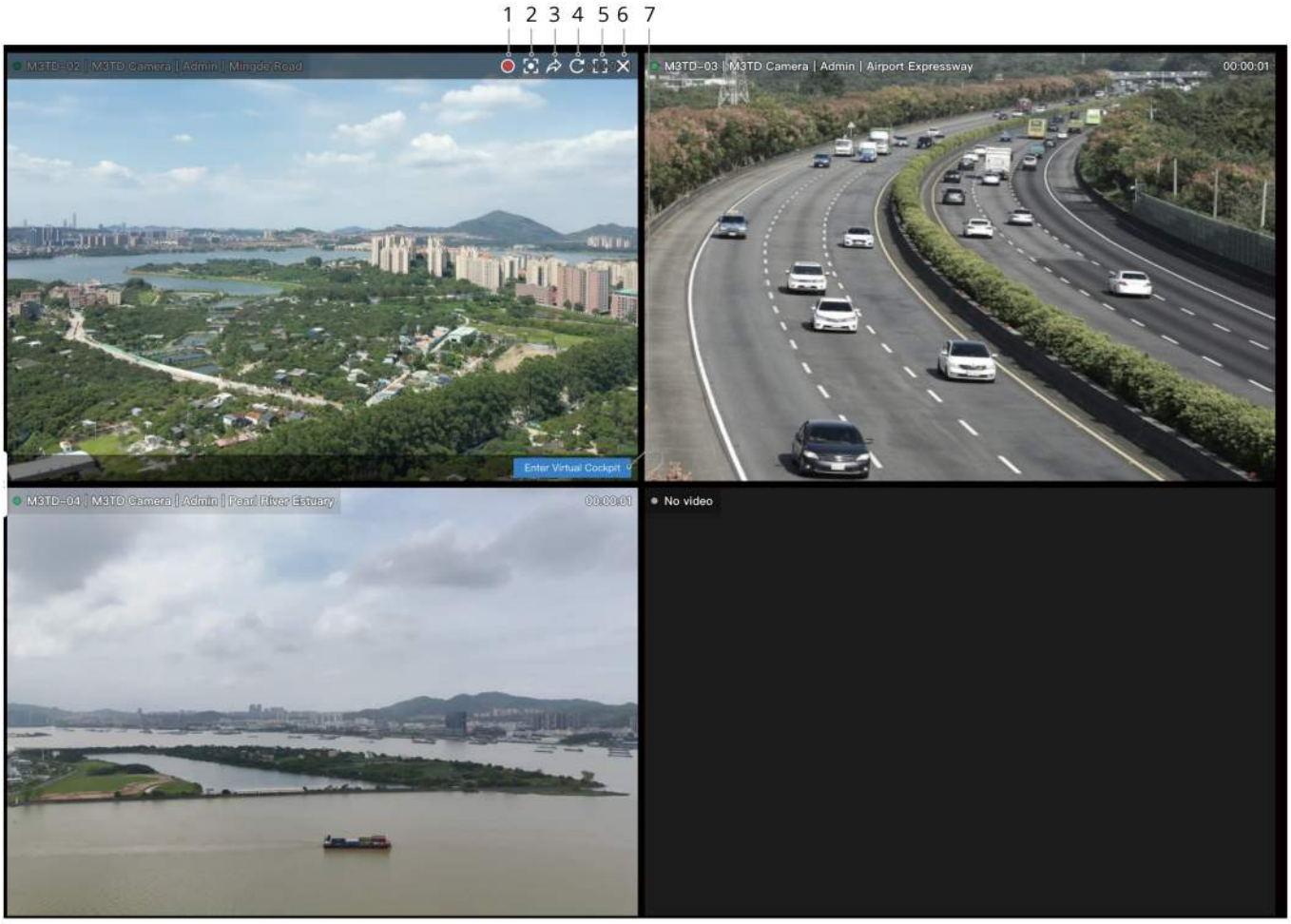
Click Keyboard Shortcuts and the shortcut keys will be displayed on the windows. Users can press the corresponding button to display the selected livestream in full screen.

6. Liveview Settings

Click the Liveview Settings to disable the on-screen display (OSD) information or select between different livestream display modes.(As shown in Figure 3.2)

- OSD Info: Includes the device name, model, task name, operator, and geographic location. The OSD information will be displayed on the top of the livestream window. The OSD Info is enabled by default. Users can disable the OSD info manually.
- Display: Users can choose between Fit and Fill modes. The actual aspect ratio will be displayed by default. Users can change to the fill mode, and the livestream view will occupy the entire window.

Livestream Window



- Linked Operations: When the cursor hovers over a livestream window, a blue border will appear, indicating that the window is selected. At the same time, the corresponding camera button on the device list will also be highlighted.
- Drag Livestream Window: Drag the livestream window to adjust its position.

1. Recording

Click to record the current livestream. The indicator at the top of the window will turn red. During the recording, the operations on the livestream view and virtual cockpit will also be reflected on the device status window.

2. Recenter Map

Click to recenter the device on the map, and the device will also be automatically highlighted.

3. Share Livestream

Click to share livestream to other users.

4. Refresh

Click to refresh the livestream view.

5. Full Screen

Click to enter the full screen mode. Press ESC or click Exit full screen to exit.

6. Exit Livestream

Click to exit the livestream view.

7. Enter Virtual Cockpit

Click to open the virtual cockpit of the corresponding aircraft in a new browser tab.

Exit Livestream

Click on the upper left corner to exit livestream.

Notes

1. Livestream Lag

If the livestream is lagging, the livestream window will automatically refresh and display "Loading".

2. Device Powered Off

If a device is powered off, the livestream window will display "Offline".

3. Device Error

If any errors occur to the device and the livestream cannot be displayed properly, the livestream window will display "Livestream error. Click Refresh". By default, the livestream view will automatically refresh within 10 seconds. Users can also manually refresh the view.

Map Details

The dock and aircraft locations will be displayed on the map in real time. Users can click the dock or aircraft icon, and a line connecting the dock and its connected aircraft will be displayed.

When the dock is performing tasks, users can click the dock status panel, and the flight route will be displayed in green and the aircraft trajectory in blue on the map. If the aircraft is performing a flight route task, the waypoint number will also be displayed.

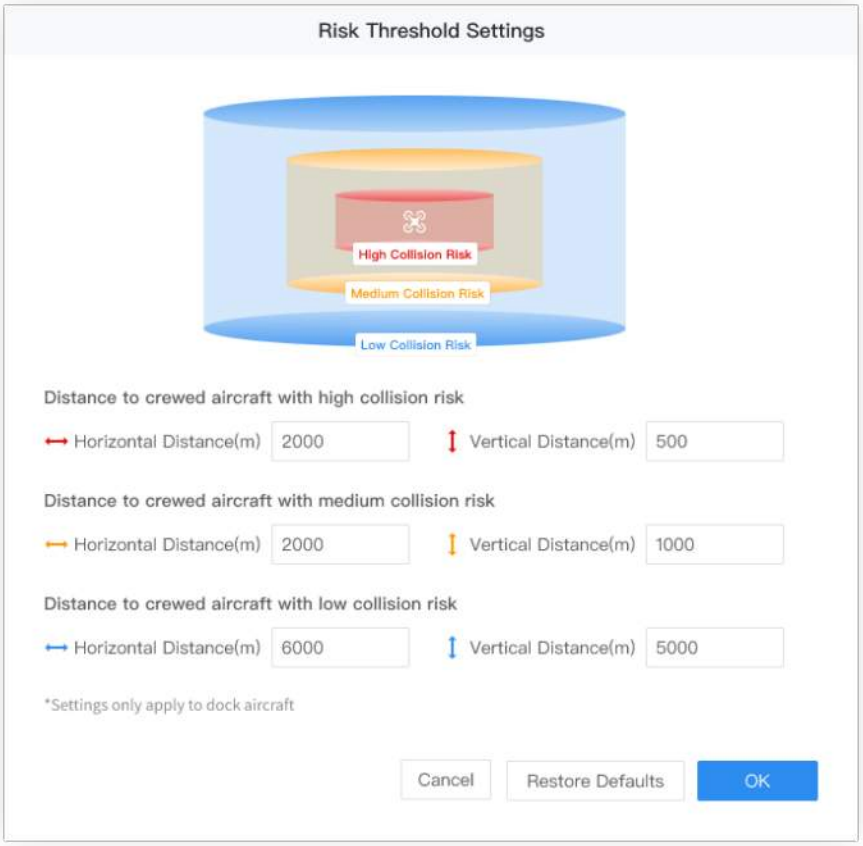
Project members can also perform the following actions on the map.

1. Click to search geographic locations, annotations, device information, and models or photos that are overlaid on the map.

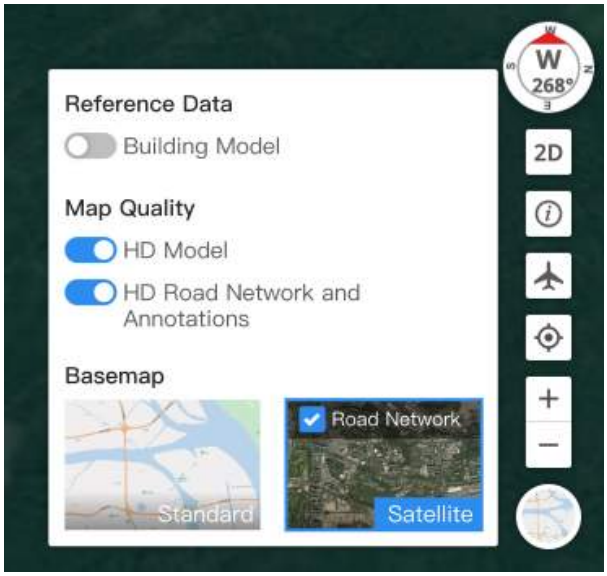


2. View for the map orientation.
3. Click 2D to enable the 3D map. Press and hold the Control/Ctrl key and left button of the mouse together to rotate the map.
4. Click to view GEO Zone information.
5. Click to adjust how collision risk with crewed aircraft is displayed on the map. You can also customize the threshold for crewed aircraft collision risk.





6. Click and the project point of interest will be displayed in the middle of the web page.
7. Click to view the map lab.



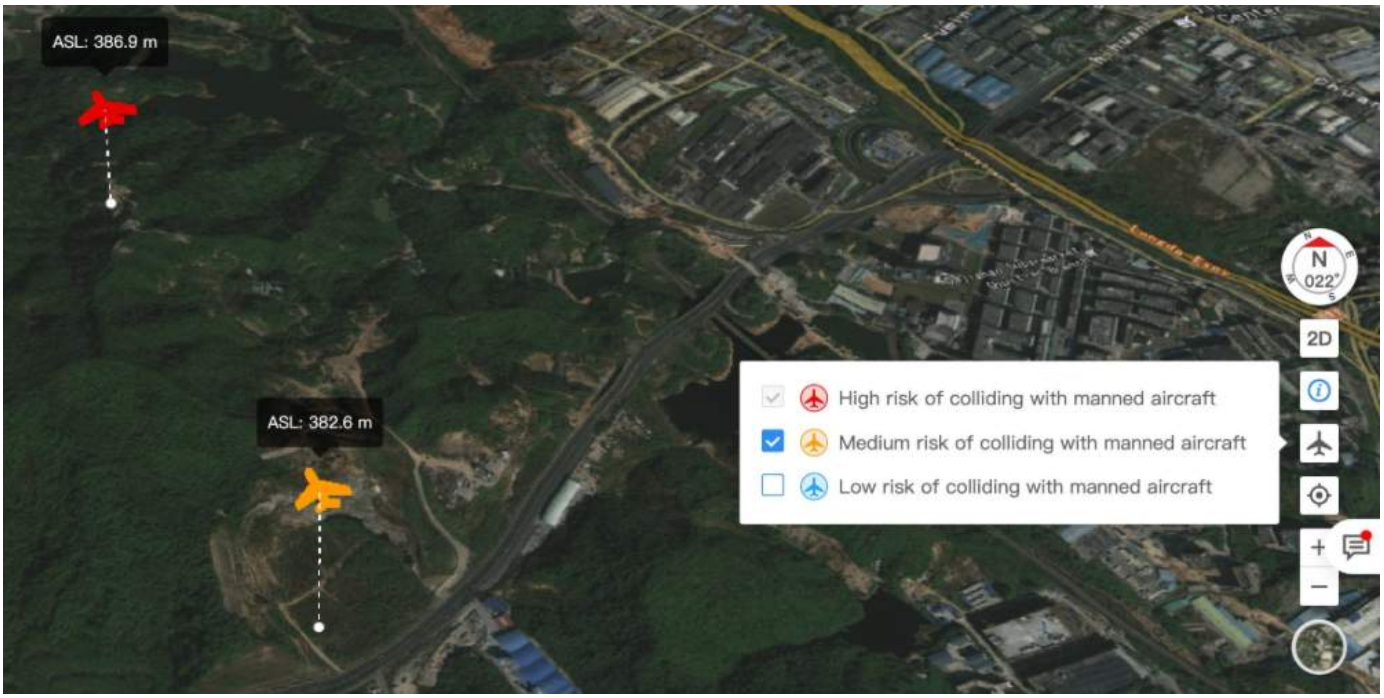
- Building Model: Enable Building Model to display building models on the map.
- HD Model: When enabled, models will be displayed in high definition. Operations may stutter with low computer performance.
- HD Road Network and Annotations: Enabling this feature enhances the display of the map's road network and annotations. Operations may stutter with low computer performance.
- Map Type: Choose to switch between the standard and satellite maps.

DJI AirSense

DJI FlightHub 2 collects all the DJI AirSense data reported by the **dock aircraft** in the project and displays the location of an approaching manned airplane or helicopter, as well as a warning message on the web page when there is a potential risk of collision. DJI AirSense can obtain and analyze the location, altitude, orientation, and velocity of the manned airplane or helicopter and compare the information with the current location, altitude, orientation, and velocity of the dock aircraft to evaluate the collision risk in real time.

- Warning (high collision risk): A red airplane icon will appear on the map, and the web page will display the message stating, "Manned aircraft nearby. Take over aircraft promptly to avoid". FlightHub 2 users can click the dock name to open the device status window and obtain the aircraft control to avoid collisions.
- Caution (medium collision risk): A yellow airplane icon will appear on the map when a manned airplane or helicopter is relatively near the dock aircraft.
- Normal (low collision risk): A blue airplane icon will appear on the map when the manned airplane or helicopter is relatively far away from the dock aircraft.

Users can click in the lower right corner of the map to decide whether to display the low and medium collision risk warnings on the map.



Manned airplanes or helicopters with Automatic Dependent Surveillance–Broadcast (ADS-B) transmitters can broadcast flight information. The DJI aircraft equipped with DJI AirSense can receive the flight information broadcast from ADS-B transmitters that comply with the 1090ES (RTCA DO-260) or UAT (RTCA DO-282) standard and within a radius range of 10 km. DJI AirSense only issues warning messages under certain circumstances when specific manned airplanes or helicopters are approaching and is not able to actively control or take over the DJI aircraft to avoid collisions. Users should always fly the aircraft within the visual line of sight and be cautious at all times to ensure flight safety. DJI AirSense has the following limitations:

- DJI AirSense can only receive messages broadcast by manned airplanes or helicopters installed with an ADS-B Out device that is in compliance with the 1090ES or UAT standard. DJI AirSense cannot receive messages from manned airplanes or helicopters that are not equipped with ADS-B Out devices or equipped with devices that are not functioning properly.
- DJI AirSense uses satellite and radio signals to receive ADS-B messages. If there is an obstacle between a manned airplane or helicopter and a DJI aircraft, DJI AirSense may not be able to receive broadcast and issue warning messages.
- Warning messages may be sent with delays if DJI AirSense experiences any interference from the surrounding environment. Users need to observe the surrounding environment and fly with caution.
- Warning messages may not be accurate when the DJI aircraft is unable to obtain its location information.
- DJI AirSense cannot receive broadcast from manned airplanes or helicopters, nor send warning messages to FlightHub 2 users when DJI AirSense is disabled or not properly functioning.

Multi-Drone Takeoff/Landing

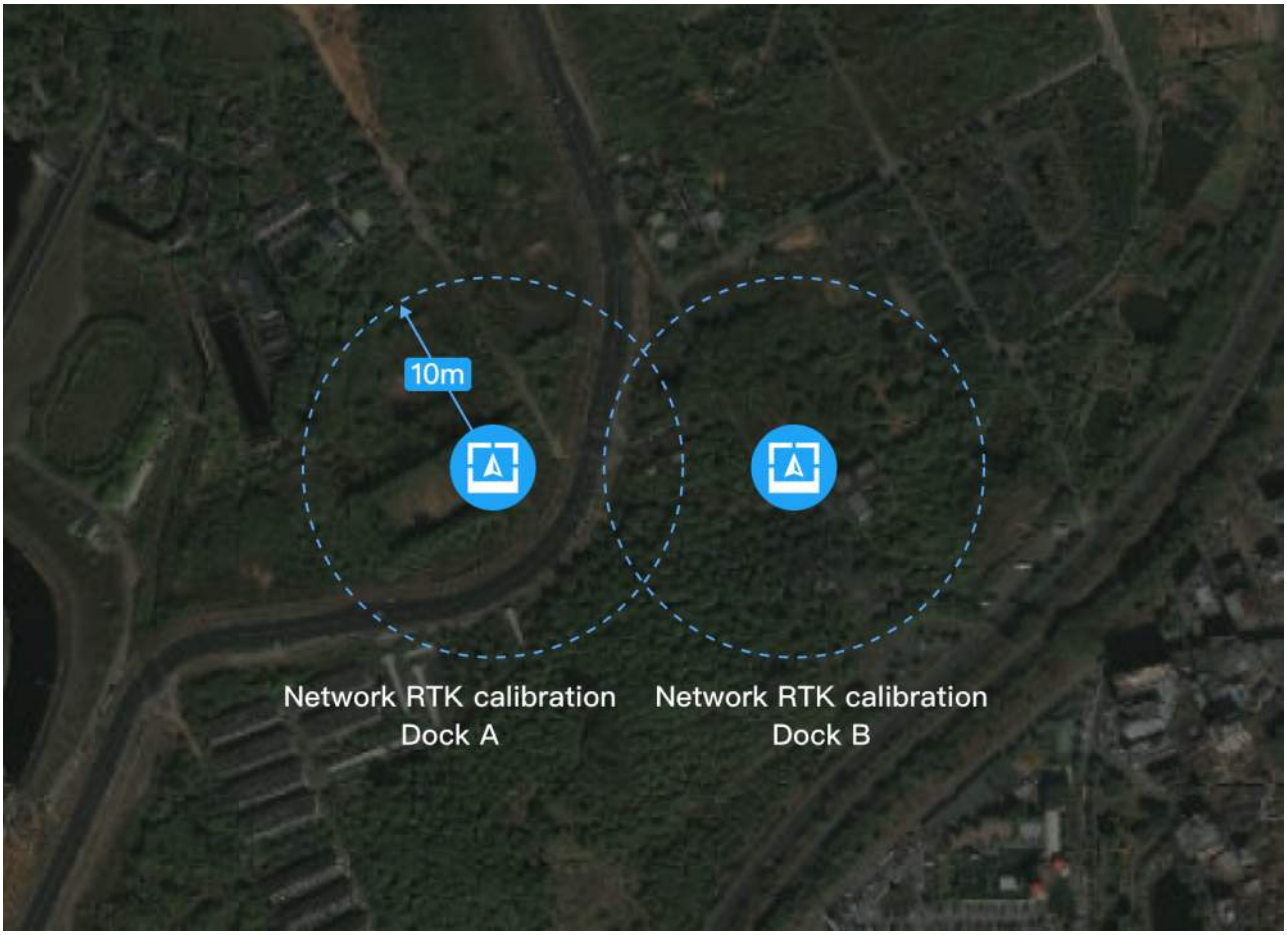
- Dock Auto-Grouping Conditions
- Takeoff and Landing Scheduling
- Exceptional Situations

This feature primarily addresses potential collision and incorrect dock landing issues that may arise during takeoff and landing when docks are deployed closely. You can enable or disable this feature here. When enabled, the system will automatically group docks based on their deployment locations and automatically schedule docks during task performance.

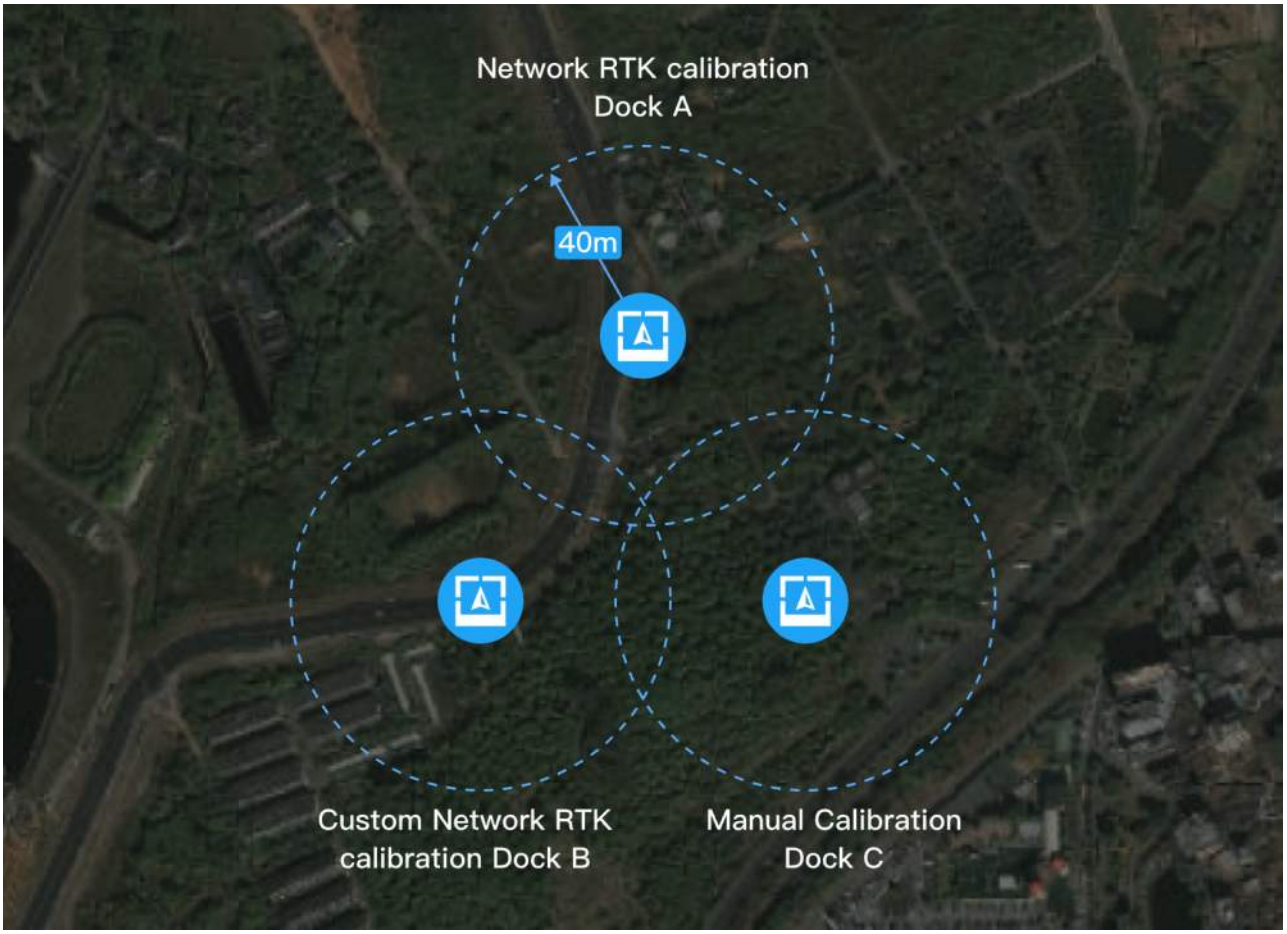
- Only DJI Dock 3 supports the multi-drone takeoff/landing feature.

Dock Auto-Grouping Conditions

Scenario 1: For docks whose locations are calibrated through network RTK and deployed within 20 meters, a circular area with a 10m radius is defined as the takeoff/landing area for each dock. Docks with overlapping takeoff/landing areas will be automatically grouped.



Scenario 2: For docks whose locations are not calibrated through network RTK, but through GNSS, manual calibration, or custom network RTK, and deployed within 80 meters, a circular area with a 40m radius is defined as the takeoff/landing area for each dock. Docks with overlapping takeoff/landing areas will be automatically grouped.



Takeoff and Landing Scheduling

1. Takeoff Scheduling

Before an aircraft takes off, the system will first check if any other aircraft in the dock group is taking off or landing. If so, the aircraft will wait until the takeoff/landing area is available. If not, the aircraft will take off and occupy the takeoff/landing area in the group. The area will be released only after the aircraft leaves the takeoff/landing area.

2. Landing Scheduling

When an aircraft is returning home, upon returning to the takeoff/landing area or requesting to open dock covers, the system will check if any aircraft in the group is taking off or landing.

- If the takeoff/landing zone is occupied, the aircraft will hover at the edge of the area, waiting for the area to be available. The aircraft will continue to return home if the battery is low.
- If the takeoff/landing area is not occupied, the aircraft will continue returning home and request the dock to open the covers. The area will not become available until the aircraft completes landing and the dock closes the covers.

During tasks, you can view the status of the takeoff/landing area on the map.



You can also click on the dock on the map to view the grouping status in the takeoff/landing area.



- Remote debugging or opening the covers on-site does not affect the occupancy status of the takeoff/landing area, but it may impact the takeoff and landing process of other aircraft.

Exercise caution when debugging if there are aircraft operating nearby.

Exceptional Situations

1. After a flight task ends, if the covers do not close properly, the takeoff/landing area that is occupied will not be released automatically. In this case, the covers need to be closed via remote or on-site debugging so the area can become available. Reasons for the covers not closing after task performances include but are not limited to:

- Abnormal operation of the dock cover's mechanical structure.
- The dock was already in remote or on-site debugging with the covers open before the flight task was distributed.

2. If the dock goes offline before the aircraft takes off and leaves the takeoff/landing area or after occupying the area during landing, the message to release the area cannot be sent. The area will continue to be occupied until communication is restored or the occupation times out after 30 minutes.

Automatic Swap

- Prerequisites and Checklist
- Task Configuration Process
- Task Performance and Management

The automatic swap task supports uninterrupted observation of a specified subject by automatically scheduling aircraft from two docks.

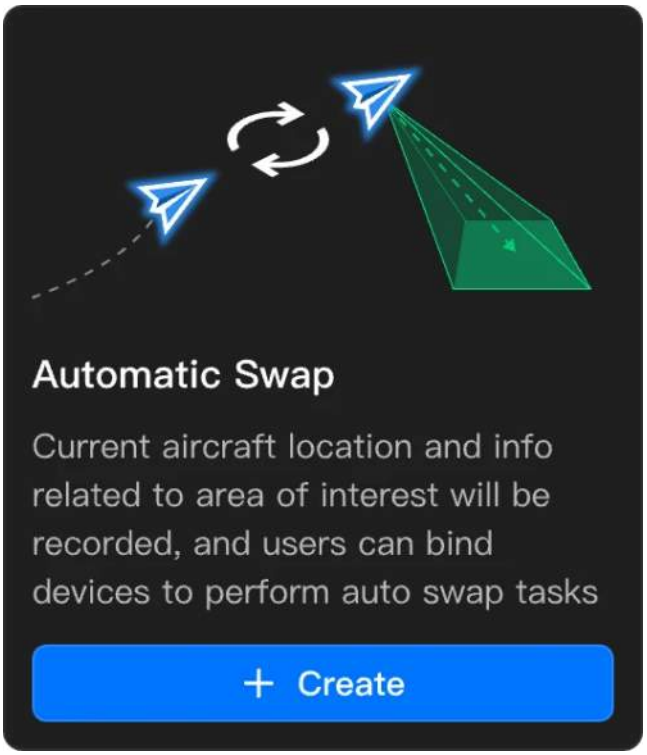
> - Only DJI Dock 3 supports the automatic swap feature.

Prerequisites and Checklist

1. The primary aircraft has successfully taken off, flown out of the safe takeoff/landing area, and is currently in the Manual Flight mode.
2. The primary aircraft is hovering, and the subject or area to be observed is confirmed.

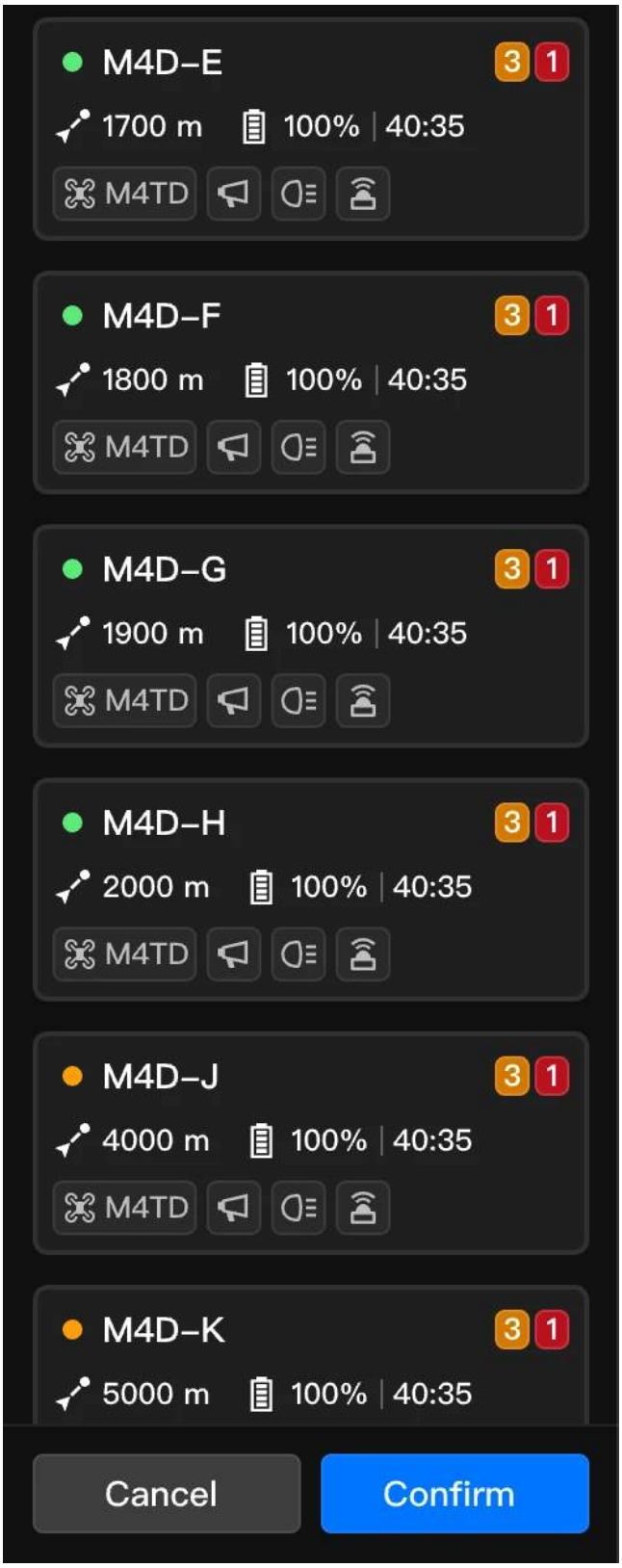
Task Configuration Process

1. Create an automatic swap task in the virtual cockpit.

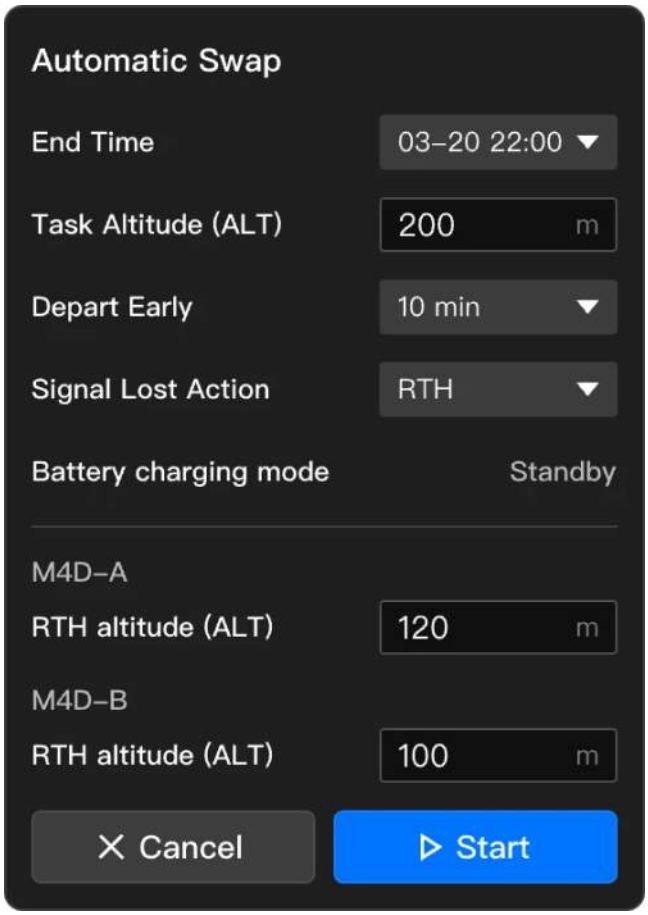


2. In the recommended device list, select a reserve aircraft. Only docks within 5 km of the aerial task point can be selected.





3. Set task parameters.

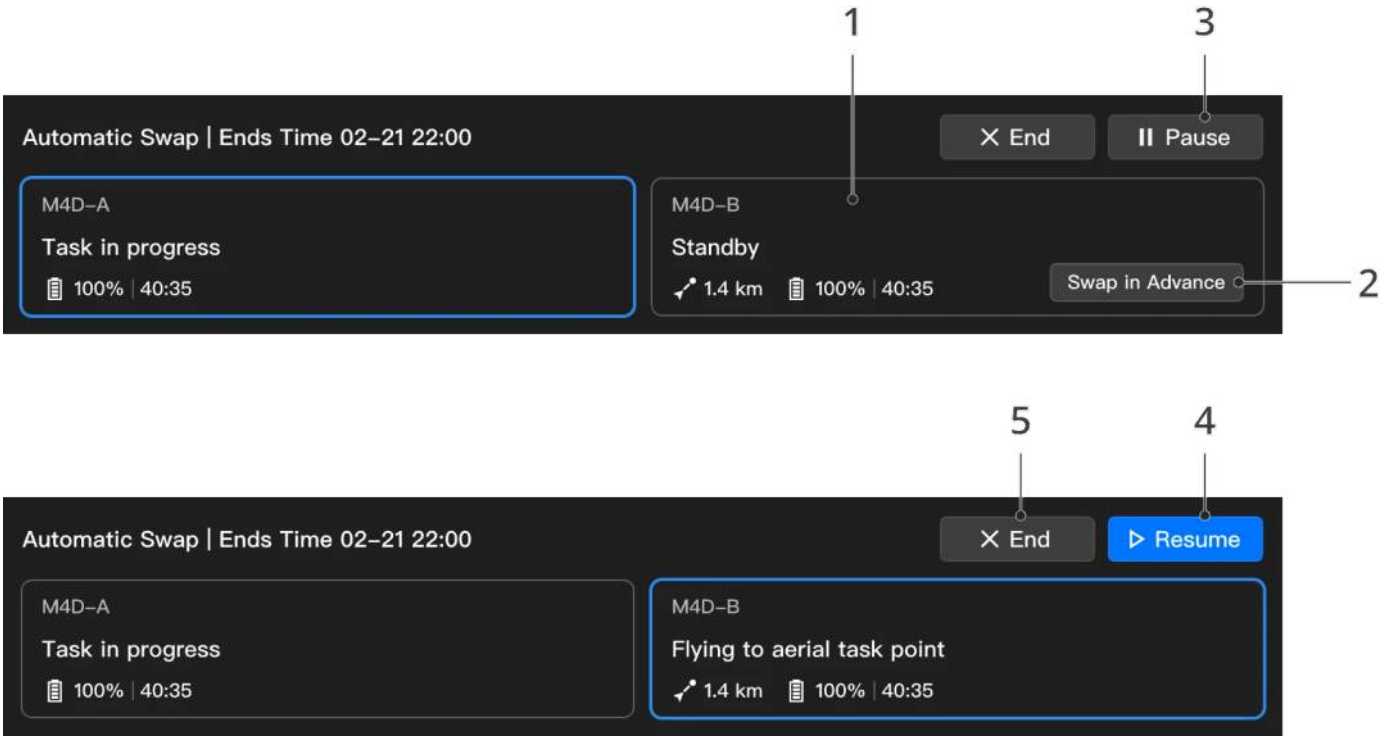


Parameter	Range	Description
End Time	1 to 12 hours after the task begins	Indicates the maximum duration of the task. Once the task deadline is reached, the task will automatically end.
Depart Early	0 to 30 minutes	It is recommended to depart 10 minutes early. Adjust according to environmental complexity (e.g., wind speed, obstacles), and set an earlier departure time in complex scenes.
Battery Charging Mode	The system defaults to battery standby mode.	During the automatic swap task, the aircraft will automatically recharge to 90% battery to ensure efficient operation.

Task Performance and Management

After the task starts, the system will automatically calculate two aerial aerial task points based on the location of the observed subject, primary aircraft, and reserve aircraft. During the automatic swap task, the aircraft will be automatically scheduled to reach the aerial task points in sequence to observe the area of interest.

- The aerial task point for the reserve aircraft will be defined within a radius of 50 meters from the primary aircraft. Make sure this area is relatively clear to guarantee the safety of the task.
- After completing the task, the reserve aircraft will orient itself toward the target location that the primary aircraft was facing when the task was created, and adjust its zoom level to match that of the primary aircraft.



(1) Switch livestream device and payload control

- After entering the virtual cockpit, the user will by default have flight and payload control of the primary aircraft.
- Click on the device card to view the video transmission of the reserve aircraft and perform corresponding operations.

- During the automatic swap task, only the gimbal can be manually controlled. Other operations need to be paused or performed after the task.

(2) Swap in Advance: Click Swap in Advance to allow the reserve aircraft to take off in advance, reach the aerial task point, and complete the device swap.

(3) Pause Task: Click Pause Task to freely control any aircraft (except during Return to Home (RTH) or landing process).

(4) Resume Task: When resuming a task, the system will resume the task based on the locations of the observed subject and aerial task point. If the primary aircraft moves during task suspension, the system will recalculate the aerial task point based on the new position of the primary aircraft before resuming the task.

(5) Complete Task: When the task is completed, the primary and reserve aircraft will operate independently of each other. If both aircraft are still performing tasks in the air, they will automatically return to home.

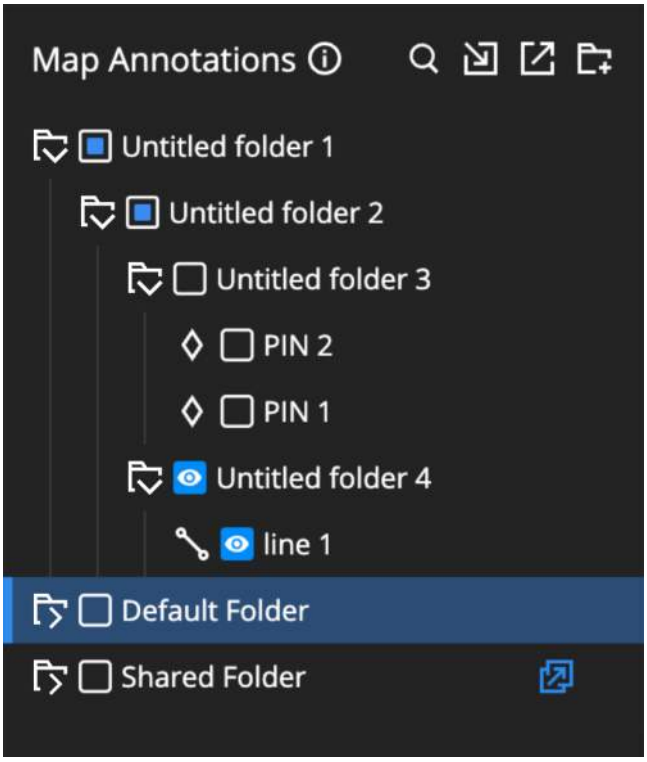
- During the swap process, if the reserve aircraft cannot reach the aerial task point due to reasons such as takeoff failure or insufficient battery, the automatic swap task will be paused.

Map Annotations

Project members can click to enter the Annotation page and add annotations such as points, lines, areas, and circles on the map. The project administrator can click to distribute annotation folders to DJI Pilot 2 and click to lock folders. Once the folder is locked, project members can no longer edit the annotations in the folder.



Click to import KML/KMZ files and click to select and export annotation folders to KML files.



DJI Pilot 2 users can also create points, lines, areas, and circles after entering the map view. Annotations will be remotely uploaded to DJI FlightHub 2 and stored in Shared Folder. Annotations

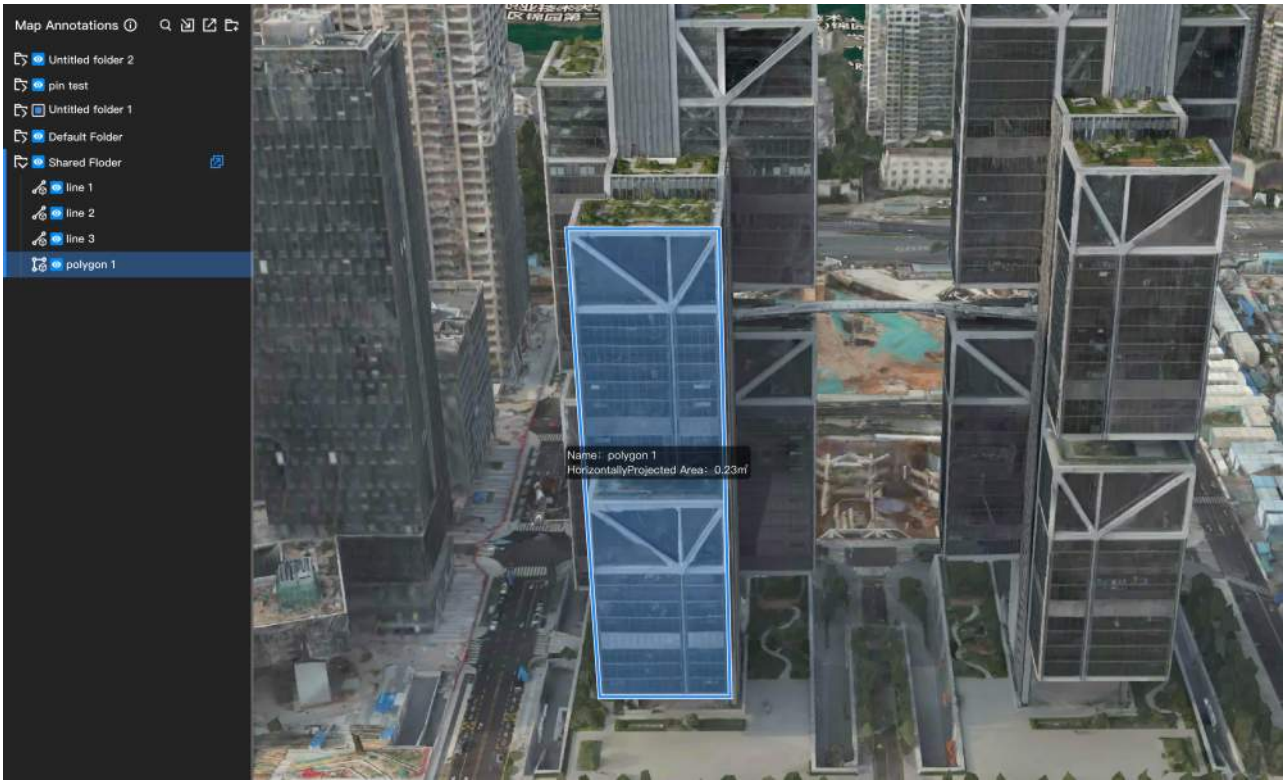
in Shared Folder are distributed by default and cannot be disabled.



DJI Pilot 2 can record the observed views of the camera, and the views will be synced to the Observed View Annotations folder on the cloud. Selected observation views can be converted into area annotations. The feature is currently only supported by the Matrice 4 enterprise series aircraft.

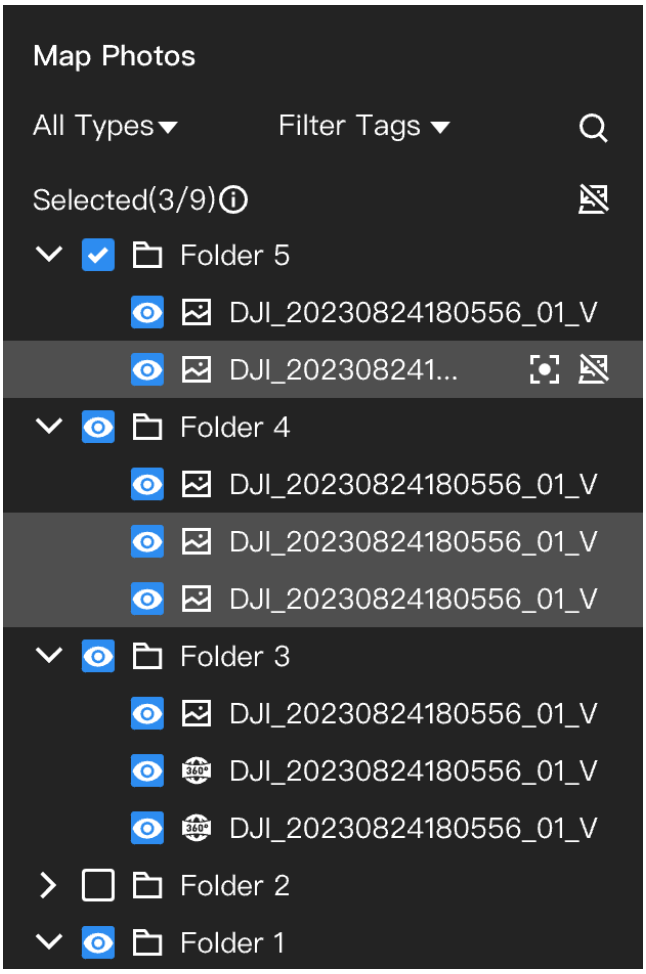


Spatial points, lines, and areas can be created using laser technology in DJI Pilot 2, and the annotations will be synced to the Shared Folder on the cloud. Selected spatial points, lines, and areas can be projected onto the ground and automatically generated as new annotations. The feature is currently only supported by the Matrice 4 enterprise series aircraft.


Map Annotations
Untitled folder 2
pin test
Untitled folder 1
Default Folder
Shared Floder
line 1
line 2
line 3
polygon 1
Name：polygon 1
HorizontallyProjected Area：0.23㎡

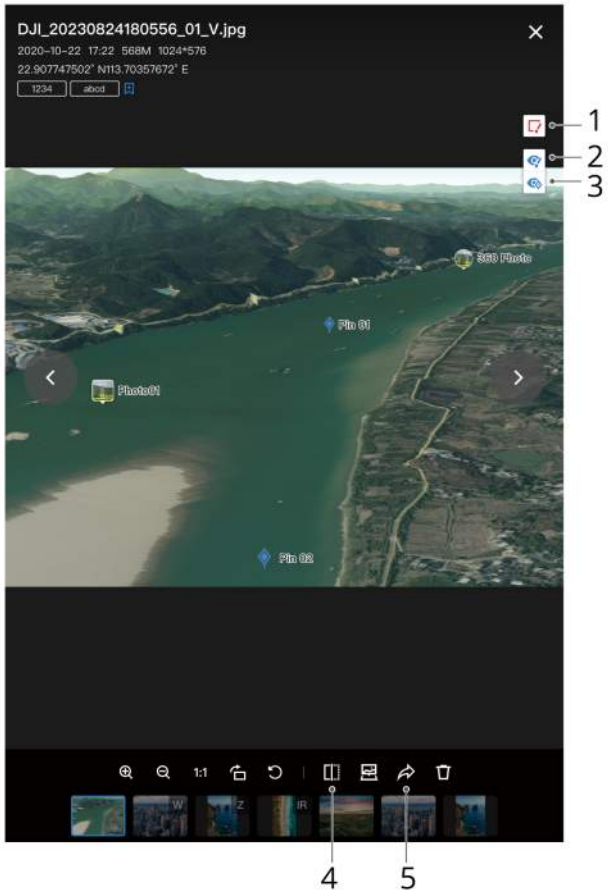
Map Photos

Project members can click to enter Map Photos to manage all the photos that are overlaid on the map.



1. Click to hide the display of a single photo or the entire folder on the map.
2. Click to cancel the overlay of a single photo or the entire folder on the map.

Users can click a single photo on the list or the thumbnail on the map to preview the photo.



1. Click to markup photos. Users can add frames and notes on the photos and press [Shift] and drag to move the photos. The notes will automatically become the tags for the photos and can be used for filtering the photos. Users can also filter photos with unnamed markups.
2. Click to hide the markup.
3. Click to hide annotations.
4. Click to compare photos taken by the same Take Photo (Fixed Angle) action at the same waypoint. See Preview Media Files for more details.
5. Click to customize the sharing settings and share the current photo.

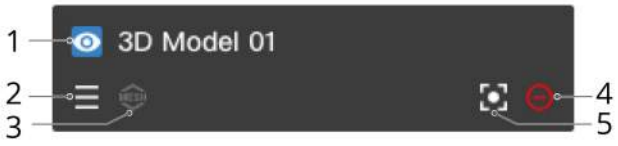
Users can also use the following keyboard shortcuts:

- Press [T] to add a tag.
- Press [←] [→] to switch photos.
- Press [ESC] to exit the preview.

3D Model Management

- 3D Model Panel
- Point Cloud Model Display

3D Model Panel



1. Display the Model on the Map

The project administrator can click to display the model on the map.

2. Change the Display Order

The project administrator can drag to change the display order of the models. If there are overlapping models in the same area, the 3D models at the top of the list will be displayed on the top of the map.

3. Display the Model Type

The icon stands for the point cloud model, and stands for the mesh model.

4. Center the 3D Model

Users can click to select the 3D model, and the model will be displayed in the middle of the web page.

5. Remove the 3D Model

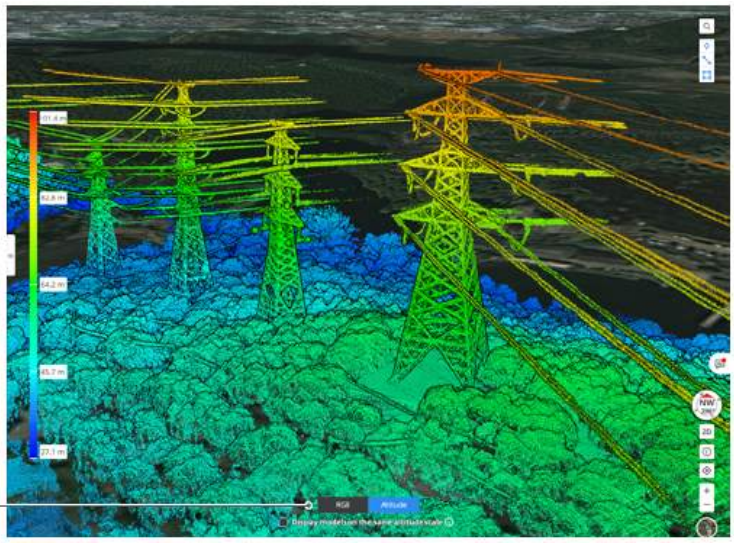
Users can click to cancel the display of the 3D model on the map. The 3D model will still exist in the Model library.

Point Cloud Model Display

The point cloud models can be displayed in the RGB, Reflectivity, Altitude, or Echo mode, depending on what information is included in the models.

When the model is displayed in the Altitude mode, the altitude scale will be shown on the left. After selecting "Display models on the same altitude scale", multiple selected models will be displayed on the same altitude scale, and the same altitude will be rendered with the same color.





2D Model Management

- 2D Model Panel
- Cloud Mapping

2D Model Panel



1. Display the Model on the Map

The project administrator can click to display the model on the map.

2. Change the Display Order

The project administrator can drag to change the display order of the models. If there are overlapping models in the same area, the 2D models at the top of the list will be displayed on the top of the map.

3. Load the Elevation Data

After the elevation of a mapped area is calculated, the project administrator can click to load the elevation data onto the map.

> Note: Users can only load the elevation data of a mapped area one at a time.

4. Distribute the Mapping Output

The 2D model can be distributed to DJI Pilot 2. The project administrator can click to cancel the distribution.

5. Compare 2D Models

Click to compare models that have overlapping areas. See Compare Models for more details.

6. Center the 2D Model

Users can click to select the 2D model, and the model will be displayed in the middle of the web page.

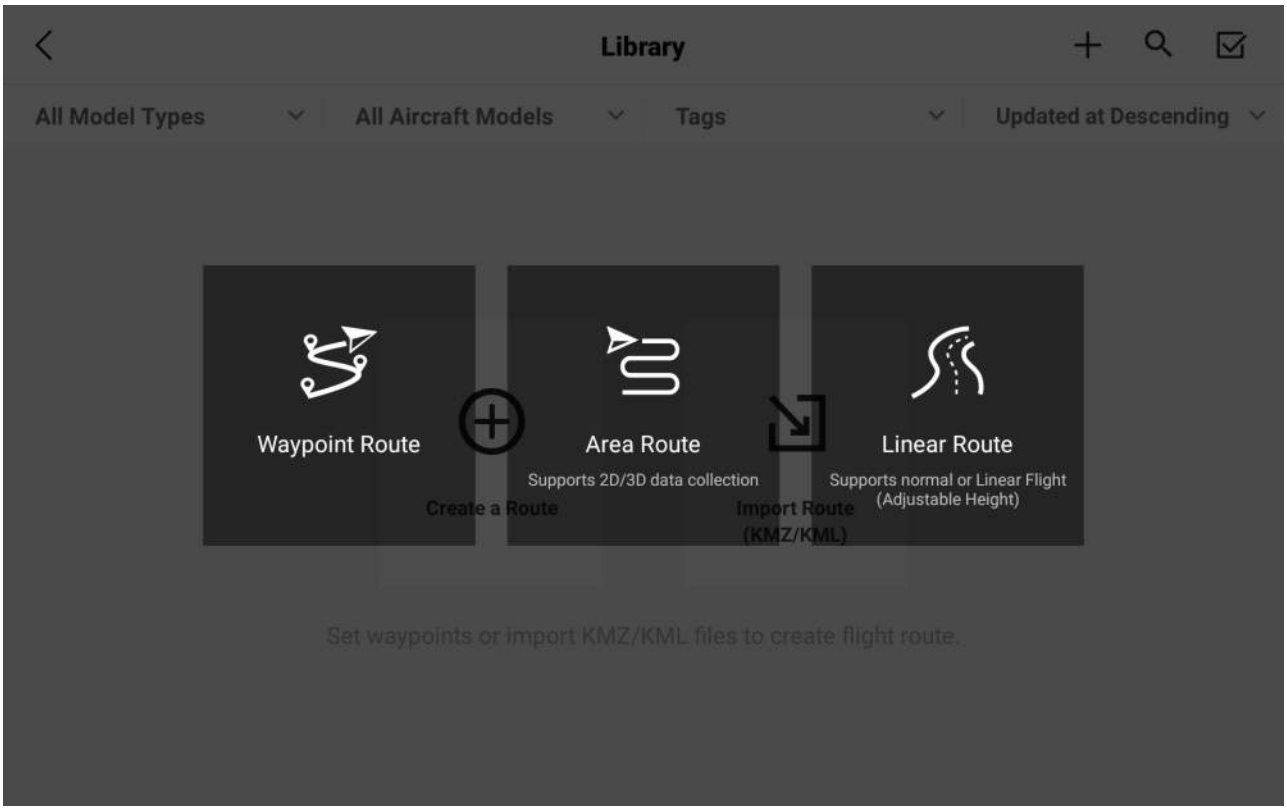
7. Remove the 2D Model

Users can click to cancel the display of the 2D model on the map. The 2D model will still exist in the model library.

Cloud Mapping

DJI Pilot 2 users can log in to the DJI FlightHub 2 cloud service to perform cloud mapping and manage the mapping progress on the web.

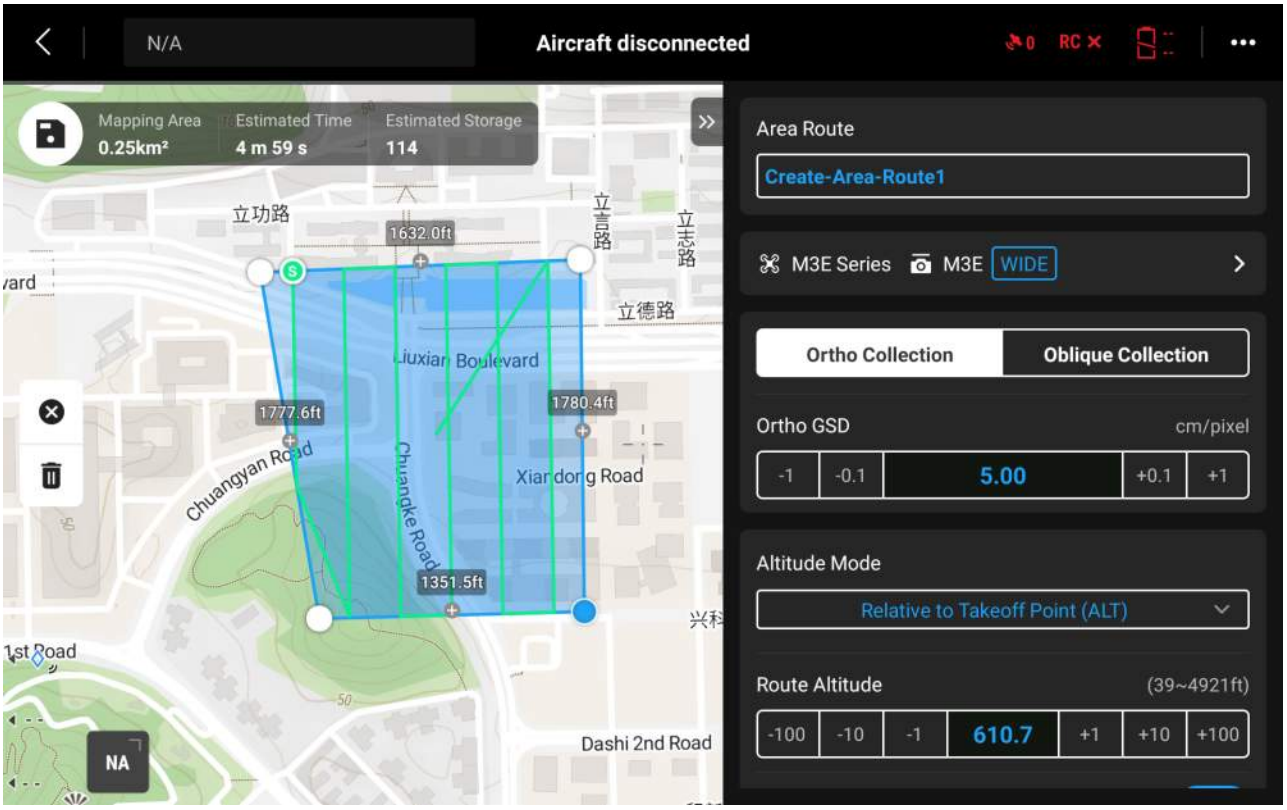
1. Tap Flight Route on the DJI Pilot 2 home screen and select Area Route.



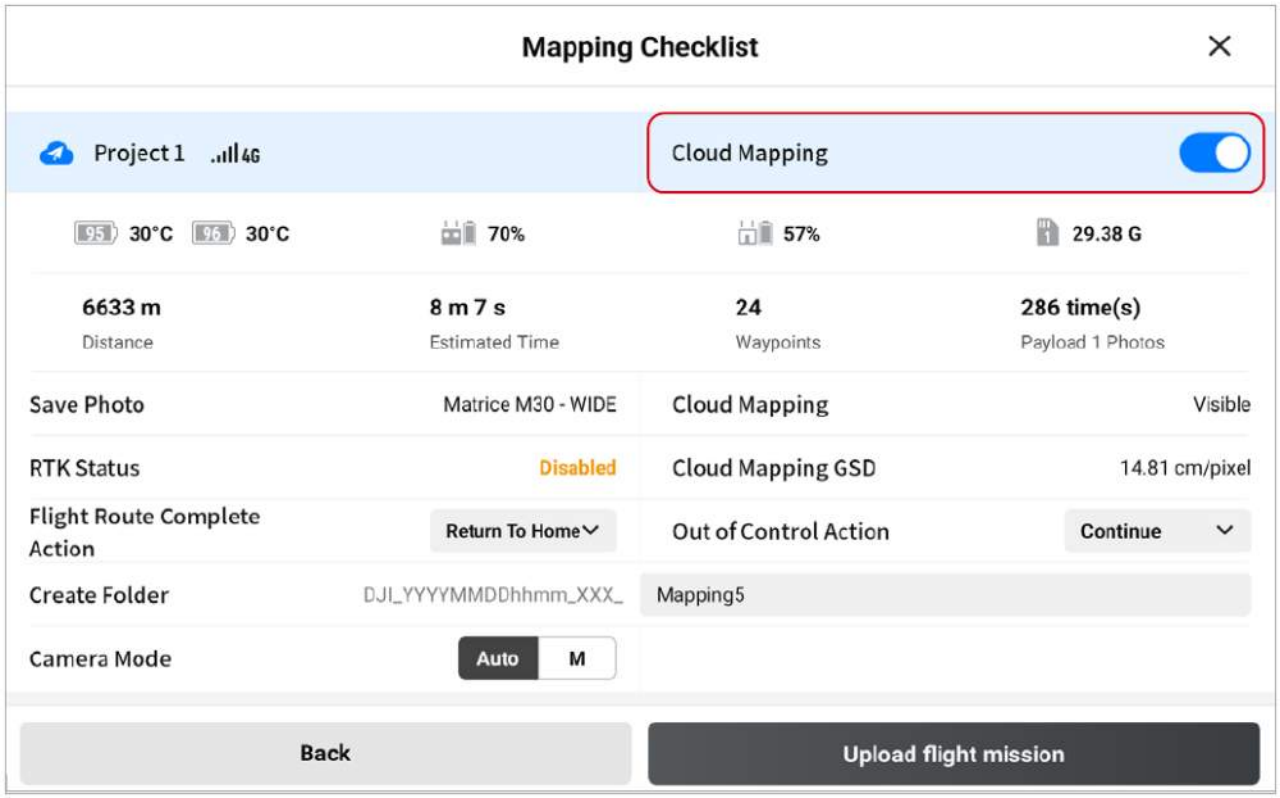
2. Configure settings on the right panel. Tap to save settings and tap to perform the mapping task.

DJI FlightHub 2 supports infrared and visible light mapping tasks with Zenmuse H20/H30 series, and the Matrice 30 series (including the dock version), Mavic 3 enterprise series, and Matrice 3D

series cameras.



3. Enable Cloud Mapping on the mapping checklist and upload the flight task.



4. Tap Progress to view the mapping status.



DJI FlightHub 2 project members can click to enter the Map page. Select the mapping task to view the task planning area and mapping output.

Custom Flight Area

Project administrators can click  to enter the Task Area Management and manage the custom task areas and GEO Zones.

Administrators can click  to create custom flight areas. The types of the custom flight areas include:

- Polygonal or circular task area: The aircraft can perform tasks in the area and cannot take off when it is outside the area or within 10 meters of the area boundary.
- Polygonal or circular GEO Zone: The aircraft cannot enter the GEO Zone, nor take off when it is inside the GEO Zone or within 10 meters of the zone boundary.
- Rectangular No-Landing Zone: The aircraft cannot automatically land within the no-landing zone. If an attempt is made to land while a pilot is manually flying the aircraft, or while the aircraft is performing a task, the aircraft will automatically plan the shortest path to exit the zone before landing.

- The custom task areas cannot overlap.
- If a dock is bound to a project and needs to perform tasks, the dock should be inside the custom flight area, and the distance between the dock and the boundary of the area should be less than 10 meters.
- A maximum of 255 vertexes can be added when creating a polygonal flight area. The minimum radius of a circular task area is 10 m.
- If the distance between the aircraft and the boundary of the custom flight area is less than 5 meters during a task, the task will be stopped and the aircraft will return home directly. Pay attention to the distance between the aircraft and custom flight area when planning a task.
- Users can manually draw rectangular no-landing zones, with a length range of 10 to 3000 meters and a width range of 10 to 100 meters. Up to 50 rectangular no-landing zones can be created for each project.
- Go to Map Task Area, right-click on a line annotation, and select Convert to custom No-Landing Zone. The system will automatically convert the line annotation into a no-landing zone.

- Note: When No-Landing Zones overlap and form a closed area, the closed area does not automatically become a No-Landing Zone. Only the original No-Landing Zones are considered effective. To ensure flight safety, adjust the width of the No-Landing Zones or reposition the endpoints to prevent overlaps.



Obstacle Data

- Obstacle Data Introduction
- Obstacle Data Settings
- Notes on On-premises Version

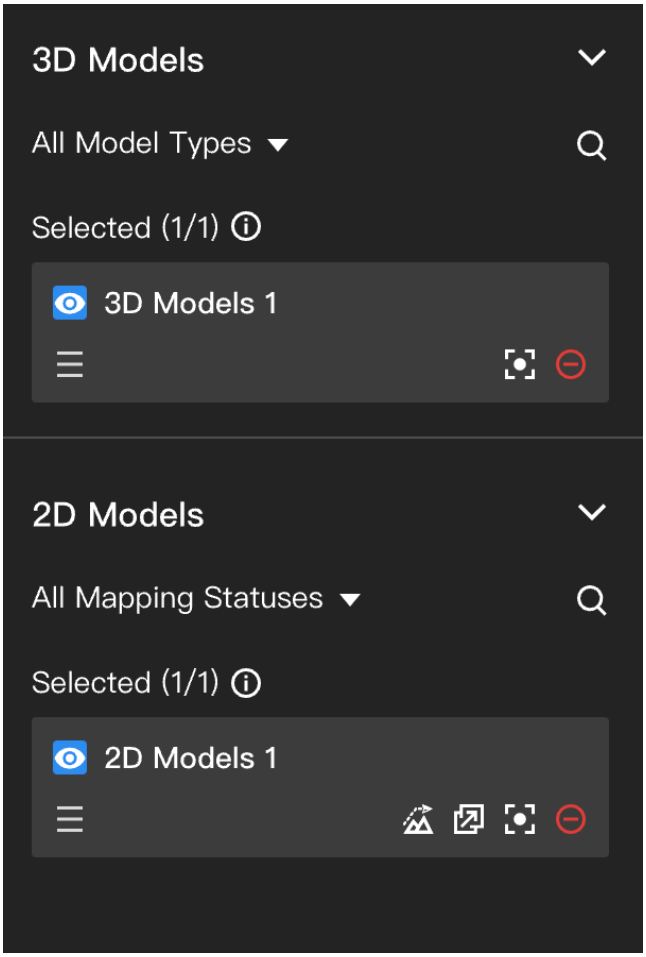
The obstacle data is sourced from the global elevation data and the models in the project. Users can enable Obstacle Data on the cloud and synchronize the data to the dock aircraft. Based on the obstacle data, the aircraft can plan an optimal route to bypass obstacles along the route when performing FlyTo tasks or returning home.

Obstacle Data Introduction

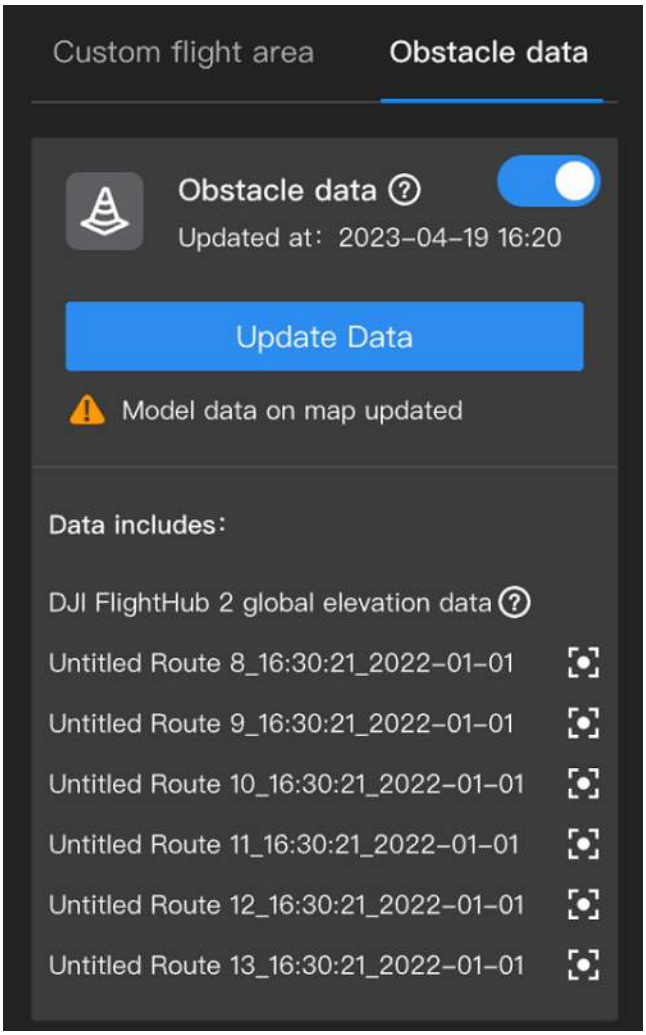
- By default, the obstacle data is sourced from the global elevation data within a 40 km × 40 km (24.85 mi × 24.85 mi) area centered around the dock. When both the global elevation data and the model data are present on the map, the model data will be prioritized.
- To ensure the reliability of the obstacle data, it is recommended to perform the RTK calibration when deploying the dock and choose the RTK mode when creating task plans.
- When the environment is suitable for the vision system to work properly, the aircraft will automatically plan an optimal route based on the obstacle data and the data collected by the vision sensors. The optimal route will maintain a safe distance from the objects on the 2.5D map and in the models. The horizontal distance is approximately 10 meters, while the vertical distance from the 2D or 3D models is about 30 meters and 60 meters from the objects on the map. When the environment is not suitable for the vision system to work properly, such as low or no light at night, only the obstacle data will be valid. There will be potential safety risk if the model data is not accurate.
- Based on the obstacle data, the aircraft will bypass the area that has weak GNSS signal to ensure aircraft positioning accuracy. If there are objects such as power cranes, power lines, and bridges, the aircraft will try to bypass the obstacles by flying above the objects.
- When the aircraft is performing tasks based on the GNSS positioning, the obstacle bypassing performance may be affected. Users should pay close attention to the flight route and the livestream view and fly with caution.

Obstacle Data Settings

1. If there are 2D or 3D models within the task area in the project, users can click Map on the left to load the model data onto the map.



2. The project administrator can enable Obstacle Data.



The obstacle data will automatically be synchronized to the dock aircraft for optimal route planning.

Notes on On-premises Version

Downloading Offline Elevation Data

On the DJI Developer website's FlightHub 2 On-Premises Service page, navigate to Download Elevation Data to proceed.

- Step 1: Verify your License ID.
- Step 2: Select an area on the map or enter the latitude and longitude range for the work area.
- Step 3: Download the elevation data.

Notes:

- If the coordinates you enter are not whole numbers, the final data package will cover an area expanded to the nearest whole-number coordinates (rounded up).
- Data generation can take a long time. Please wait for the process to complete.

Importing Offline Elevation Data

For on-premises service users:

- Step 1: Clear the existing data from the target directory:
  rm -rf ${DATA_ROOT_PATH}/static_data/elevation
- Unzip the downloaded elevation data package. Then, move the contents of the elevation/ folder into the server's static data directory:
  ${DATA_ROOT_PATH}/static_data/elevation/
- Step 3: Navigate to ${deployment package extraction directory}/tool/map/ to run the publishing script:
  bash ./publish-elevation.sh

The import is successful when the script's progress reaches 100%.

Data Synchronization

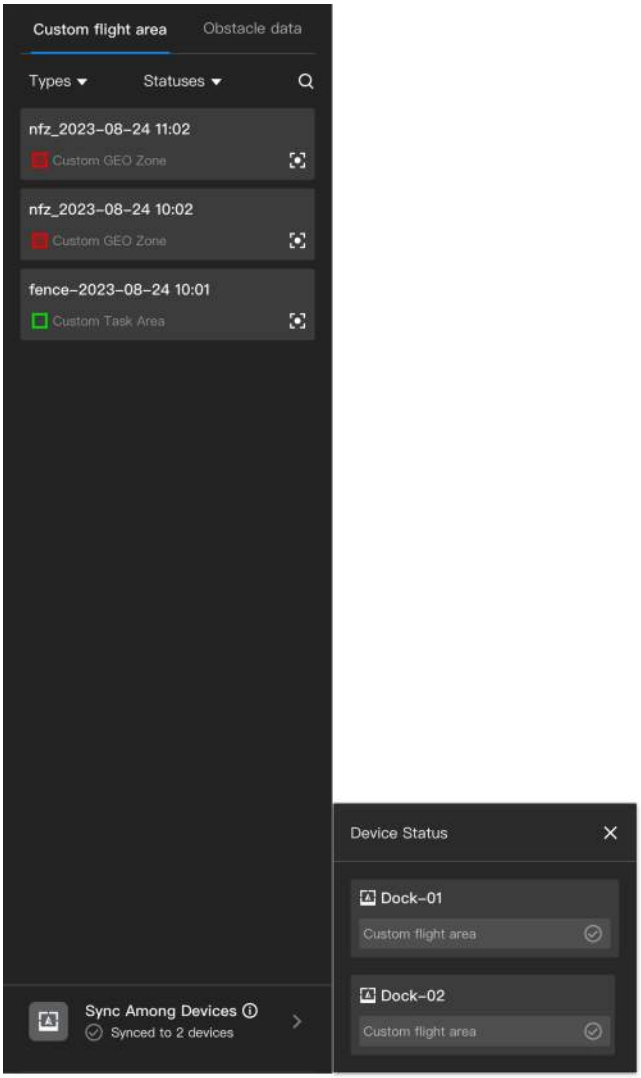
When the data in the task area is updated, the update will also be automatically synchronized from the cloud to the dock aircraft.

1. Custom Flight Area

- The custom flight area data will automatically be synchronized to the idle dock aircraft. For the dock aircraft that is performing a task, the data will be synchronized after the task is completed.
- For the data that is synchronized to the aircraft connected to the remote controller, an update prompt will be displayed on the screen of remote controller. Users can choose to synchronize the updates before starting tasks.

2. Obstacle data

The data will automatically be synchronized to the idle dock aircraft. For the dock aircraft that is performing a task, the data will be synchronized after the task is completed.


Custom flight area
Obstacle data
Types
Statuses
nfz_2023-08-24 11:02
Custom GEO Zone
nfz_2023-08-24 10:02
Custom GEO Zone
fence-2023-08-24 10:01
Custom Task Area
Sync Among Devices
Synced to 2 devices
Device Status
Dock-01
Custom flight area
Dock-02
Custom flight area

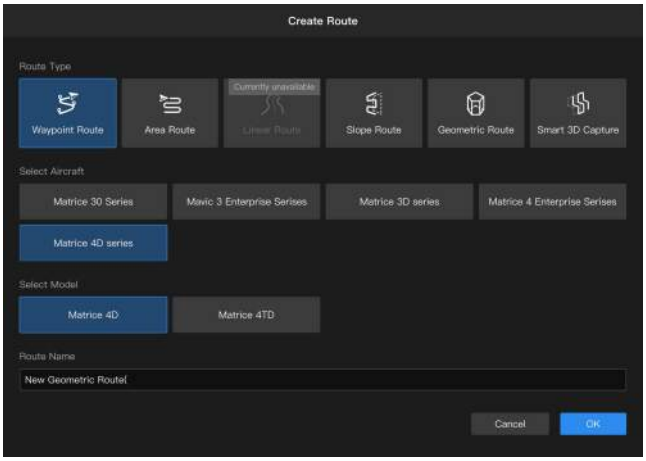
Import Flight Routes

Click  > Import KMZ File to select and import KMZ flight routes.

- The KMZ file must include wpmz/template.kml and wpmz/waylines.wpml.
- The upload progress and status will be displayed. Users can stop uploading files when the files are being or waiting to be uploaded.

Create Flight Routes

Click "+" in the upper right corner of the flight route list and fill in the information below to create a flight route.



1. Route Type

Waypoint, area, slope, and geometric routes are supported.

2. Select Aircraft

The Matrice 3D series, Matrice 30, and Mavic 3 enterprise series are supported.

3. Select Model

Users should select the correct aircraft model before planning the task.

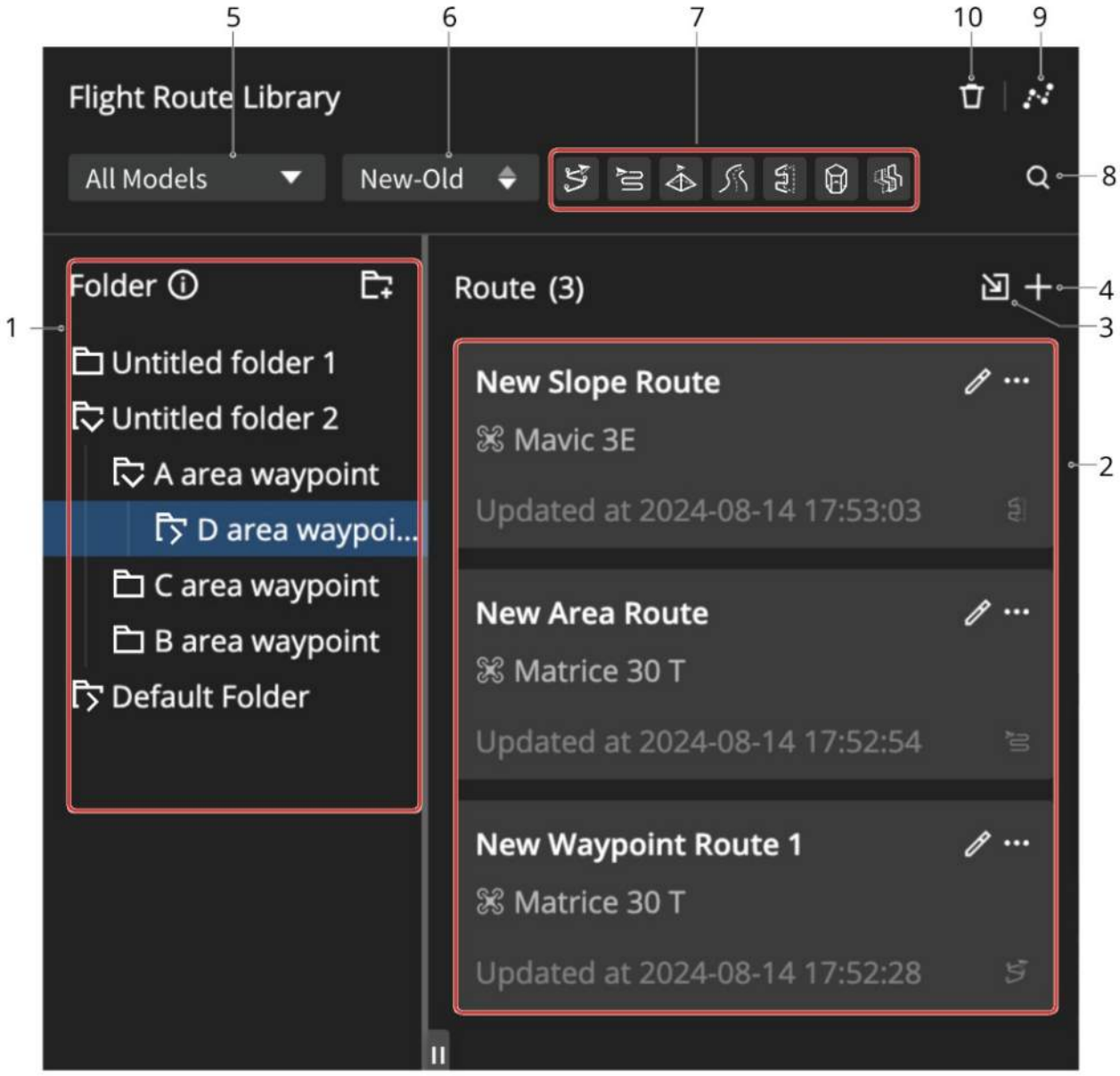
4. Route Name

The route name is required and should be within 60 characters.

Click OK to create the flight route.

Manage Flight Routes

After clicking the Flight Route Library, the file structure will be shown on the left and files within the selected folder will be displayed on the right.



1. Folder: Users can manage all the folders here. Files in the selected folder will be displayed on the right.

> Note: Files stored in the subfolders will be displayed only when the subfolders are selected.

    - Create Folder: Click  to create a subfolder under the currently selected folder.
    - Folder Management: Click a folder to change the folder's name. Drag the folder to change its hierarchy. The number after the folder name means the total number of the flight routes in the current folder and its subfolders.
2. Route: Displays the basic information of the flight route. Press Control/Cmd and click to multi-select routes and click ••• for more settings.
3. Import flight route: Click to import flight routes.
4. Add flight route: Create a new flight route in the current folder.
5. Search aircraft model: Click All Models and filter aircraft model to view flight routes performed by the same aircraft model.
6. Sort by time: Users can sort flight routes by last modified time.
7. Filter flight route: Users can select a flight route type and filter all flight routes of the same type.
8. Search: Users can search by folder or flight route name. Folders and route files that meet the criteria will be displayed in the search results.
9. Merge flight routes: Users can select files and merge. Selected routes should meet the following requirements:
    - Only waypoint routes are supported.
    - Routes are performed by the same aircraft model.
    - For waypoint altitude that is set as relative to takeoff point, takeoff point should be set.
    - The currently supported models are Matrice 30 series, Matrice 3D series, Mavic 3 enterprise series,Matrice 4 enterprise series and Matrice 4D series.
10. Delete selected flight route file: Select a file, click  to delete.

Edit Waypoint Routes

- Editor Interface Introduction
- Flight Route Planning and Initiation
- AI Waypoint Route Planning

The Waypoint Route Editor supports using the mouse and keyboard to control a virtual aircraft to plan waypoint routes, adjusting the waypoint location and shooting angle based on the imported 3D models, as well as checking whether the flight routes are safe. After completing the route planning and first flight, users can enable AI Spot-Check or adjust the subject of interest to capture the desired views in the subsequent tasks.

Editor Interface Introduction



1.Reverse Flight Route

Click to reverse the waypoint order of the flight route.

For the following waypoint action pairs:

Start Recording	Stop Recording
Start Timed Interval Shot	End Interval Shot
Start Distance Interval Shot	End Interval Shot

The waypoint order can be automatically swapped. Make sure the new flight route meets requirements before reverse.

2. Waypoint List

Displays the added waypoints and waypoint actions.

- Click the waypoint or action icon, and the waypoint will be displayed in the middle of the web page.
- Double-click the Take Photo (Fixed Angle) action and scroll the mouse wheel to zoom in or out or drag the auxiliary view to adjust the shooting angle.

3. Main View

- Displays the flight route based on the map view. Users can drag the map, scroll the mouse wheel to zoom in or out, or press and move wheel to rotate the map view. Users can also click  or press [~] to switch to the map view.
- The data in the center of the main view represents the straight line distance between the virtual aircraft and the shooting subject.

4. Flight Data

Displays the altitude and heading of the virtual aircraft, as well as the gimbal angle. Users can also click   to adjust the waypoint type and aircraft yaw mode.

5. Action Editor

Displays details of the selected waypoint action. For the Take Photo (Fixed Angle) action, users can preview the zoom photo effect based on the imported models. Media files captured will be displayed here after the flight task is completed. Users can enable AI Spot-Check or adjust the shooting angle and start the task again to capture the expected views.

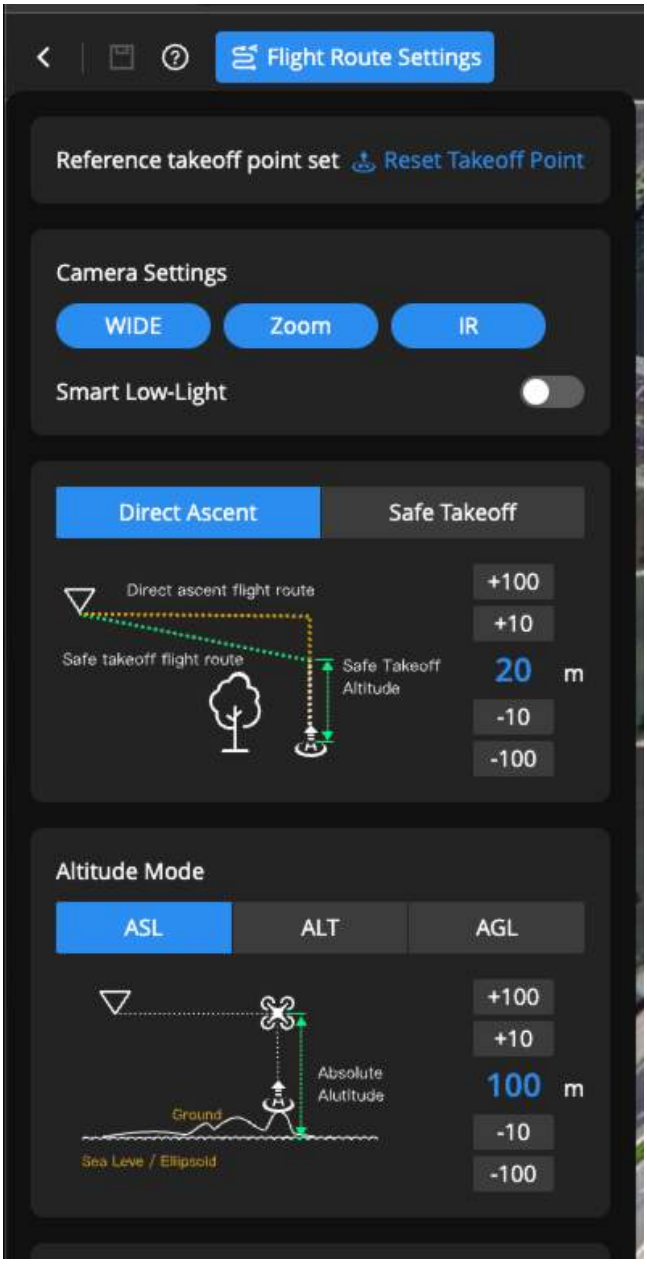
Note: To use AI Spot-Check, users should select to store zoom photos and choose an appropriate zoom ratio so that the subject of interest is within the camera view before tasks.

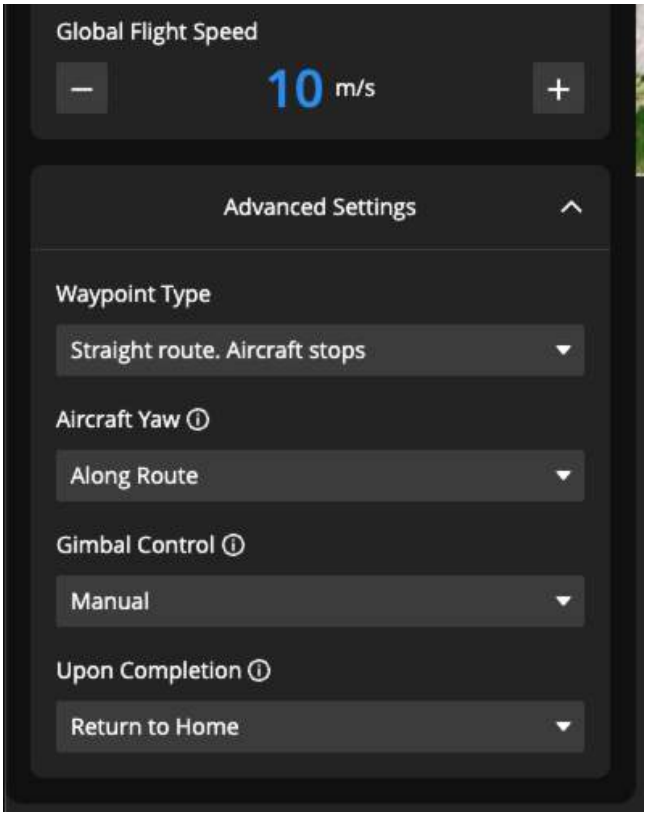
6. Auxiliary View

Displays the flight route based on the first-person view. Users can scroll the mouse wheel to zoom in or out or drag the auxiliary view to adjust the shooting angle. Users can also click ⇋ or press [~] to switch to the map view.

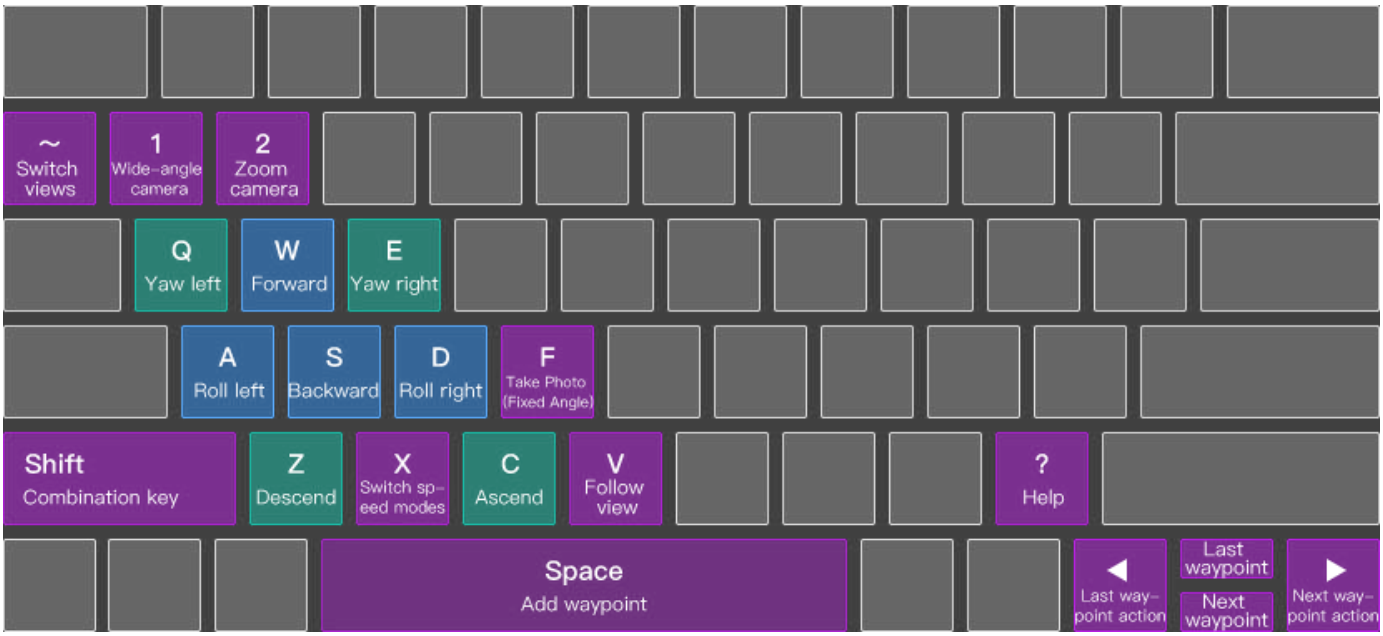
7. Flight Route Settings

Users can move the mouse over ⓘ to view the setting descriptions and modify the global settings.





8. Keyboard Shortcuts



[1]: Switch to the wide-angle camera	[2]: Switch to the zoom camera
[Q]: Yaw left	[E]: Yaw right
[W]: Forward	[S]: Backward
[A]: Roll left	[D]: Roll right
[Z]: Descend	[C]: Ascend

[F]: Add Take Photo (Fixed Angle) action in the current virtual aircraft location. Confirm the shooting angle or zoom ratio if the user is editing the action	[Space]: Add a waypoint in the current virtual aircraft location. Confirm the updated waypoint location if the user is editing the waypoint
[Shift]+[F]: Insert a Take Photo (Fixed Angle) action after the current action	[Shift]+[Space]: Insert a waypoint after the current waypoint
[X]: Switch the speed modes of the virtual aircraft	[V]: Enable the mouselook feature. Press [V] or [ESC] to exit
[←]: Select the last waypoint action	[→]: Select the next waypoint action
[↑]: Select the last waypoint	[↓]: Select the next waypoint
[~]: Switch between the map and first-person views	

Note: The keyboard layout may be different in different countries or regions, and users should follow the actual interface guidance. To change the keyboard layout, go to User Center > Preferences > Keyboard Layout to customize the settings.

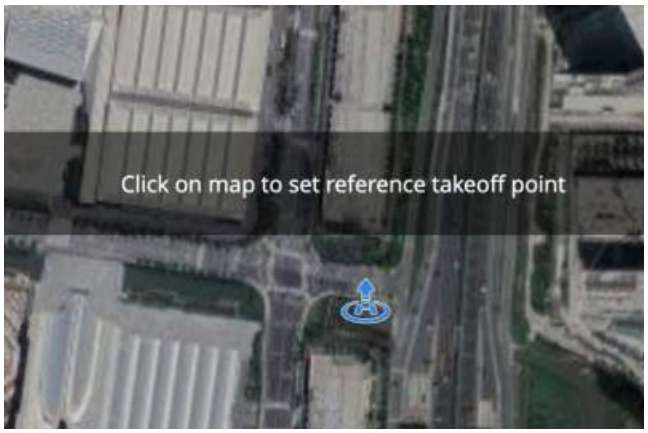
9. **Flight Route Edit Settings**

FlightHub 2 supports synchronizing attitude information when adding a new waypoint. When enabled, it automatically records the virtual aircraft's gimbal yaw and tilt angles, the aircraft's yaw, and camera zoom level upon adding a new waypoint, and adds these data to the action list.

Flight Route Planning and Initiation

1. Set a Reference Takeoff Point

Click Set Takeoff Point and select an appropriate location or the dock as a reference takeoff point. It is recommended to set the dock as the reference takeoff point.



2. Add a Waypoint

Control and move the virtual aircraft to a desired location and press [Space] to add a waypoint in that location.

3. Insert a Waypoint

Select a waypoint and press [Shift]+[Space] to insert a waypoint after the selected one.

4. Adjust the Camera View

In the first-person view:

- Drag the camera view to change the camera view or scroll the mouse or adjust the slider to change the zoom ratio.
- Press [V] to enable the mouselook feature so that users can directly adjust the camera view by moving the mouse. Press [V] or [ESC] to exit.

5. Add a Waypoint Action

- Users can press [F] to add a Take Photo (Fixed Angle) action for the current waypoint. If the virtual aircraft is not on the waypoint, a waypoint with a Take Photo (Fixed Angle) action will be added automatically.
- Press [Shift]+[F] to insert a Take Photo (Fixed Angle) action after the selected action. If the virtual aircraft is not on the current waypoint, a waypoint with a Take Photo (Fixed Angle) action will be inserted automatically.

Click ••• to display more waypoint actions.

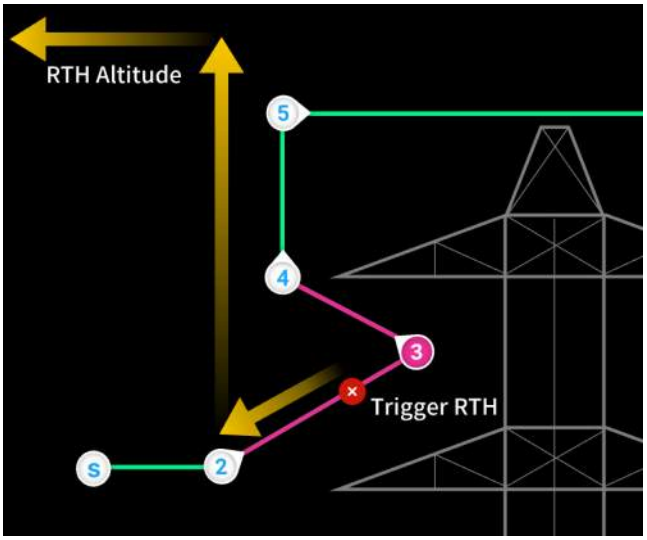
Add waypoint at current virtual aircraft location	Start recording (Aircraft yaw and gimbal pan angles and camera zoom ratio will be recorded at the same time)

Add Take Photo (Fixed Angle) action	Stop recording
Start timed interval shot	Start timed interval shot
End interval shot	Hover
Aircraft yaw	Gimbal yaw
Gimbal yaw	Gimbal yaw
Camera zoom	Create folder
Take panorama	
Spotlight	Spotlight Strobe
Spotlight on	Spotlight off
Speaker	Start/Stop broadcasting
Intelligent recognition	Start/Stop intelligent recognition
Record current attitude	

6. Add a No-Return Point

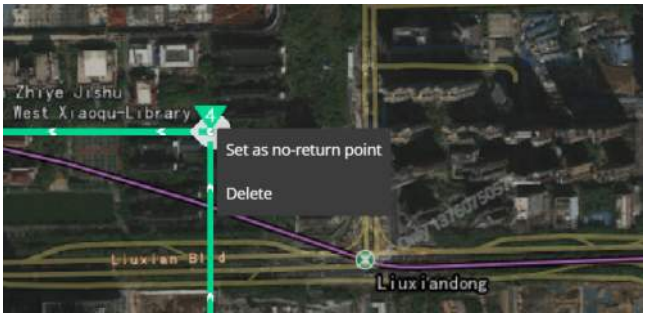
When editing the waypoint route, the waypoint with obstacles above it can be marked as a no-return point. The route from the previous waypoint of the no-return point to its next waypoint will be marked as a no-return area (Both the previous and next waypoints are not included.) When the aircraft is in the no-return area and safe RTH is triggered, the aircraft will follow the route and fly out of the area before ascending to the RTH altitude and returning to home.

As shown in the photo below, Waypoint 3 is a no-return point, and the yellow line is the RTH route.

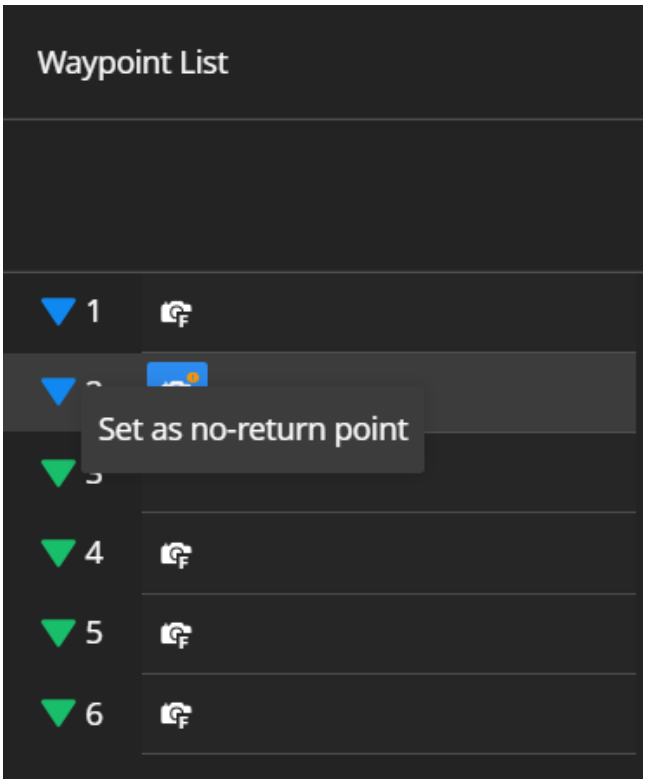


Ways to add no-return points:

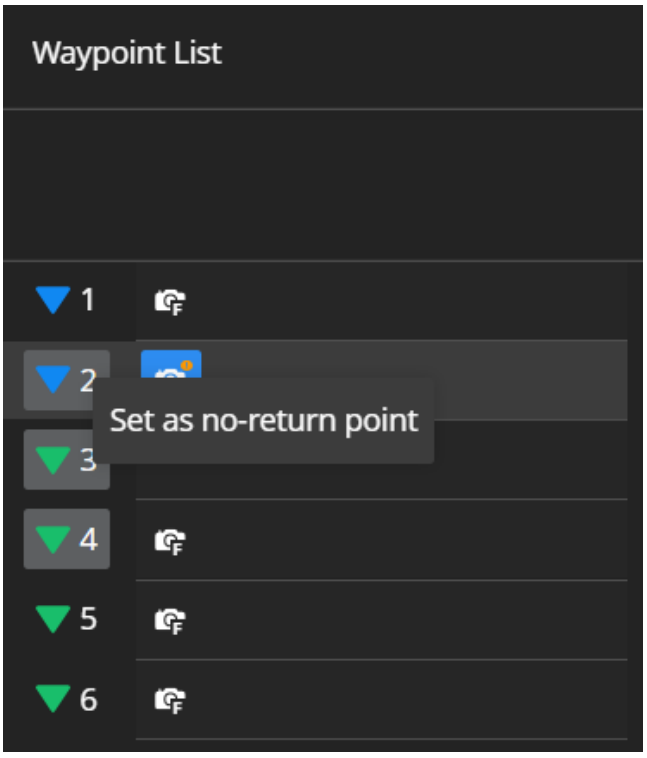
- When the map view is set as the main view, select the waypoint and right-click to choose "Set as no-return point".



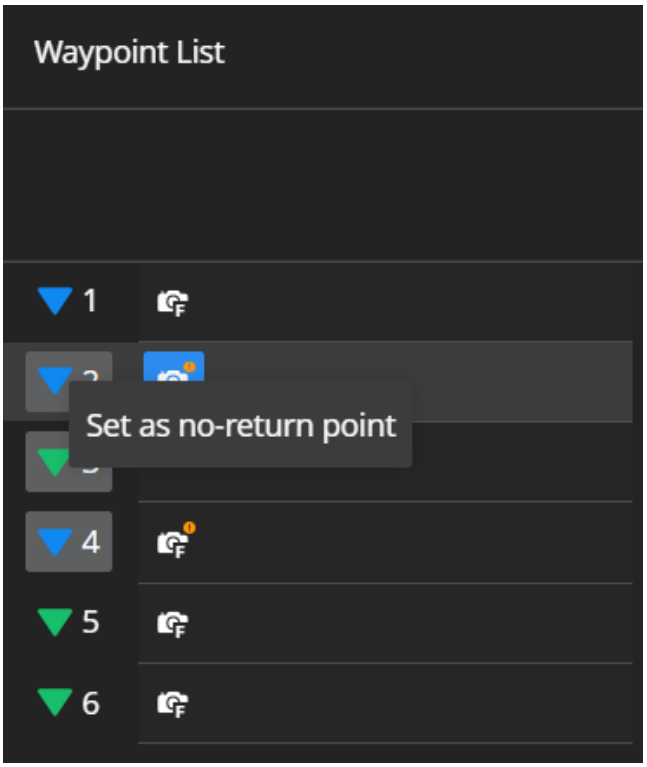
- Select a waypoint in the waypoint list and right-click to select "Set as no-return point".



- Press [Shift] and select the start and end waypoints to set consecutive waypoints as no-return points. Users can also press the left button of the mouse, drag to select waypoints, and right-click to select "Set as no-return point".



To cancel the no-return point settings, select waypoints and right-click "Cancel no-return point".



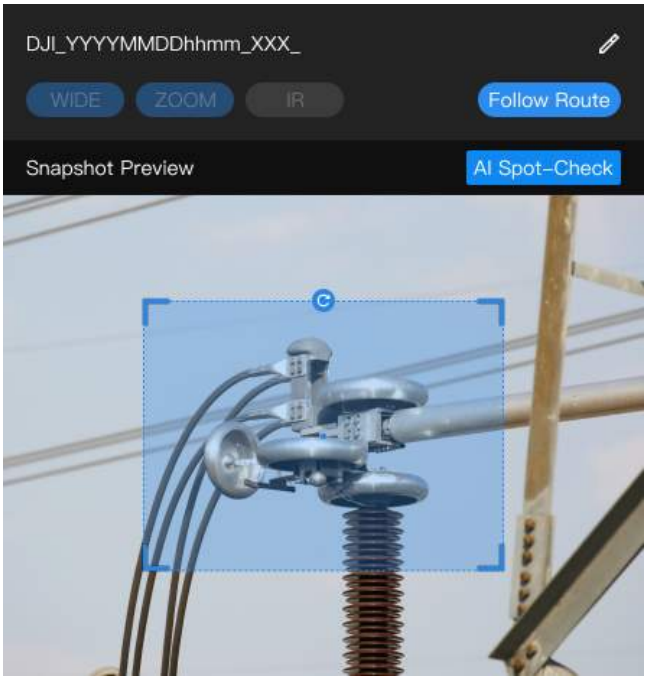
7. Perform AI Spot-Check

7.1 Distribute the task

Users can distribute the task to the dock through the plan library after planning the flight route. Wait until the media files are uploaded to the cloud. See Task Plan Library for more details.

7.2 Adjust the shooting angle

Users can reopen the flight route editor and view the media files captured in the action editor. Click AI Spot-Check and drag or rotate the blue frame to adjust the subject of interest.



7.3 Perform the task again

After adjusting the subject of interest, users can distribute the task again. The dock aircraft will perform AI Spot-Check based on the adjusted angle to capture the desired views.

8. Batch Editing

8.1 Selecting Multiple Waypoints

To select a group of consecutive waypoints, click the first waypoint, then press and hold the Shift key and click the last waypoint. You can then use the Batch Edit Waypoints panel on the right to edit all selected waypoints at once.

8.2 Batch Editing Waypoint Parameters

You can modify the following parameters for all selected waypoints:

- Waypoint Altitude
- Waypoint Speed
- Waypoint Type
- Aircraft Yaw
- Gimbal Tilt Angle Between Waypoints
- No-Return Points

> Note: The Gimbal Tilt Angle Between Waypoints can only be edited after selecting "For Each Waypoint" in Flight Route Settings > Advanced Settings.

8.3 Batch Editing Waypoint Actions

1. Add Action/Action Template

- Add Action: Adds a single new action to the start or end of the action list for each selected waypoint.
- Add Action Template: Right-click any waypoint in the list and select Copy as Action Template. You can then add the action template to the start or end of selected waypoint actions.

1. Replace with Action Template

- Replaces all existing actions on the selected waypoints with the actions from your template.

1. Clear All Actions

- Removes all actions from the selected waypoints.

1. Edit Specific Actions

- Click to batch edit action parameters of the selected waypoints.

AI Waypoint Route Planning

The waypoint route supports adding intelligent recognition actions, allowing the identification of people, vehicles, boats, or abnormal high and low-temperature points during the route, and performing actions such as taking photos, recording videos, and waiting for the operator to take over after alerts.

Feature Introduction

- Intelligent recognition actions support the identification of either visible light or infrared photos, but not both simultaneously. **If you switch to an infrared camera during visible light recognition, the visible light recognition will not be effective, and vice versa.**
- Once intelligent recognition starts, it remains active continuously. After triggering an alert, the pre-set actions will be performed automatically. Once the actions are completed, the intelligent recognition will reactivate after a 10-second interval to avoid repeated alerts.
- Since intelligent recognition actions occur between waypoints, they will automatically be placed as the first action at the corresponding waypoint after saving the route. Their execution order is

parallel to waypoint actions.

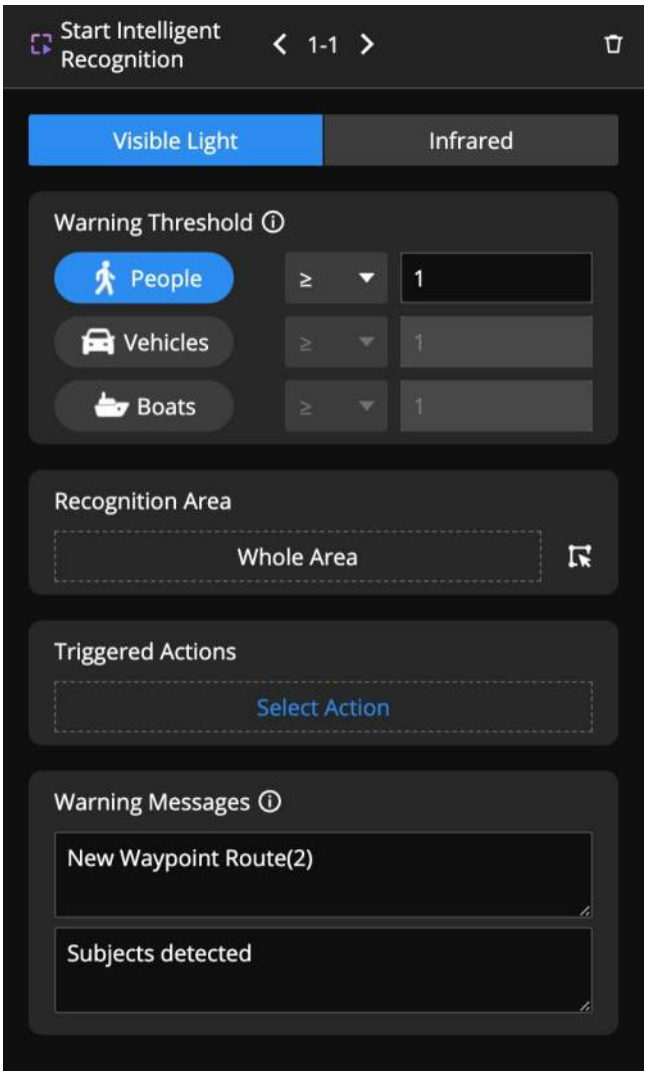
- **Actions between waypoints** include starting intelligent recognition, timed shots, and distance interval shots, while **waypoint actions** include all other actions.
- The intelligent recognition capability will automatically deactivate upon performing the intelligent recognition stop action or at the end of the route. To perform another intelligent recognition start action, add a stop action first to ensure actions are paired. This feature allows for the following scenarios.

> Waypoint 1: Start intelligent recognition - visible light - person recognition
> Waypoint 3: Action 1: Stop intelligent recognition; Action 2: Start intelligent recognition - visible light - vehicle recognition
> Waypoint 5: Action 1: Stop intelligent recognition; Action 2: Start intelligent recognition - infrared - high temperature
> Waypoint 6: Stop intelligent recognition
> This route will recognize people between waypoints 1 and 3, vehicles between waypoints 3 and 5, and high-temperature points between waypoints 5 and 6.

- In the current version, the intelligent recognition capability, AI-Spot check, and speaker action are mutually exclusive. Please do not add the above action combinations on the same route.

Visible Light Recognition Configuration

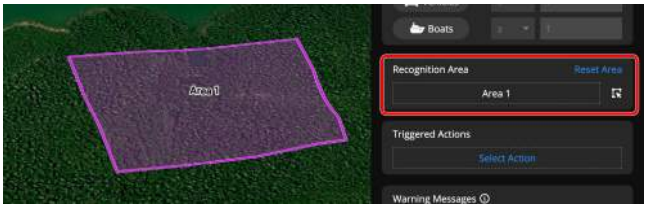
After enabling intelligent recognition, you can set related parameters here, choosing either visible light or infrared recognition.



Warning Conditions: You can select multiple options such as people, vehicles, and boats for recognition, and set alert thresholds. For example, a alert is triggered when the number of people is 20 or more. When either the threshold for person, vehicle, or boat recognition is met, the alert will be triggered.

> Note: Perform person, vehicle, and boat recognition in well-lit environments to avoid recognition errors or blurry snapshots.

Recognition Area: You can set the area for recognition, useful for scenarios where only specific areas need to be recognized. For example, if the camera view includes an 8-lane road, you may only want to recognize a specific lane. By default, all objects in the camera view will be recognized. After clicking , you can specify the recognition area by clicking the name of the area annotation marked on the map. The selected area will be highlighted in pink. The recognition area boundaries are for reference only, and objects at the boundaries may not be accurately recognized.



Actions: You can customize alert actions after the set threshold is met. When an alert is triggered, a snapshot will be taken by default for archiving and saved in the Immediate-Media folder under the corresponding route file in the media file library.

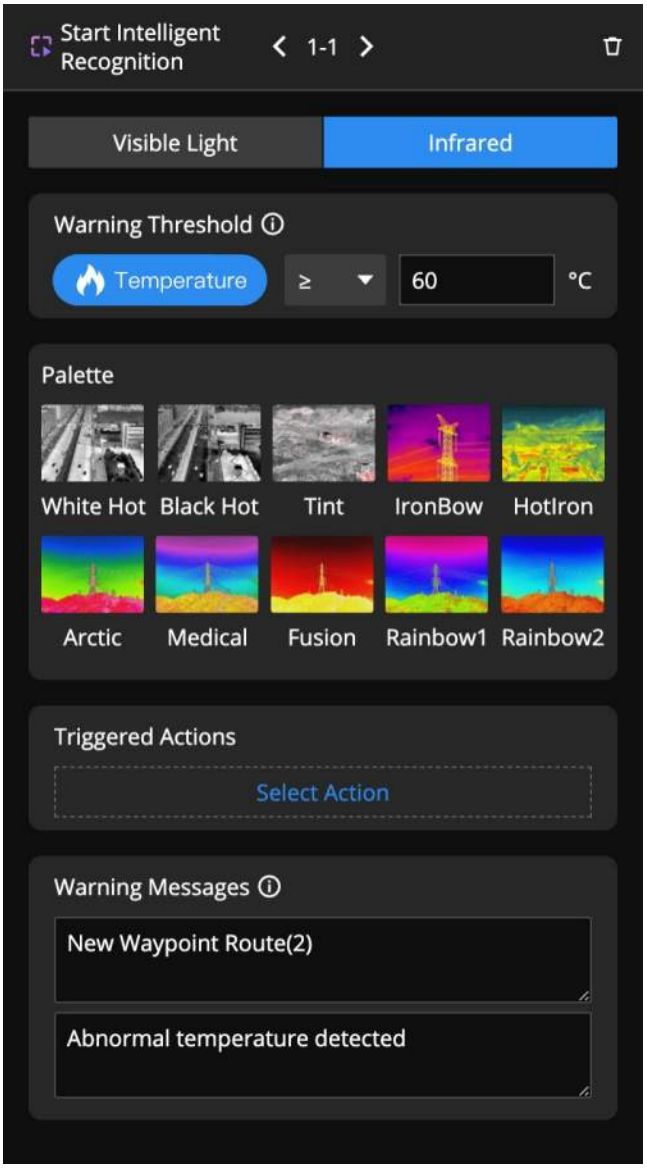
- Take Photos: After the threshold is met, photos will be taken for each object. If the object moves during the process, the object may not be captured. These photos will be saved in the root directory of the route file. If the virtual cockpit is entered during tasks, photos will be saved in the Remote-control folder.
- Record Videos: Video recording will start and continue for a set duration before resuming the route.
- Wait for Takeover: The aircraft will hover and wait for user intervention, continuing the route after a set duration.
- The duration for video recording and waiting for takeover will be calculated simultaneously. For example, if video recording is set for 30 seconds and waiting for takeover is set for 60 seconds, the system will wait for an additional 30 seconds after video recording ends, and vice versa.

Warning Messages: You can configure the warning message and content to be pushed to specific users after an alert occurs. The title can be up to 60 characters, and the content up to 120 characters. Do not enter characters other than Chinese, English, and common symbols.

When the warning message is pushed, the snapshot and location information will be pushed as well. Due to issues like poor video transmission signals, photos may not be loaded in the message temporarily.

Infrared Recognition Configuration

After enabling intelligent recognition, you can set related parameters for infrared recognition, choosing either visible light or infrared recognition.



Warning Conditions: You can set the temperature recognition threshold, with an upper and lower limit of -20° C to 550° C. The recommended temperature range is -20° C to 150° C.

Palette: You can set the palette for infrared photos.

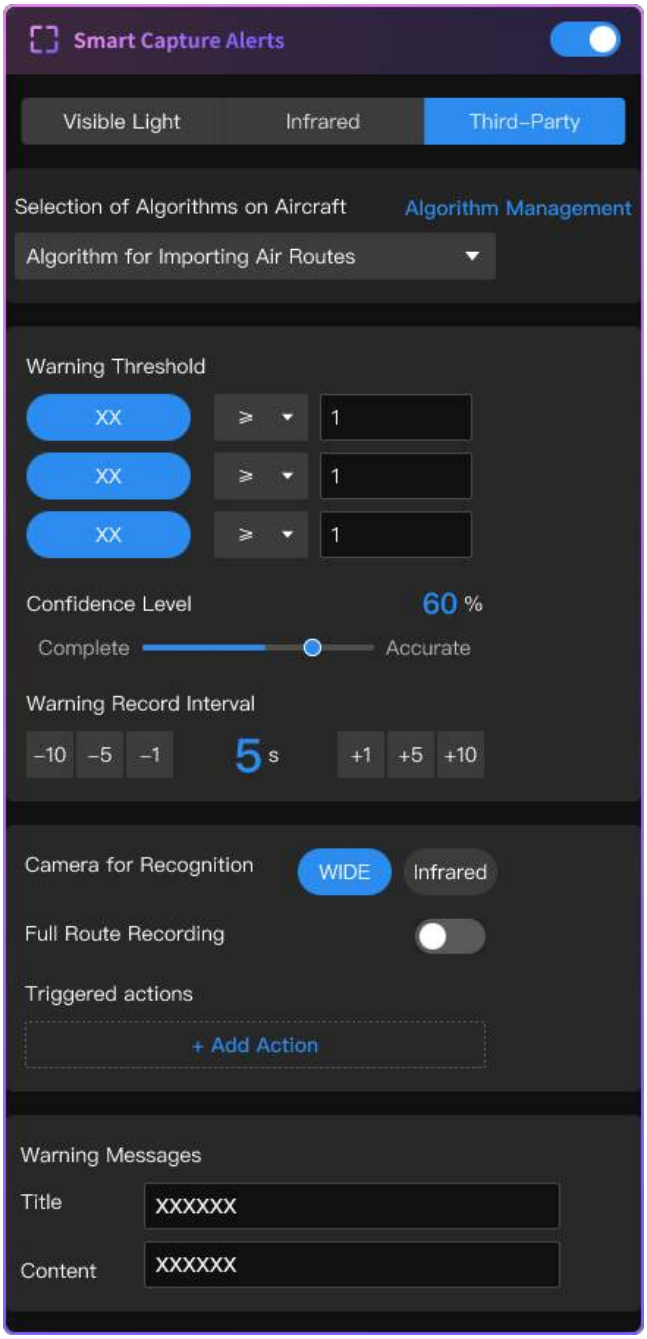
Actions: Currently, after the threshold is met, photos will not be taken for each object. The logic for video recording and waiting for takeover is the same as for visible light recognition.

Warning Information: The warning information capability is the same as for visible light recognition.

Third-Party On-Aircraft Algorithm Configuration

Selection of Algorithms on Aircraft: Select available onboard algorithms for aircraft bound to the current project. You can add or manage these by navigating to Algorithms.

Note: You can add multiple Smart Capture actions and configure third-party algorithms, visible light, or infrared recognition within the same waypoint route. However, only one third-party on-aircraft algorithm is supported per flight route.



Warning Threshold: Set the trigger threshold for alarms, which are defined by the selected third-party algorithm.

Confidence Level: After selecting a third-party algorithm, the confidence level will automatically adjust to the recommended confidence level set by the developer at the time of algorithm release. We advise not changing this value unless you have a specific requirement.

Recognition Area: Define a specific area for the algorithm to recognize. This works just like the recognition area for visible light recognition.

Triggered Actions: Customize the action when an alarm is triggered. This functions similarly to the triggered actions for visible light recognition.

> Note: To ensure a successful task, the algorithms selected in the flight route must match the algorithms loaded on the aircraft. The flight route will fail if the specified algorithm is not available on the aircraft.

Flight Route Execution

Users can configure recognition objects, warning frequency, and methods for routes with intelligent recognition actions. See AI Route Warning Notification section in the Task Plan Library > Single-Dock Plans/Multi-Dock Plans for more details.

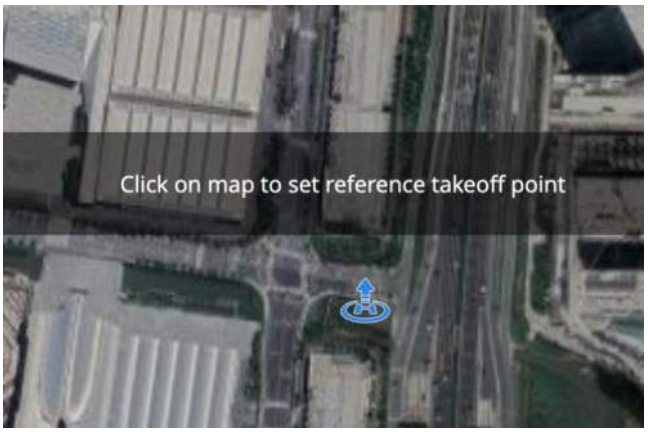
Edit Area Routes

- Flight Route Planning
- Flight Task Execution
- Photo Mapping

Cloud users can edit routes for 2D or 3D mapping in the Area Route Editor, distribute the flight task through the plan library, and complete the mapping task in the Model library.

Flight Route Planning

1. Click on the map to select an appropriate location or the dock as a reference takeoff point.



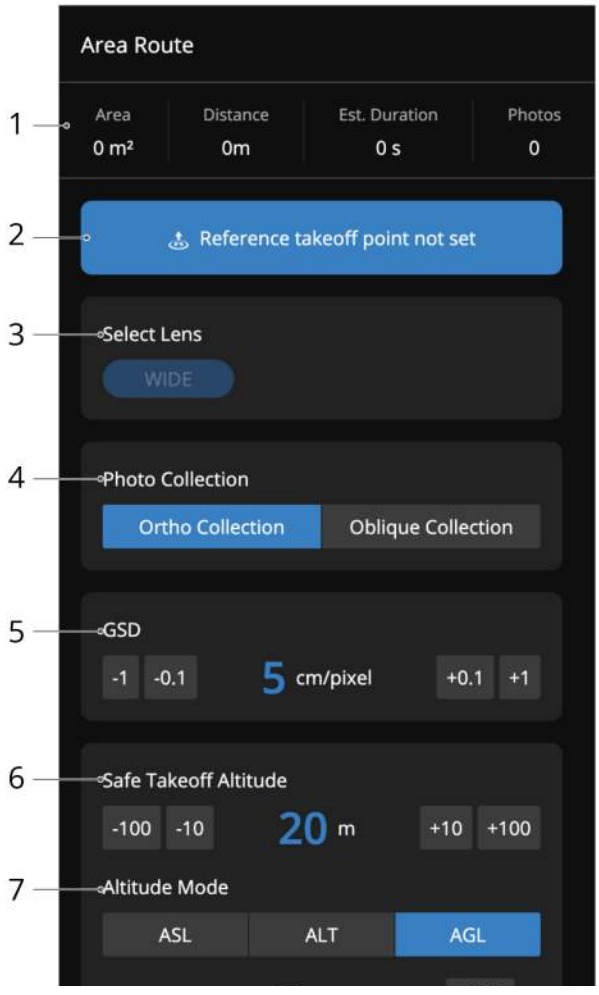
> Note: It is recommended to set the dock as the reference takeoff point.

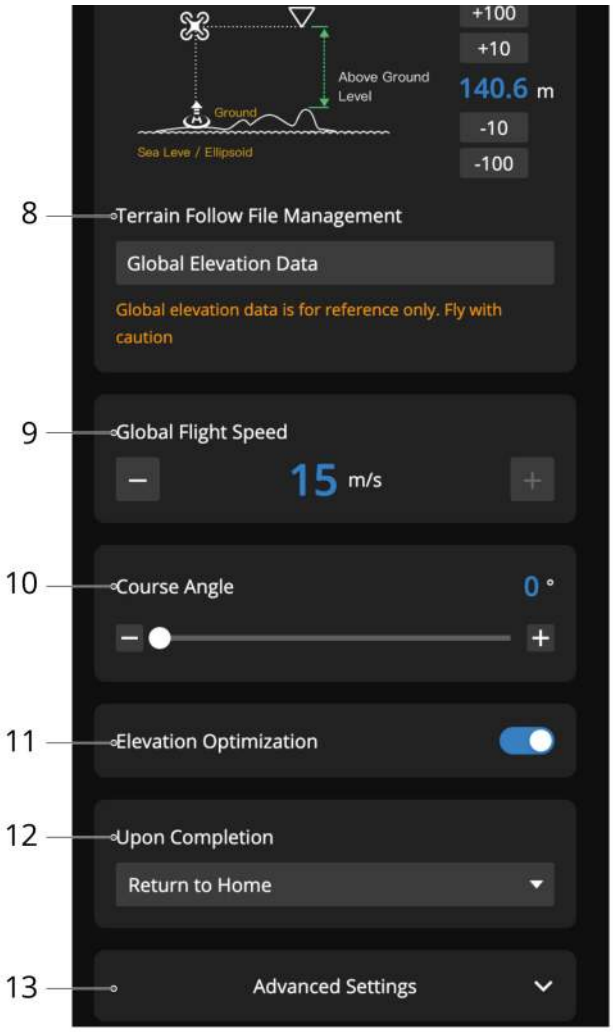
2. Draw the mapping area.



- If there are obstacles in the mapping area, make sure the obstacle altitude is lower than the flight altitude.
- If the mapping size is too large, it may take some time to generate flight routes. It is recommended to divide the mapping area into multiple sections.

3. Global Settings





1. Basic Information

Displays the area route information, including the area size, flight route distance, estimated flight time, and number of photos that will be captured.

2. Set a Reference Takeoff Point

Click on the map to set a reference takeoff point.

3. Select Lens

Users can select lenses when the aircraft supports multiple lenses.

4. Collection Method

Users can choose from different collection methods.

- After selecting Ortho Collection and enabling Elevation Optimization, the photos collected will contain elevation data.

- To generate 3D models, users should select Oblique Collection.

5. GSD

Ground Sample Distance (GSD) is the physical distance on the ground that each pixel represents. A smaller GSD value indicates a higher resolution and larger data size. Adjusting the GSD value will affect parameters such as the flight altitude. It is recommended to use the default settings.

6. Safe Takeoff Altitude

- If the safe takeoff altitude is higher than the altitude of the first waypoint, the aircraft will fly to the first waypoint at safe takeoff altitude and then descend to the first waypoint.
- If the safe takeoff altitude is lower than the altitude of the first waypoint, the aircraft will ascend to the first waypoint altitude and then fly to the first waypoint.

7. Altitude Mode

- Absolute Altitude (ASL): Consistent waypoint altitude relative to the sea level or ellipsoid height.
- Altitude Relative to Takeoff Point (ALT): Consistent waypoint altitude relative to the takeoff point.
- Altitude Above Ground Level (AGL): Consistent waypoint altitude relative to the ground.

- The data of the ground elevation can be sourced from the global elevation data and the user-imported models.
- Data source priority: 3D model elevation data > 2D model elevation data > global elevation data
- When there are more than one 3D model in the same mapping area, the highest altitude of the terrain surface will be regarded as the ground level.

8. Terrain Follow File Management

Real-time Terrain Follow can be enabled when flight routes are performed by the Mavic 3 enterprise series. When enabled, the aircraft will perform Terrain Follow based on the terrain surface altitude collected by the aircraft sensors. After selecting AGL, models that are displayed in the mapping area will be used as the Terrain Follow source data.

Note: To use the 2D elevation model as the Terrain Follow source data, users need to load the elevation data on the map first.

9. Global Flight Speed

The speed of the aircraft when performing the flight route. It is recommended to set the value as 15 m/s to increase the photo collection efficiency.

10. Course Angle

Adjust the course angle of the generated routes. Using the default settings is recommended.

11. Elevation Optimization

When enabled, the aircraft will fly to the mapping area center after completing the flight route and capture a series of tilt-angle photos to improve the elevation data accuracy. It is recommended to enable Elevation Optimization to obtain more accurate elevation information.

12. Upon Completion

The aircraft action when it completes the flight task. Setting to "Return to Home" is recommended.

13. Advanced Settings

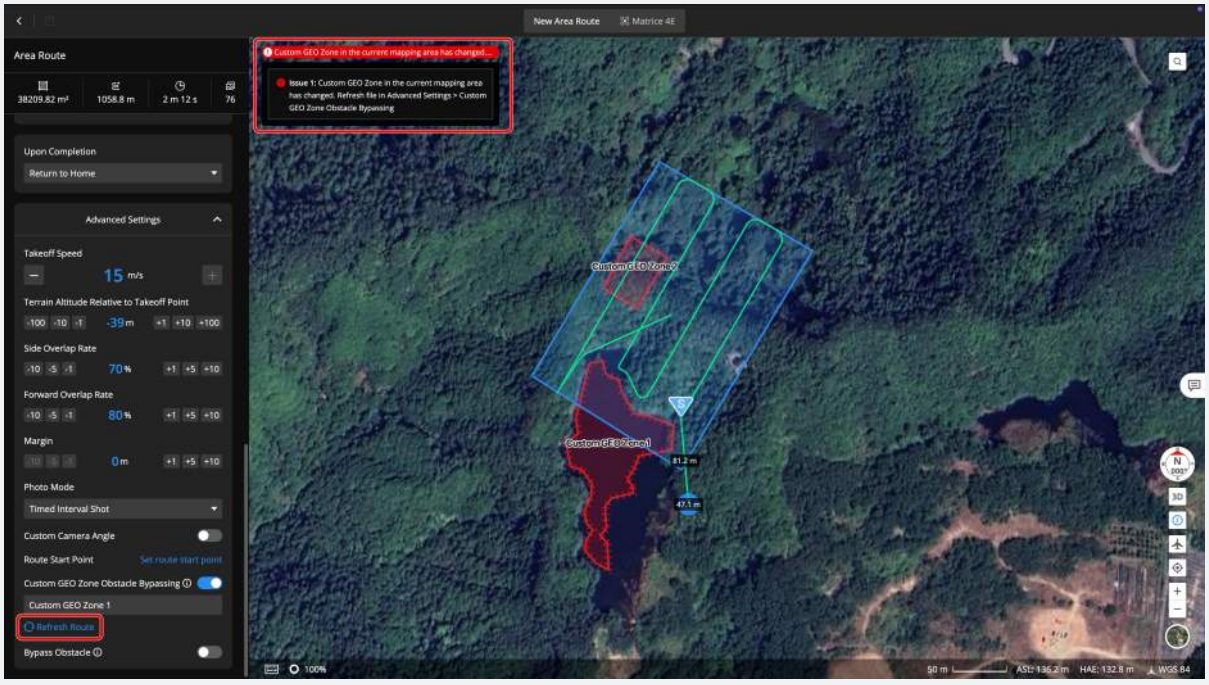
- **Side/forward overlap rate**: High overlap rates increase the overlap between adjacent photos captured by the aircraft and improve the mapping accuracy, but the mapping efficiency will be decreased. It is recommended to use the default overlap rates to balance the mapping quality and efficiency.
- **Margin**: Setting the margin to the mapping area can widen the flight area to avoid issues like blurriness at the edge of the model.
- **Photo mode**: Users can select between "Timed Interval Shot" and "Distance Interval Shot".
- **Custom Camera Angle**: When enabled, the camera angle can be customized, but it may lead to failure in mapping.
- **Route Start Point**: Click to set the start waypoint of the flight route on the map.
- **Custom GEO Zone Obstacle Bypassing**: When enabled, the flight route will bypass the GEO Zone within the mapping area, with the flight speed reduced at the edge of the GEO Zone.

- If the GEO Zones within the mapping area are too dense or complex, generating a feasible area route may not be possible. It is recommended to adjust the mapping area or customize the GEO Zone. This feature is currently only supported by DJI Dock 3, Matrice 4 Enterprise Series, and DJI Dock 2.

- If a GEO Zone is encountered while the aircraft is flying to the first waypoint, enabling this switch will allow the aircraft to plan a real-time bypassing route, which will not be displayed in the flight route editor. This feature is currently only supported by DJI Dock 3.



- If there are changes to the custom GEO Zone in the project, refresh the flight route in the flight route editor promptly to avoid task failure.



- **Bypass Obstacle**: When enabled, the aircraft will attempt to bypass obstacles during tasks, but mapping output may not be generated as expected. Tasks will be interrupted if the aircraft fails to bypass obstacles. Compared to Custom GEO Zone Obstacle Bypassing, Bypass Obstacle is primarily suitable for real-time bypassing of temporary obstacles and has a limited bypassing

distance. If there are long-term fixed obstacles or areas that need to be bypassed in the mapping area, it is recommended to use Custom GEO Zone Obstacle Bypassing.

Flight Task Execution

Users can distribute the task to the dock through the plan library after planning the flight route. Wait until the photos are uploaded to the cloud. See Task Plan Library for more details.

- After selecting the corresponding flight route and device in the plan library, it is recommended to enable "Resume Flight from Breakpoint" to ensure a successful collection of photos.
- It is recommended to start the area route in overcast weather conditions without direct sunlight for enhanced photo quality.

Photo Mapping

After photos are captured by the aircraft, users can start the 2D or 3D mapping. See Mapping for more details.

Edit Slope Routes

- Flight Route Planning

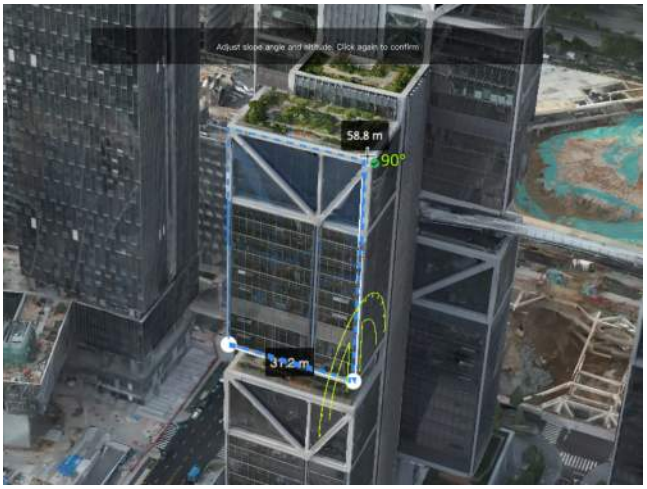
The Slope Route Editor supports creating a mapping task for a slope. Users can create a slope route, distribute the task to DJI Pilot 2, and complete the mapping task in the model library. Before creating a slope route, users can perform an area route task and generate a rough model of the area for the slope planning.

Flight Route Planning

1. Click on the map to create a reference line for the slope being mapped.

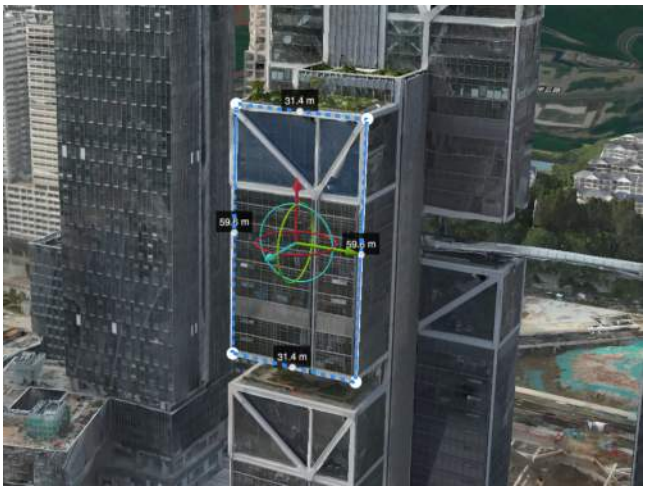


2. Move the cursor to create a mapping area along the slope surface. Press [Shift] at the same time to enable a protractor and adjust the slope angle. Click to confirm the mapping area.

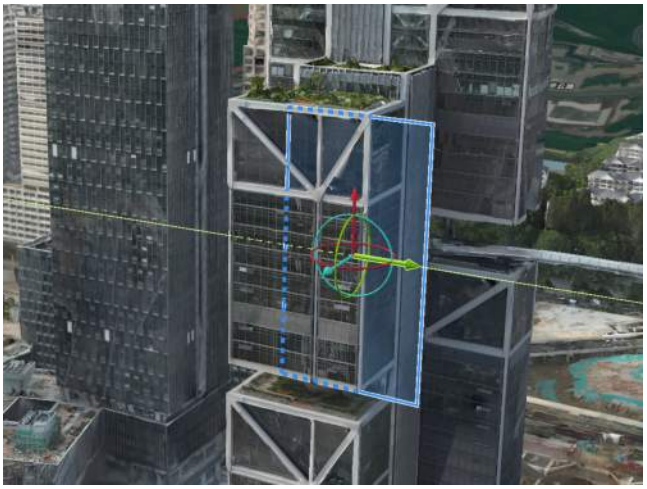


3. Edit mapping area:

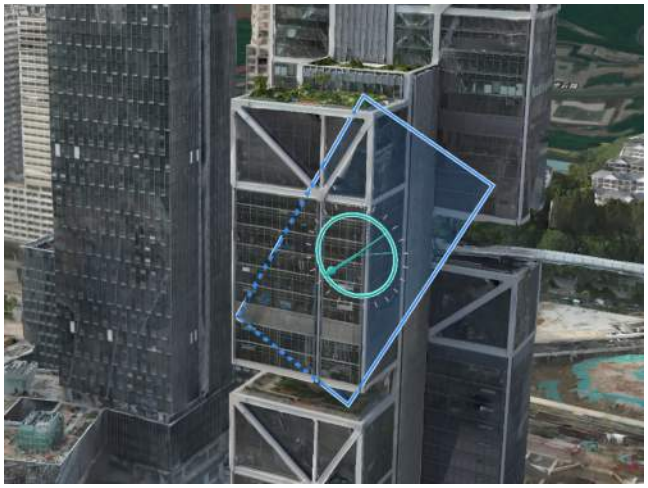
- Click on the mapping area to edit.



- Drag the vertex or use the 3D manipulator to adjust the mapping area. The 3D manipulator consists of 3 translation arrows and rotation circles. Press and drag the X, Y, or Z axis to move the mapping area along the corresponding direction.



- Press and drag the rotation circle to rotate the mapping area along the corresponding axis plane. Press [Shift] at the same time to enable the protractor and adjust the slope angle.



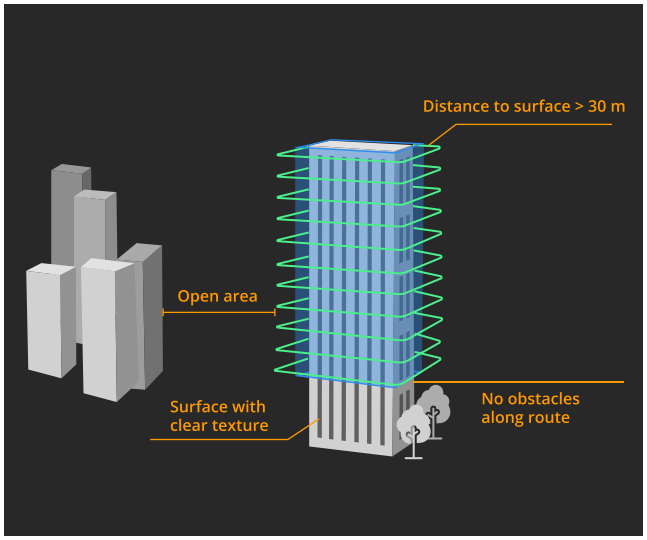
Edit Geometric Routes

- Before Use
- Flight Route Planning

The Geometric Route Editor supports creating a mapping task for prism- or cylinder-shaped structures. Users can create a geometric route, distribute the task to DJI Pilot 2, and complete the mapping task in the model library. Before creating a geometric route, users can perform an area route task and generate a rough model of the area for the geometric planning.

Before Use

- It is recommended to set the distance between the geometric route and geometric surface to be greater than 30 meters. Otherwise, satellite signal may be affected.
- The mapping surface should be non-reflective and have rich texture. Avoid mapping glass walls.
- Make sure there is enough space when aircraft is performing tasks. Avoid starting tasks in narrow space between buildings or areas with many trees.
- Make sure RTK is working properly when checking flight details and during tasks.

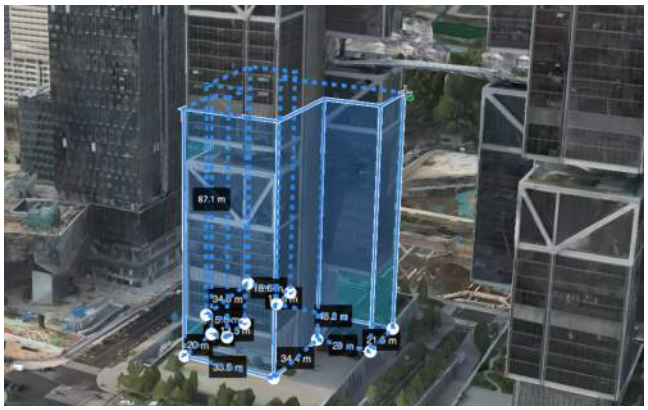


Flight Route Planning

1. Click on the map to create the bottom or top base of the area being mapped, and click  to switch between mapping for prisms and cylinders.

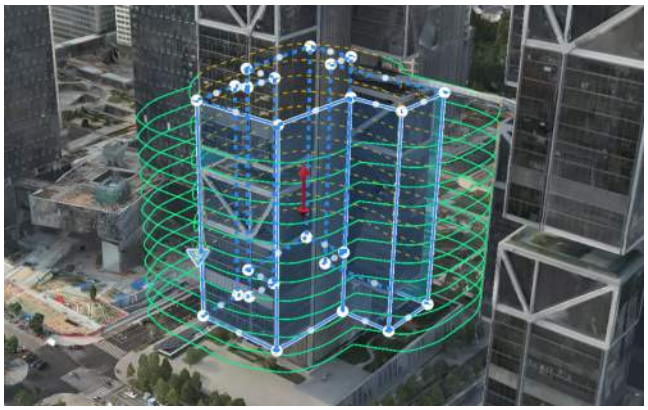


2. Change to the 3D map, move the cursor to set the height, and click again to confirm.



3. Edit mapping area:

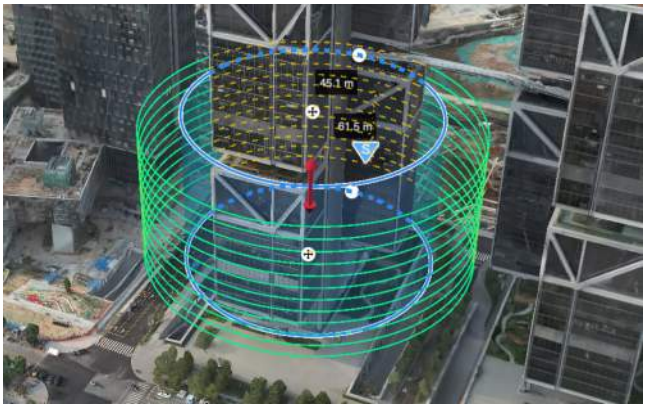
- Click on the mapping area to edit.



- Drag the edge or vertex or add a vertex between vertexes to adjust the mapping area. Users can also drag the Z axis ↕ to move the mapping area vertically.

Users can also perform the following operations on the cylindrical mapping area:

- Drag the edge of the top or bottom base to adjust the height.
- Drag the center of the top or bottom base to move the cylinder horizontally.
- Drag the vertex of the top or bottom base to adjust the radius.
- Drag the Z axis to move the cylinder vertically.


45.1 m
61.5 m

Edit Smart 3D Capture

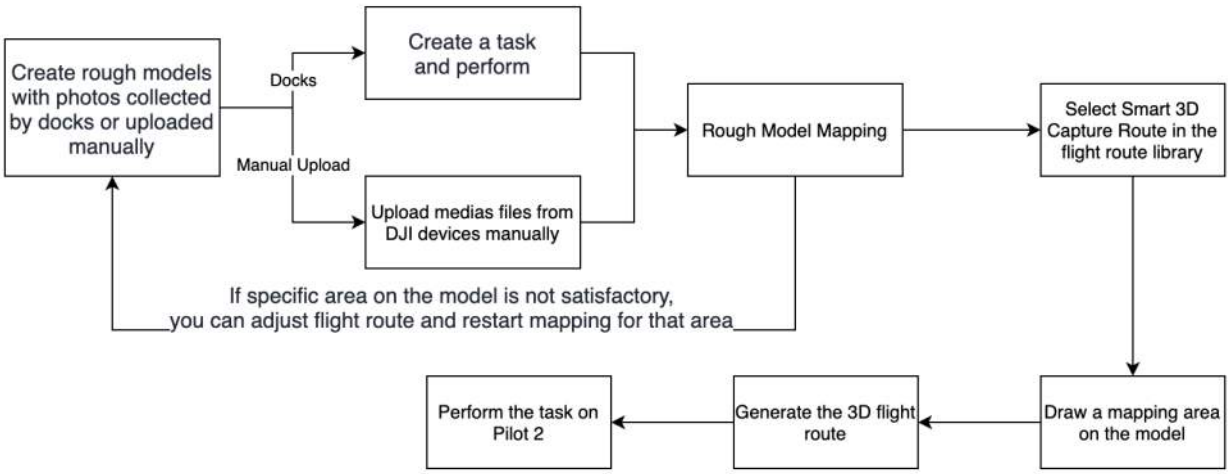
- Notes
- Overall Process
- Rough Model Mapping
- Smart 3D Capture Route Planning
- Refine Model (Customize Model)
- Flight Route Execution

Smart 3D Capture supports generating routes based on a **rough model**. FlightHub 2 users can generate the rough model using photos uploaded from the dock or imported from the media file library. After the rough model is created, the model can be selected for generating the Smart 3D Capture route.The feature is currently only supported by the Matrice 4 enterprise series aircraft. After the route is generated in FlightHub 2, users can obtain the route from Pilot 2. Compared to the Smart 3D Capture feature in Pilot 2, the same feature in FlightHub 2 is suitable for planning and managing large-scale routes. The rough model mapping performance is better on the cloud than on the remote controller. It is recommended to flexibly choose between using Pilot 2 or FlightHub 2 for Smart 3D Capture planning based on the specific needs.

Notes

- If there are obvious missing parts in the rough model, add a custom model first to assist in generation of the flight route.
- Make sure there is enough space when aircraft is performing tasks. Avoid starting tasks in narrow space between buildings or areas with many trees.
- Make sure RTK is converged, signal strength is good, and no warning messages appear when collecting the rough model data or during the Smart 3D Capture task.

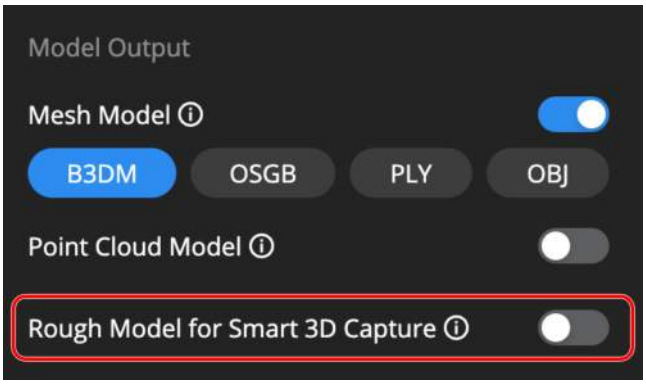
Overall Process



Rough Model Mapping

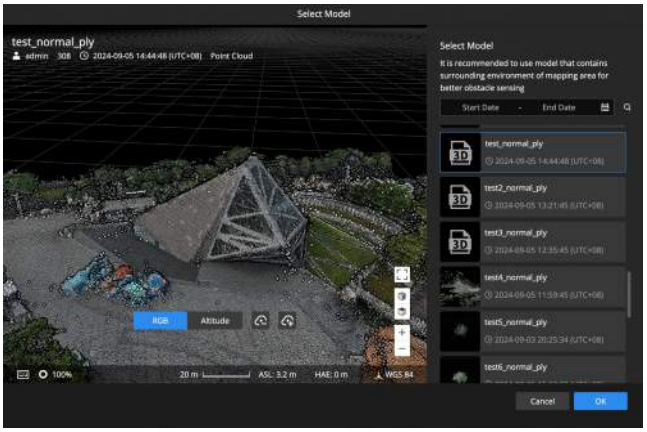
Rough Model for Smart 3D Capture can be enabled in the Model library. When enabled, generated models can be used for Smart 3D Capture. Make sure the RTK signal is converged during photo collection. Besides using the photos uploaded from docks for mapping, users can also import media files from local to the media file library. Since rough model files will be compressed together with route files, avoid using too many photos to prevent the compressed file size from being too large.

1. Import local photos to the media file library or select photos uploaded from docks.
2. Enable Rough Model for Smart 3D Capture to generate a model for route planning.

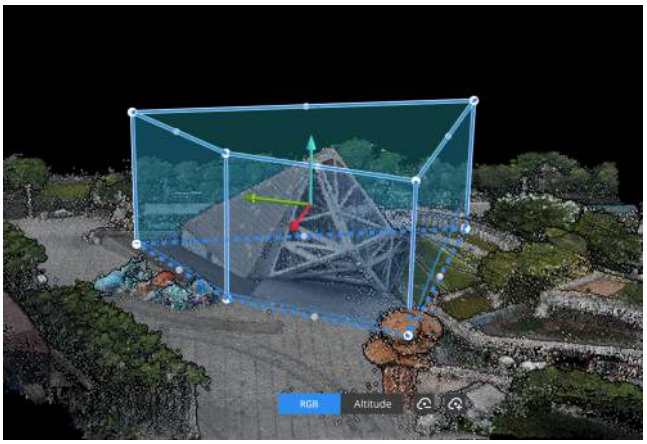


Smart 3D Capture Route Planning

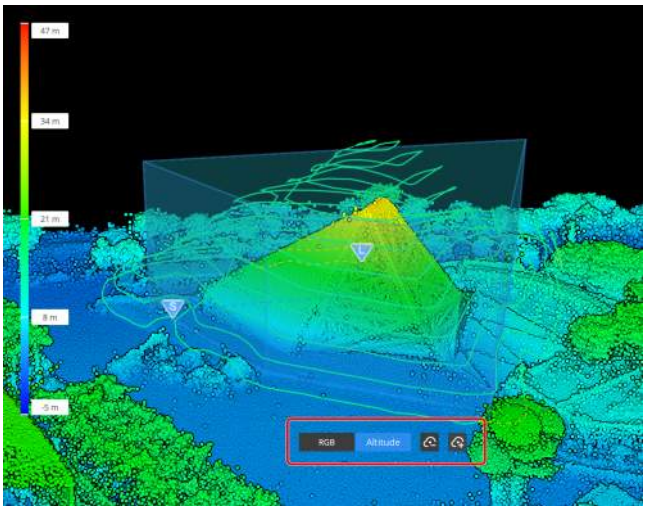
1. Select Smart 3D Capture Route in the flight route library or edit routes uploaded from Pilot 2.
2. Choose a rough model for route planning. If Rough Model for Smart 3D Capture is not enabled before model mapping, the model will not be available.



3. Draw a mapping area on the model, and a 3D area will be automatically generated based on the highest and lowest points within the selected area. There is a size limit for the mapping area. If the area is too large, the area will turn red and the route cannot be generated. It is recommended to divide large scenes into sections and collect data from one part at a time.

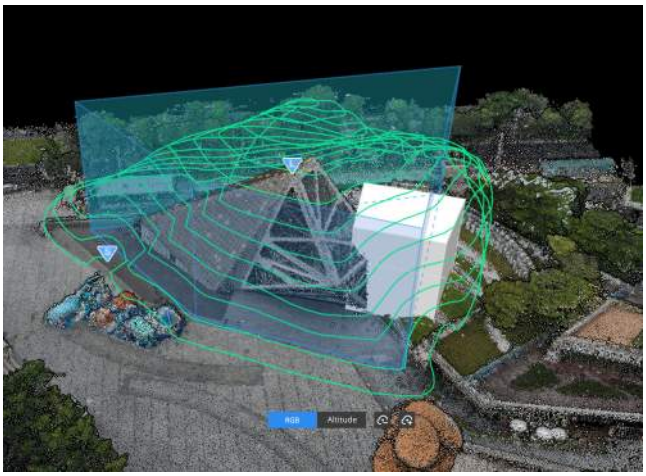


4. At the bottom, users can switch the point cloud display mode between Height or RGB mode and the point cloud density according to the scene.



Refine Model (Customize Model)

1. To refine a model, users can click in the upper right corner to create a custom model. After creating the shape of the model base, pull the model base upwards or downwards to complete the creation of the model. A route will be automatically regenerated after the custom model is created.



Flight Route Execution

Currently, docks do not support performing Smart 3D Capture routes. Users can distribute the route to the remote controller and perform the task using Pilot 2. Before task, it is recommended to perform a safety check of the flight route using the AR display.

Edit Linear Routes

- Flight Route Planning
- Flight Task Execution
- Photo Mapping

The flight route editor supports the planning of linear routes, allowing for quick drawing of orthophoto routes for strip-shaped areas. This is suitable for mapping tasks in scenes such as highways, rivers, and pipelines.

Flight Route Planning

1. Draw the points of the center line of the flight route as needed. After completing the drawing, click the last point to confirm the completion of the area drawing.



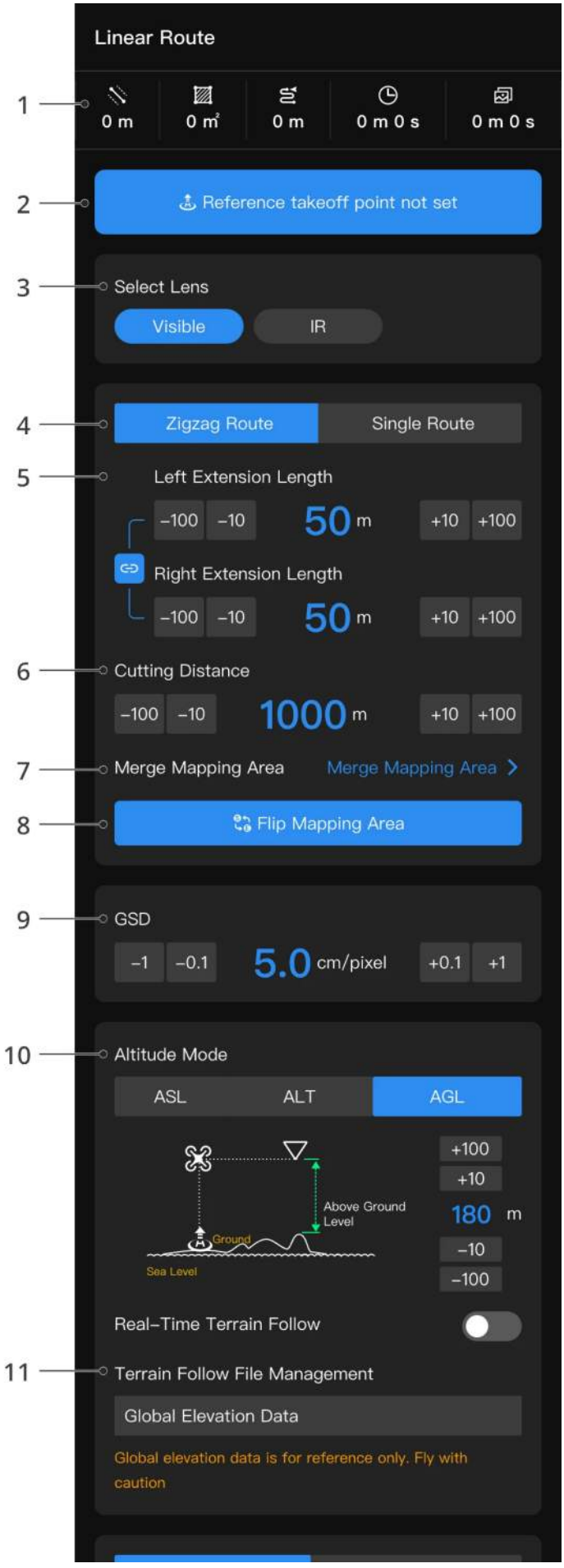
2. Once the center line is confirmed, a mapping area will be generated according to the default left and right extension lengths, and the linear route will be generated.

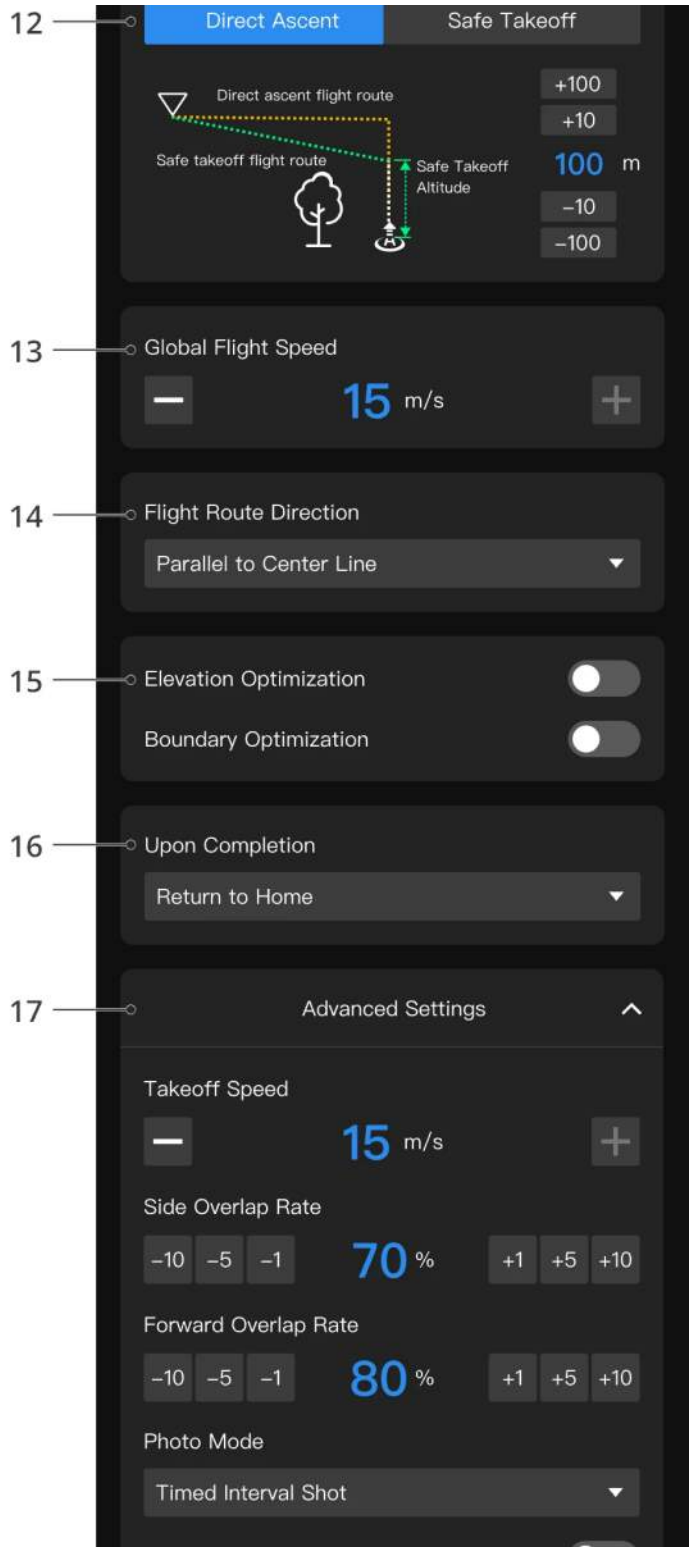


3. After the flight route is generated, you can click the center line or the center line edit button in the upper right corner to edit the center line trajectory again. You can add a point before the first endpoint by pressing the Shift key and clicking.



4. Global Settings





1. Basic Route Information

Displays information such as the center line length, coverage area, flight route length, estimated duration, and estimated number of photos.

2. Reference Takeoff Point Settings

Click on the map to set a reference takeoff point.

3. Select Lens

Users can select lenses when the aircraft supports multiple lenses.

4. Flight Route Form

- The zigzag route will cover the mapping area along the zigzag trajectory with a higher overlap rate.
- A single route will only fly along the center line.

5. Extension Length

You can set the distance for the mapping area to extend outward from the center line to the left and right at the same time. You can also choose to set the extension distance separately by clicking 🔗 .

6. Cutting Distance

You can set the cutting distance of the mapping area. For longer flight bands, you can adjust the cutting distance as needed to limit the center line length of each segment of the mapping area, facilitating more efficient planning during flight route execution.

7. Merge Mapping Areas

You can merge any adjacent flight band segments into a mapping area as needed, or split the merged mapping area back to its original status.

8. Flip Mapping Area

Click to flip the linear route area.

9. GSD

Ground Sample Distance (GSD) is the physical distance on the ground that each pixel represents. A smaller GSD value indicates a higher resolution and larger data size. Adjusting the GSD value will affect parameters such as the flight altitude. It is recommended to use the default settings.

10. Altitude Mode

- Absolute Altitude (ASL): Consistent waypoint altitude relative to the sea level or ellipsoid height.
- Altitude Relative to Takeoff Point (ALT): Consistent waypoint altitude relative to the takeoff point.
- Altitude Above Ground Level (AGL): Consistent waypoint altitude relative to the ground.

- The data of the ground elevation can be sourced from the global elevation data and the user-imported models. Data source priority: 3D model elevation data > 2D model elevation data > global elevation data.
- When there are more than one 3D model in the same mapping area, the highest altitude of the terrain surface will be regarded as the ground level.

11. Terrain Follow File Management

- In AGL mode, models displayed on the map and included within the mapping area will be used as Terrain Follow data sources.
- When a flight route is performed by a Mavic 3 Enterprise Series aircraft, users can choose to enable real-time Terrain Follow. When enabled, the aircraft will perform Terrain Follow based on the terrain surface altitude collected by the aircraft sensors, and the flight route rendered on the page is for reference only.

Note: To use the 2D elevation model as the Terrain Follow source data, users need to load the elevation data on the map first.

12. Takeoff Mode

Direct Ascent: The aircraft will ascend to the start point altitude and fly to the start point directly.

Safe Takeoff: The aircraft will ascend to the safe takeoff altitude before flying to the start point.

- If the safe takeoff altitude is greater than the first waypoint altitude, the aircraft will maintain the safe takeoff altitude, fly directly above the first waypoint, and then descend to the waypoint altitude.
- If the safe takeoff altitude is less than the first waypoint altitude, the aircraft will ascend to the waypoint altitude after takeoff and then fly to the first waypoint directly.

13. Global Flight Speed

The speed of the aircraft when performing the flight route. It is recommended to set the value as 15 m/s to increase the photo collection efficiency.

14. Flight Route Direction

The direction of the zigzag flight route can be set parallel or perpendicular to the center line.

15. Elevation Optimization & Boundary Optimization

- When enabled, the aircraft will fly to the mapping area center after completing the flight route and capture a series of tilt-angle photos to improve the elevation data accuracy.
- Boundary Optimization: When enabled, each flight band will cover two extra strips of area along its extension boundaries to ensure that more photos and details of the boundaries are captured for mapping.

16. Upon Completion

The aircraft action when it completes the flight task. Setting to "Return to Home" is recommended.

17. Advanced Settings

- Takeoff Speed: The speed at which the aircraft flies to the first waypoint can be set.
- Side/Forward Overlap Rate: High overlap rates increase the overlap between adjacent photos captured by the aircraft and improve the mapping accuracy, but the mapping efficiency will be decreased. It is recommended to use the default overlap rates to balance the mapping quality and efficiency.
- Photo mode: Users can select between "Timed Interval Shot" and "Distance Interval Shot".
- Include Center Line: When enabled, the zigzag flight route will include the center line trajectory.

Flight Task Execution

Users can distribute the task to the dock through the plan library after planning the flight route. Wait until the photos are uploaded to the cloud. See Task Plan Library for more details.

> - After selecting the corresponding flight route and device in the plan library, it is recommended to enable "Resume Flight from Breakpoint" to ensure a successful collection of photos.
> - It is recommended to start the area route in overcast weather conditions without direct sunlight for enhanced photo quality.

Photo Mapping

After photos are captured by the aircraft, users can start the 2D or 3D mapping. See Mapping for more details.

Edit Patrol Routes

- Flight Route Planning

The patrol flight route supports automatic flight route planning within a specified area for specific subject recognition and alerts. Compared to Smart Capture in waypoint routes, patrol flight route planning is more convenient and offers a more intuitive recognition area. However, flexibility is relatively reduced.

Flight Route Planning

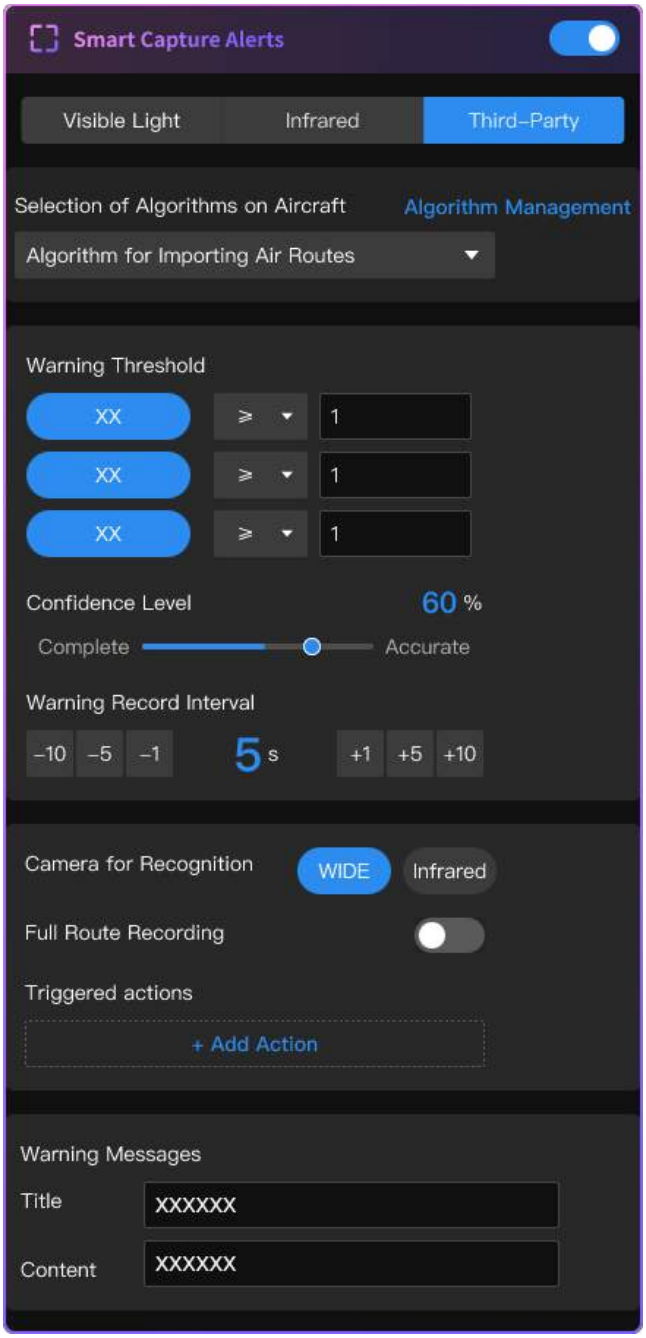
1. Plan Recognition Area

Click on the map and draw a recognition area. Once the area is determined, a patrol flight route will automatically be generated.



2. Adjust Flight Route Parameters

Smart Capture Alerts:



The patrol flight route enables Smart Capture for people by default, with options to enable recognition for vehicles and boats. The recommended altitude varies for different subjects. Please pay attention to the altitude range prompt after adjusting the recognition subject to avoid reduced recognition rates.

For configuration details of visible light and infrared recognition, refer to: **Edit Waypoint Routes > Visible Light Recognition Configuration**.

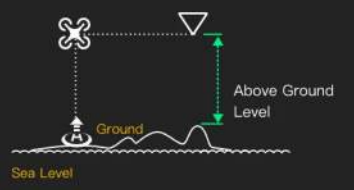
After disabling the Smart Capture alert function, the flight route will not automatically search for and recognize subjects. This is suitable for manual recognition scenarios.

Other Parameters:

Reference takeoff point not set

Altitude Mode

ASL | ALT | AGL



+100
+10
180 m
−10
−100

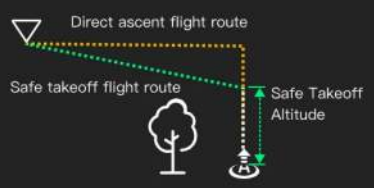
Real-Time Terrain Follow

Terrain Follow File Management

Global Elevation Data

Global elevation data is for reference only. Fly with caution

Direct Ascent | Safe Takeoff



+100
+10
100 m
−10
−100

Global Flight Speed

− 15 m/s +

Course Angle 0°

− +

Gimbal Tilt Angle −45°

− +

Upon Completion

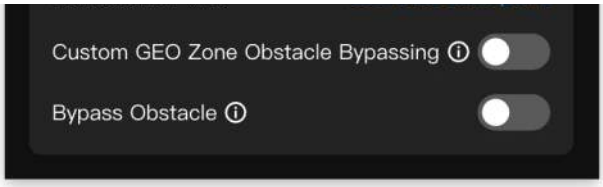
Return to Home

Advanced Settings

Takeoff Speed

− 15 m/s +

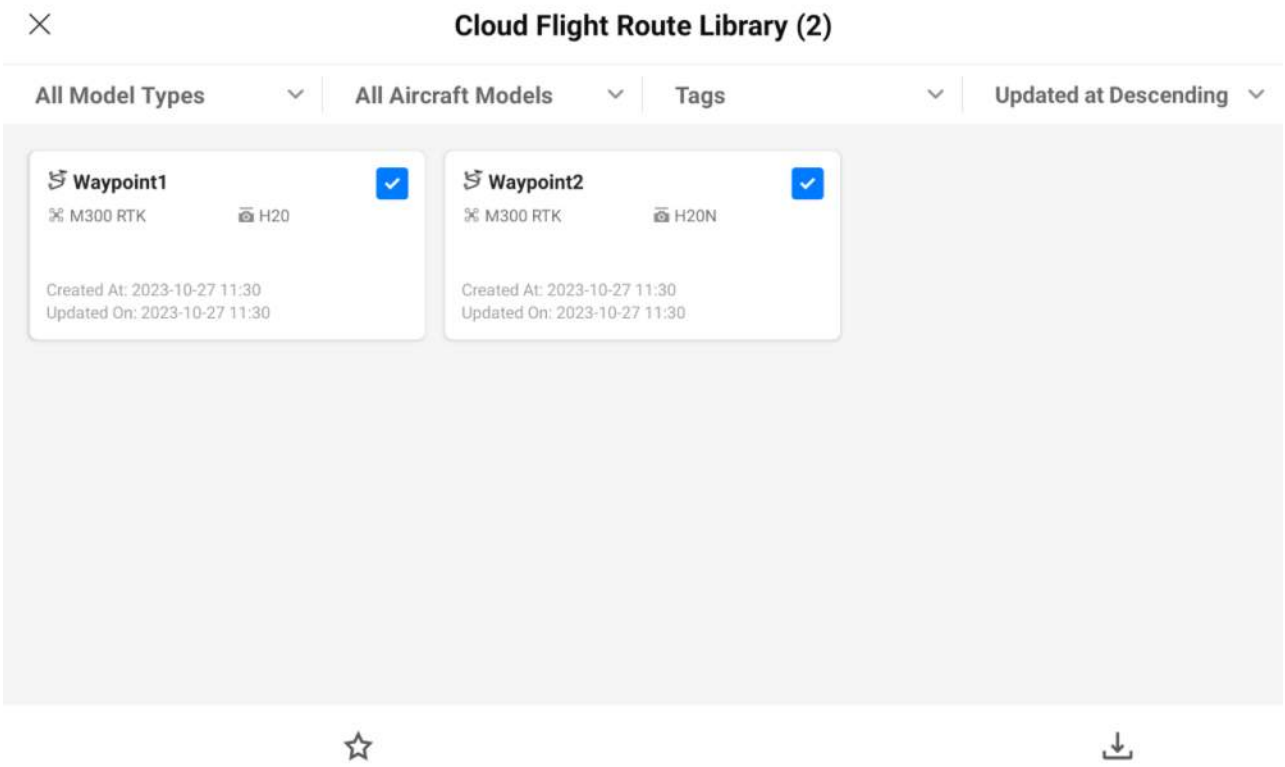
Route Start Point Set route start point



For specific flight route parameters, refer to: **Edit Area Routes**. The optimal gimbal angle varies for different recognition subjects. Please pay attention to relevant prompts to avoid using gimbal angles beyond the recommended range, which may decrease recognition rates.

Sync Flight Routes

DJI Pilot 2 users can log in to the DJI FlightHub 2 cloud service and access cloud flight tasks. Enter the home screen of DJI Pilot 2, tap Flight Route, and select Cloud to view and download flight routes created on DJI FlightHub 2.



DJI Pilot 2 users can also select flight routes in the Flight Route Library and tap to upload routes to the cloud.

Flight Route Library (2)

Cancel

All Model Types | All Aircraft Models | Tags | Updated at Descending



Waypoint1

M300 RTK | H20 | 488 m

Created At: 2023-10-27 11:25
Updated On: 2023-10-27 11:30



Waypoint2

M300 RTK | H20N | 355 m

Created At: 2023-10-27 11:22
Updated On: 2023-10-27 11:29

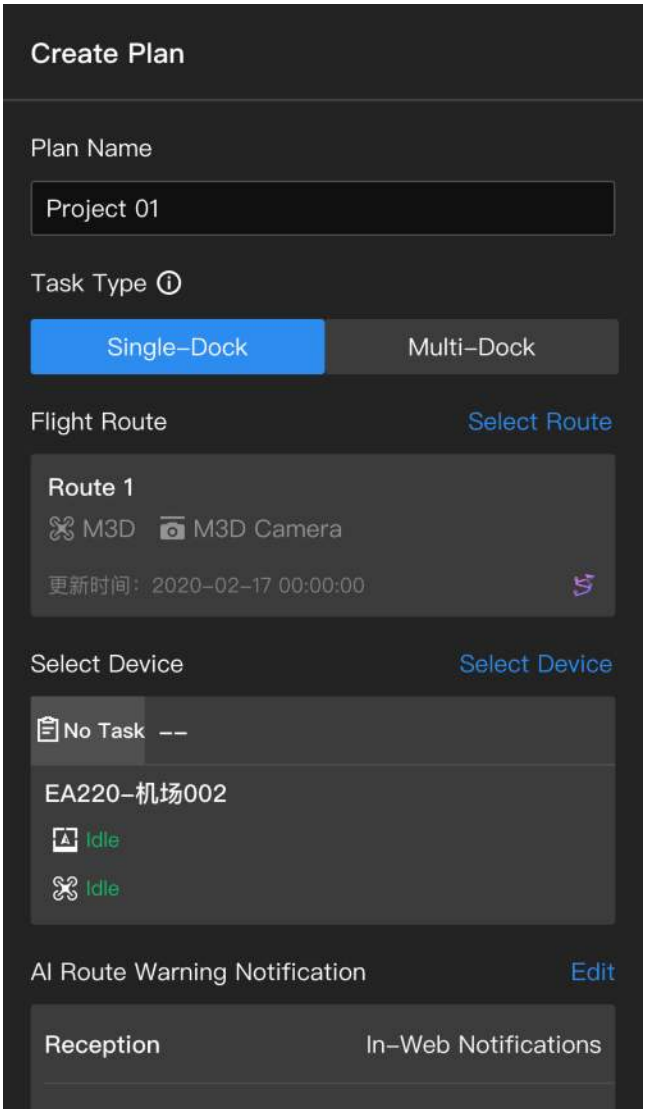
Single-Dock Plans

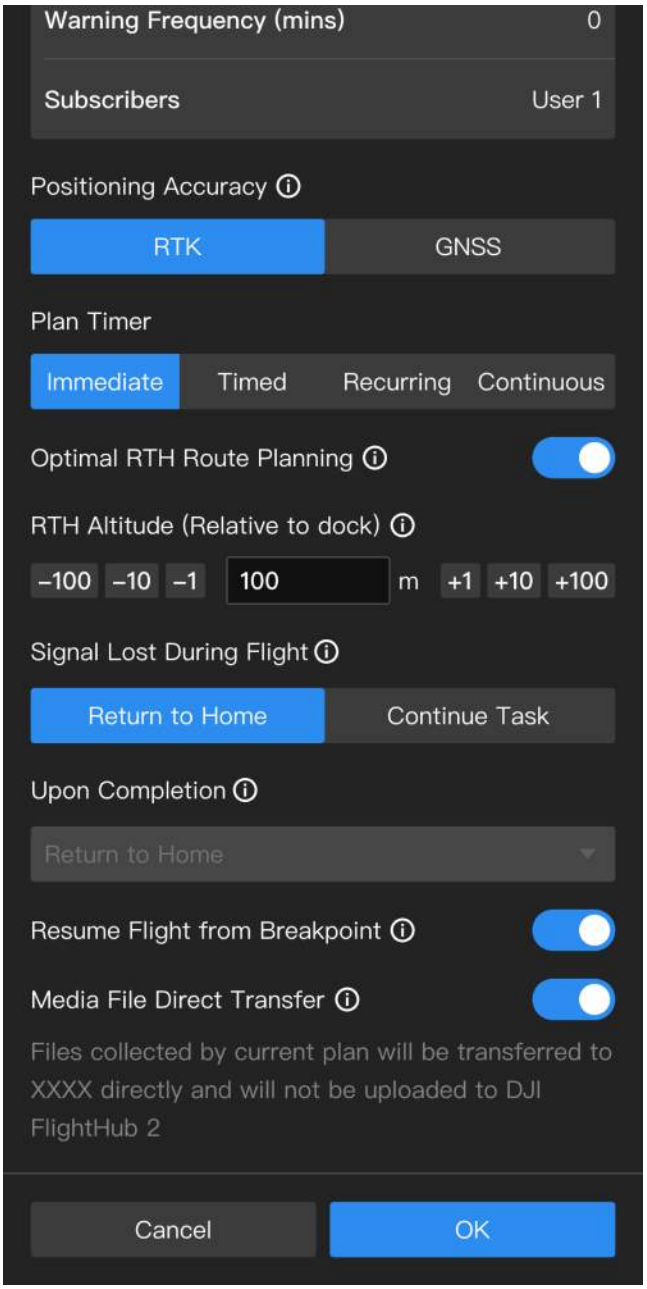
- Create Plans
- Perform Plans
- Task Management
- Notes on On-premises Version

Project members can click to enter the task plan library to view task plans, and the administrators can create and manage plans.

Create Plans

Click Create Plan to create a task plan.





1. Plan Name

The plan name is required and should be within 50 characters.

2. Task Type

Select Single-Dock.

3. Flight Route

Click to select a flight route. Only flight routes supported by the dock are displayed in the list. A flight route duplicate will be created after selecting a flight route.

- The duplicate cannot be modified after the plan is created, and the duplicate will be deleted after the plan is deleted.
- Modifying the flight route in the flight route library will not affect the flight route duplicate. Users need to create a new plan to perform the edited flight task.

4. Select Device

Only docks can be selected.

5. AI Route Warning Notification (Only Supported by DJI Dock 3)

After selecting the AI route, users need to configure the alert notification's receiving method, frequency, and subscribers when the alert conditions are met during tasks.

- Reception: You can choose in-web, SMS, or email notifications. If the organization has configured a webhook URL, you can also choose to push warning messages to the reserved webhook.
- Warning Frequency: If the warning frequency for in-web and webhook notifications is set to 0, notifications will be pushed as soon as the alert conditions are met. For all other receiving methods, the warning frequency must be set to more than 1 minute.
- Subscribers: Subscribers are only effective for in-web, SMS, and email notifications. The members added must have maintained their mobile numbers and email addresses in User Center > Basic Information.

Webhook URL: When an alert occurs, the system pushes two notifications to the configured webhook URL. The first is an instant notification, which will be sent immediately. The second is sent after photo generation and includes the photo captured at the time of the alert. Each notification contains the following information:

- "notify_type": Identifies the type of notification. Currently only "alert_notification" is supported.
- "title": The alert title customized by the user.
- "content": The alert content customized by the user.
- "dateTime": The time when the alert occurs.
- "location": The location of the subject at the time of the alert. If multiple subjects are recognized simultaneously, this will be the location at the center of the photo.

- "mediaUrl": The URL of the captured media file. If Media File Direct Transfer is enabled, it will be the file name of the media file.
- "flight_id": Identifier for the flight during which the alert occurs.
- "organization_uuid": Identifier for the organization associated with the alert.
- "project_uuid": Identifier for the project associated with the alert.

- When setting the warning frequency to Y minutes, you will only receive one warning notification every Y minutes, and the notification will only contain the latest warning information from the last Y minutes.

6. Positioning Accuracy (for DJI Dock 2 and DJI Dock 3 only)

Users can select between RTK and GNSS.

- RTK: The dock aircraft will take off and converge the RTK data in the air before performing the task. Users are unable to pause the task during the convergence. Users can choose RTK when high positioning accuracy is required.
- GNSS: The aircraft will perform tasks directly without converging the RTK data. Users can choose GNSS when relatively low positioning accuracy is acceptable.

7. Plan Timer

Users can select from Immediate, Timed, Recurring, and Continuous.

- When the plan timer is set to Immediate, the aircraft will immediately perform the flight task once the plan is created.
- When the plan timer is set to Timed, the aircraft will perform the flight task when the set time is reached.
- When the plan timer is set to Recurring, the aircraft will perform repeated flight tasks when the set time is reached.
- When the plan timer is set to Continuous, the aircraft will perform flight tasks continuously when the set time is reached and the battery level meets the requirement.

8. Optimal RTH Route Planning

- When the environment is suitable for the vision system to work properly or Obstacle Data is enabled, the aircraft will automatically plan an optimal RTH route to improve task efficiency

and preserve battery life.

- When the environment is not suitable for the vision system to work properly and Obstacle Data is disabled, the aircraft will return to home based on the task altitude and RTH altitude settings.

- When Optimal RTH Route Planning is enabled, the aircraft will intelligently adjust the flight altitude and speed based on the obstacle data and the environment conditions such as the wind speed and direction, so that the aircraft can reach the FlyTo destination or the Home Point with improved efficiency.
- It is recommended to enable Obstacle Data in Task Area Management for the optimized route planning. See Obstacle Data for more details.
- When the environment is not suitable for the vision system to work properly or other issues occur when the aircraft is performing FlyTo tasks or returning to home, the aircraft will not be able to plan an optimal route. If Obstacle Data is also disabled, the aircraft can only fly based on the set altitude and will not be able to avoid obstacles along the route. Users should set an appropriate RTH altitude before the aircraft returns to home.
- When Optimal RTH Route Planning is disabled but the environment is suitable for the vision system to work properly or Obstacle Data is enabled, the aircraft can still fly horizontally or vertically to avoid obstacles.
- If the maximum flight altitude is lower than the current aircraft altitude, the aircraft will descend directly to the maximum flight altitude before continuing tasks. If the maximum altitude is higher than the current aircraft altitude, the aircraft will stop ascending when the aircraft reaches the maximum flight altitude.

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- When there are obstacles such as wires and electric towers that are hard for the vision sensors to detect, users should disable Optimal Route Planning and make sure the set task altitude and RTH altitude are higher than the obstacle altitude along the route.

9. RTH Altitude (Relative to dock)

The aircraft altitude relative to the dock when the aircraft is returning to the dock.For DJI Dock and DJI Dock 3, the altitude range is 20 - 1500 m, and for DJI Dock 2 is 15 - 1500 m. The RTH altitude should be set based on the actual flight condition, surrounding environment, and GEO information.

It is recommended that the altitude is set higher than the highest geographical point in the flight area and should be lower than the maximum flight altitude.

10. Signal Lost During Flight

The aircraft will return to home or continue the flight task when it is disconnected from the dock.

11. Upon Completion

Only Return to Home is supported when creating a task plan.

12. Resume Flight from Breakpoint

When a task cannot be completed by one single flight, a new task will automatically be generated, and the aircraft will resume the flight from the breakpoint and complete the task after being fully charged.

> Note: Tasks resuming from breakpoint will automatically expire if the tasks are not performed for more than 3 days.

13. Media File Direct Transfer

When enabled, media files collected by current plan will be directly transferred to third-party platforms.

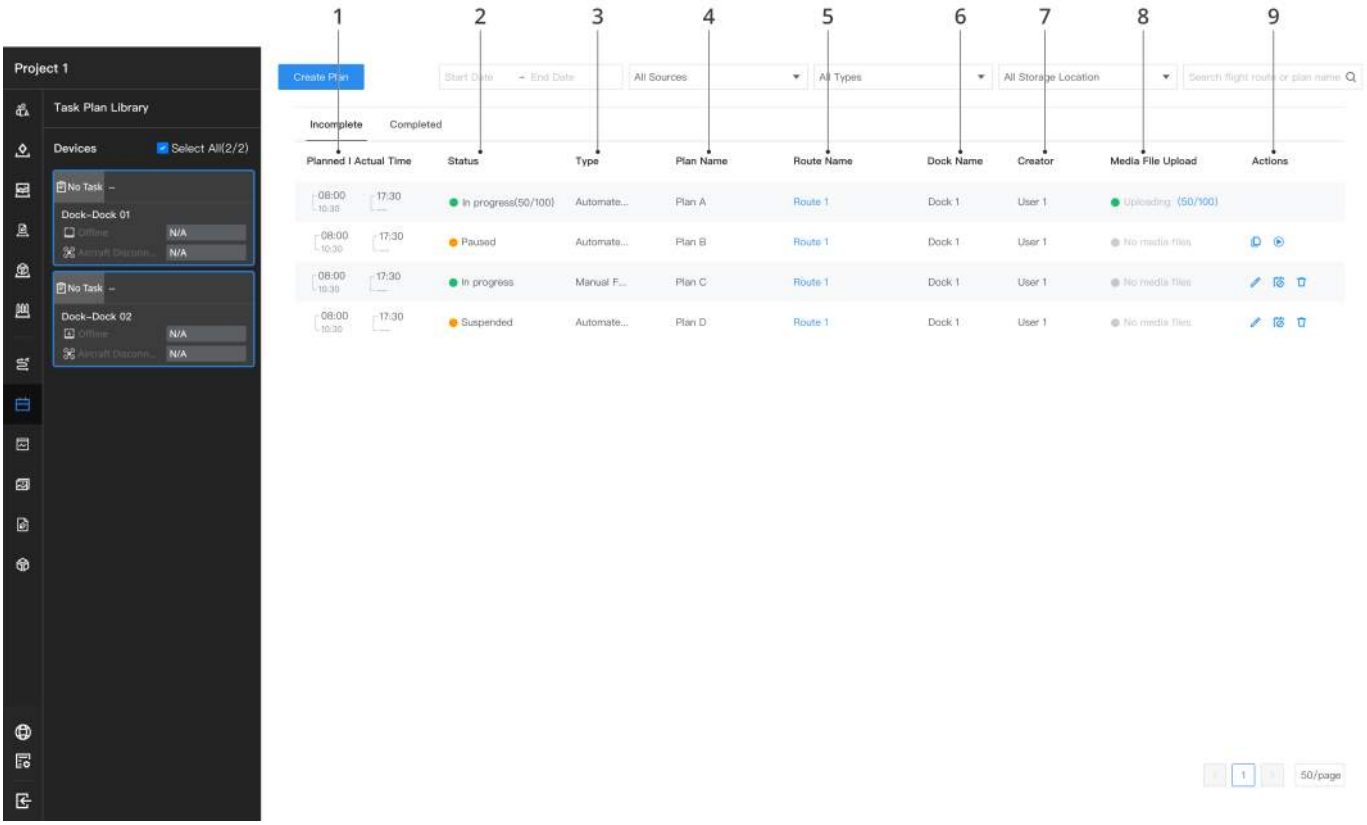
Perform Plans

Users can view the status of the single-dock task plan in the dock panel after the task starts. Click the device status window to view the device details and livestream. See Online Project Information for more details.

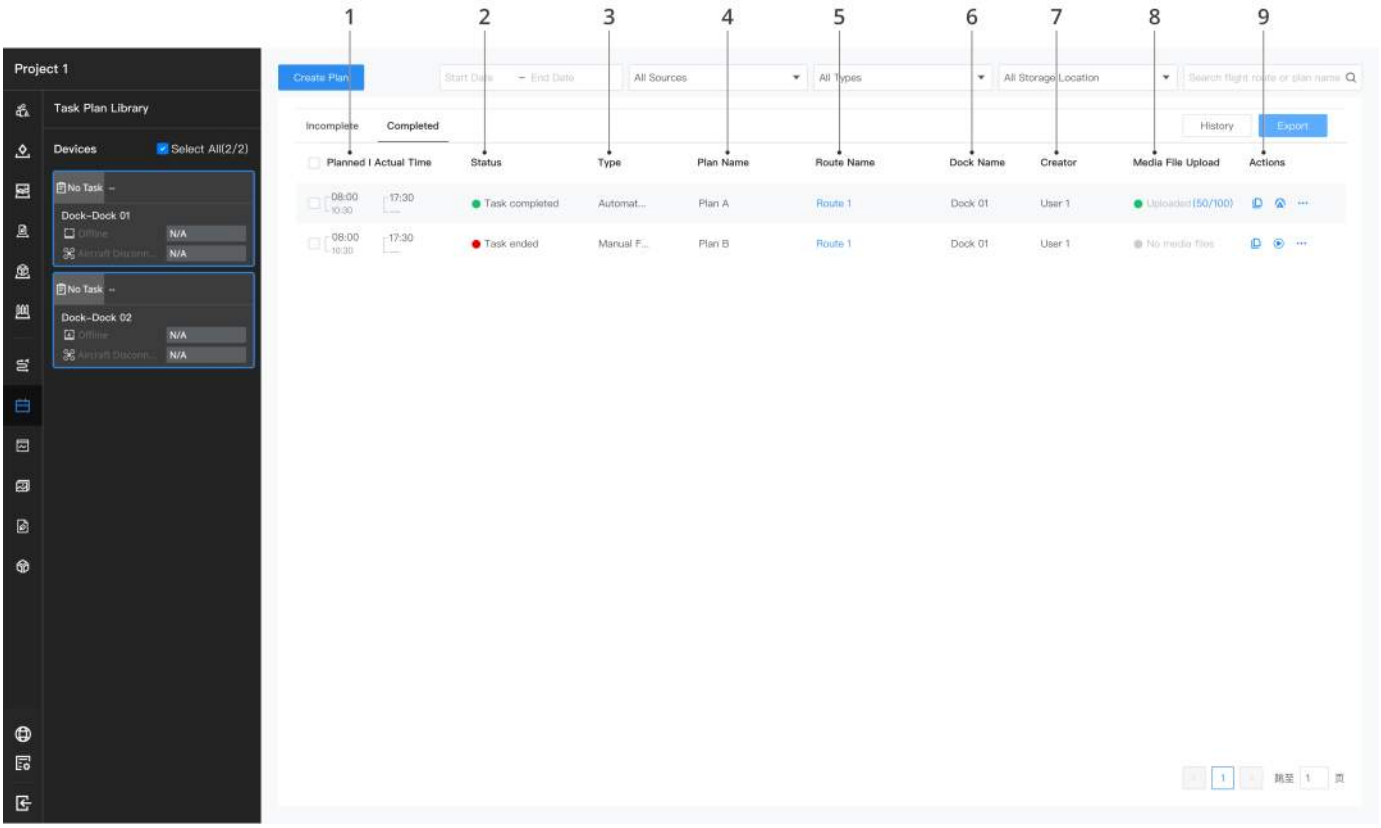
Task Management

In the Task Plan library, users can view details of both automated and manual flight tasks, including task plans, actual performance times, status, type, plan name, flight route name, device name, creator, and media file upload status. Users can also perform operations related to these tasks.

By clicking the Incomplete tab, users can view planned or ongoing flight tasks.



By clicking the Completed tab, users can view completed flight tasks.



1. Planned/Actual Time

Displays the estimated and actual performance times of flight tasks.

2. Status

- Statuses of incomplete tasks include: To be performed, In progress, Paused, and Suspended.
- Statuses of completed tasks include: Partially performed, Task completed, Task failed, and Task interrupted.

3. Type

- Automated tasks: Tasks distributed from the Task Plan Library.
- Manual flight tasks: Tasks controlled via the virtual cockpit or remote controller.

4. Plan Name

Displays the name defined by the user when creating the task.

5. Route Name

Displays the flight route copy of the flight task. Click to view the flight route. The flight route copy does not support editing.

6. Dock Name

Displays the name of the dock.

7. Creator

Displays creator information.

8. Media File Upload

Displays the media file upload status, including the number of uploaded files and total number. The media file upload statuses include Waiting to upload, Uploading, and Uploaded. Click to view media files in the Media Files library. The upload sequence of the media files is as follows:

- Media files of the Immediate flight task will be uploaded first. Media files of the Timed and Recurring tasks will be uploaded according to its actual completion time.
- Users can click Upload Now to prioritize the upload of the selected media files.

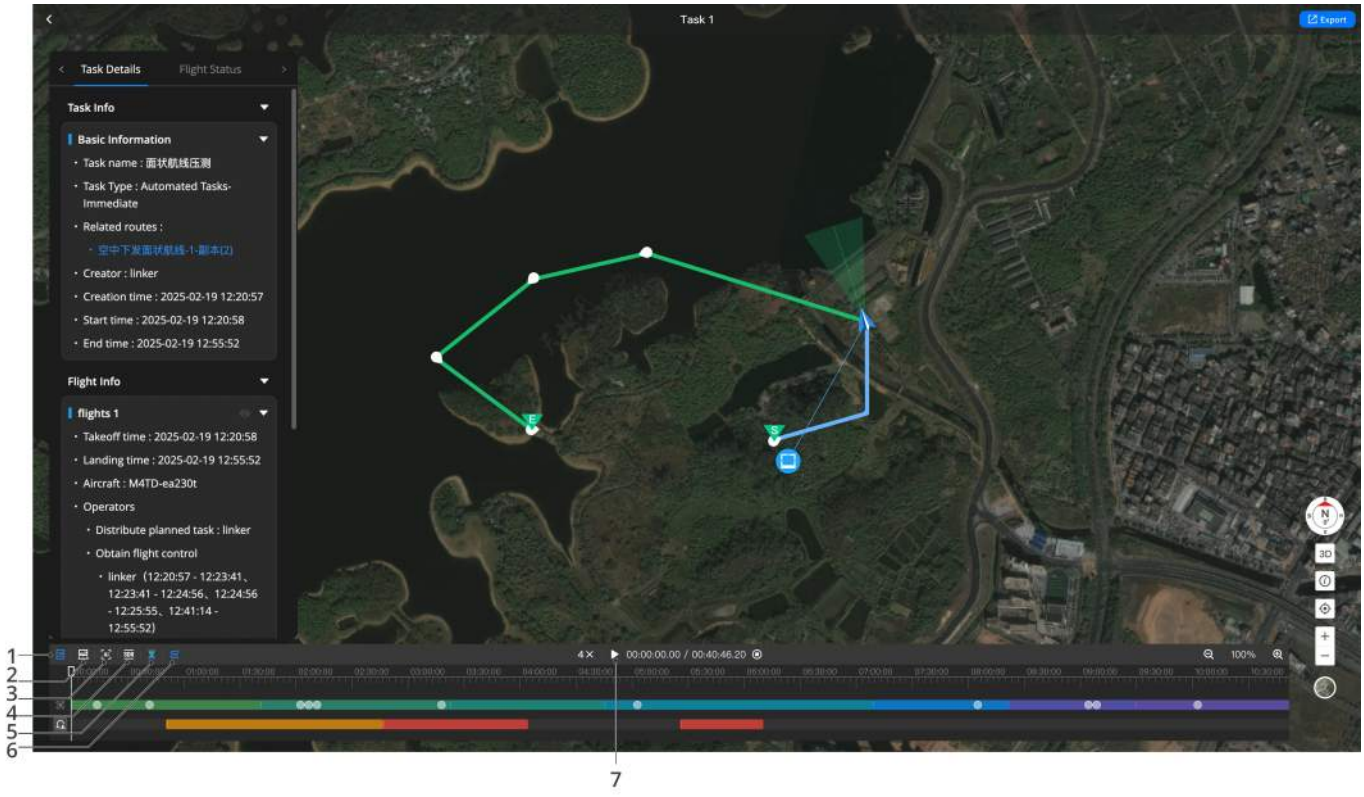
9. Actions

- For the flight tasks that are to be performed, users can edit, suspend, or delete the tasks. After the flight tasks are suspended, the aircraft will not perform the tasks. Users can resume the task so that the aircraft can continue performing the task. If the flight task exceeds the planned time, the task will be shown as failed.
- For the flight tasks that are performed, users can copy the task plan and view the flight trajectory. Click to copy the plan, enter the flight route editor, and edit to create a new task plan. When the task is completed, users can click to view the flight trajectory.
- For the flight tasks that are partially performed, users can choose to resume the flight from the breakpoint. After clicking , a new task will automatically be generated, and the aircraft will resume the flight from the breakpoint and complete the task after being fully charged.

10. View and Export Flight Records

10.1 View Flight Records

Click the Completed tab, and then click to view the flight record after a flight task is completed. You can view detailed task information corresponding to the flight task.



1) Click , you can view task details, flight status, and device information.

1. Task Details: You can view the task and flight information.
2. Flight Status: You can view user commands and flight parameters during the flight. Click the filter icon to filter fields.

3. Device Info: You can view real-time parameters of the aircraft and dock.

2) Click to preview media files.

3) Click to view detailed intelligent warning records, and support exporting AI task report.

4) Click to view the OcuSync video transmission quality corresponding to the flight trajectory on the map.

5) Click to view the aircraft's FOV on the map during trajectory playback.

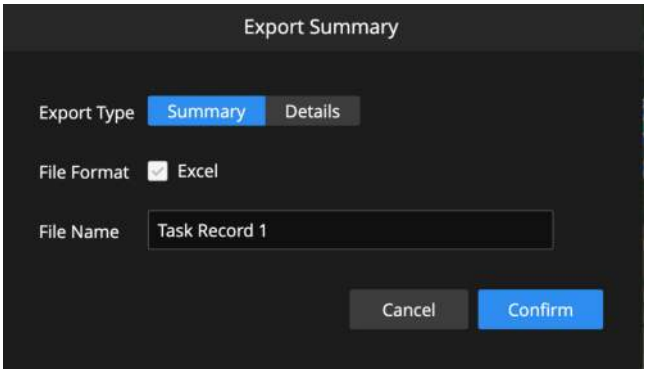
6) Click to show or hide the flight trajectory on the map.

7) Click to replay the flight trajectory.

10.2 Export Flight Records

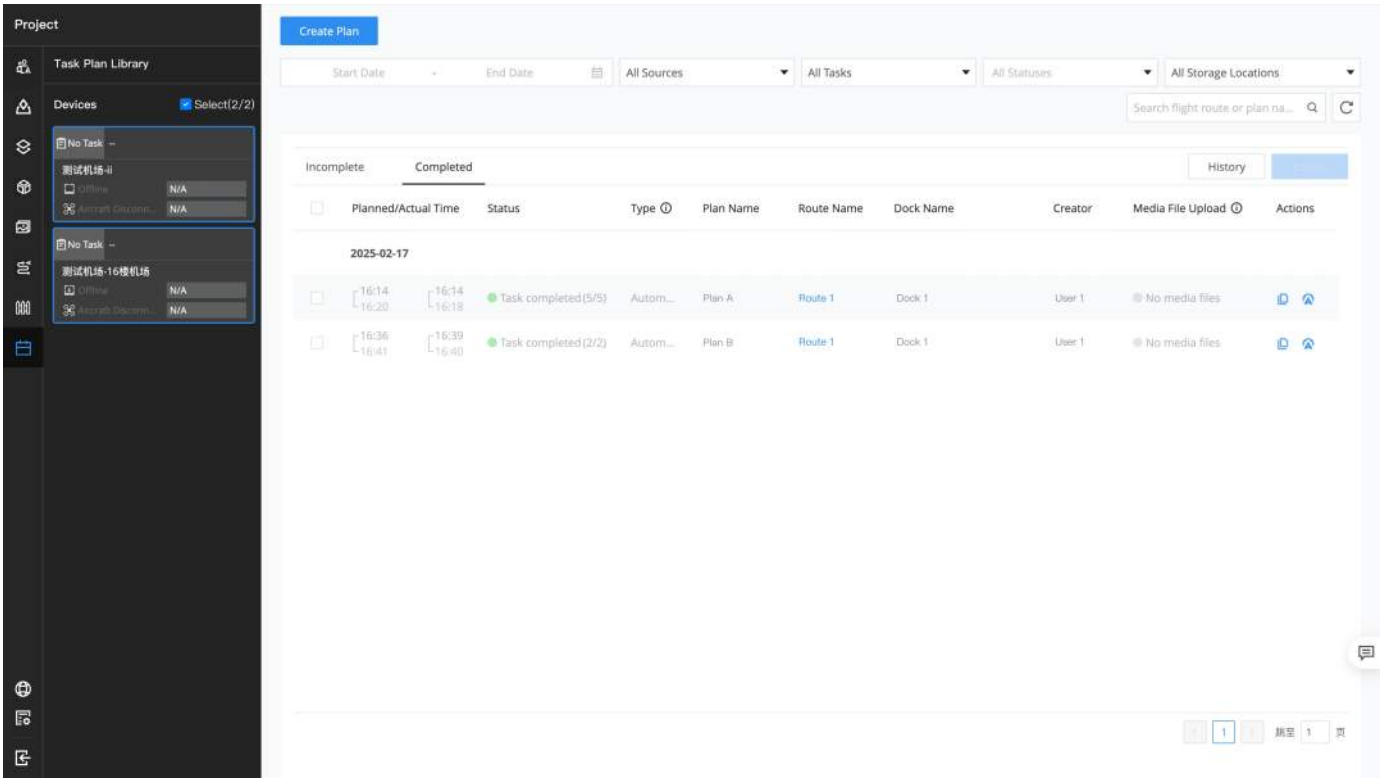
1. Single Export

Click the upper right corner of the flight record details to choose to export the summary or detailed information of the flight. When exporting detailed information, you can select the required fields. You can view past exported records or check the export progress in History.



2. Batch Export

In the Completed list, check the flight records you want to export, click export, and choose to export the summary or detailed information of the flight.



Note: Only Dock 3 supports viewing and exporting flight records. Other versions or devices only support viewing flight record summary information.

Note: When the following error codes occur when the aircraft is performing consecutive tasks, to prevent continuous retries and failures, the next consecutive task will automatically be postponed and retried after 10 minutes.

Error Code	Description
219102	Dock offline. Unable to perform task. Check if dock power supply and network connection are stable
219103	Dock not found in project. Unable to perform task
316026	Dock emergency stop button pressed down. Unable to perform task. Release button and try again
319001	Unable to perform task. Dock is performing task or uploading issue logs. Wait until task is complete or logs uploaded and try again
319016	Dock performing other task. Unable to perform current task
319018	Unable to perform task. Dock uploading issue logs. Try again later

Error Code	Description
319019	Unable to perform task. Dock obtaining issue logs. Try again later
321513	Unable to perform task. Flight route altitude greater than aircraft max flight altitude
321514	Failed to perform task. Flight route start or end point in buffer zone or exceeds distance limit
321515	Unable to perform task. Aircraft will fly across GEO Zone
514120	Dock and aircraft disconnected. Restart dock and try again or relink dock and aircraft
514134	Heavy rainfall. Unable to perform task. Try again later
514135	Unable to perform task. Wind speed too high. Try again later
514136	Dock power supply error. Unable to perform task. Resume power supply and try again
514137	Unable to perform task. Environment temperature lower than -20° C (-4° F). Try again later
514145	Dock in local debugging mode. Unable to perform current operation or task. Disconnect dock from remote controller and try again
514146	Dock in remote debugging mode. Unable to perform task. Exit debugging mode and try again
514147	Unable to start remote debugging or perform task. Updating device firmware. Wait until update is complete
514148	Task in progress. Dock unable to enter remote debugging mode or perform task again. Wait until current task is complete and try again

Notes on On-premises Version

The SMS and email services for AI routes rely on third-party cloud service capabilities. DJI FlightHub 2 on-premises version currently does not support SMS notifications.

Configuring the internal communication server or the alert server with a webhook URL is currently not supported either.

Multi-Dock Plans

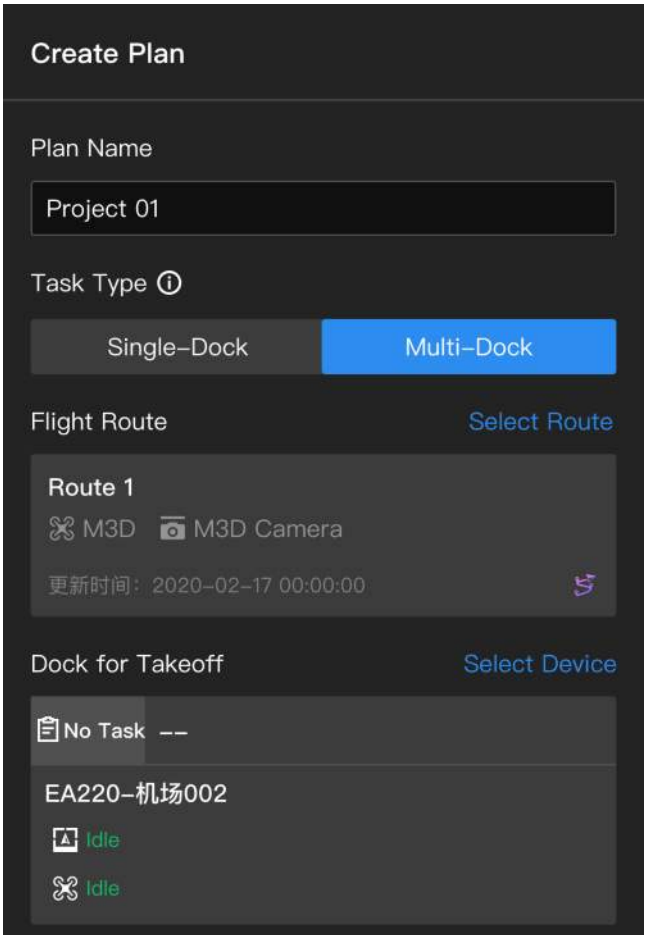
- Create Plans
- Perform Plans
- Manage Plans

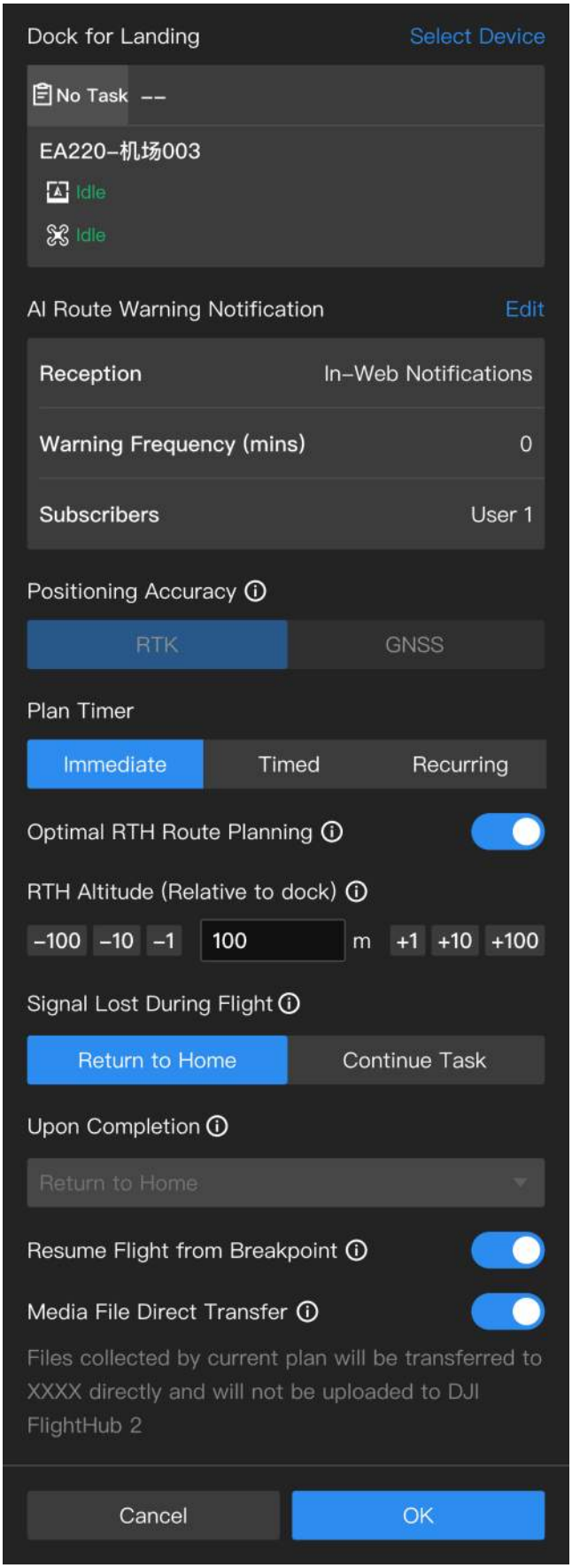
Project members can click to enter the task plan library to view task plans, and the administrators can create and manage multi-dock task plans.

> - DJI Dock 2 (firmware version must be v09.02.01.08 or later) and DJI Dock 3 support multi-dock task plans.

Create Plans

Click Create Plan to create a task plan.





1. Plan Name

The plan name is required and should be within 50 characters.

2. Task Type

Select Multi-Dock.

3. Flight Route

Click to select a flight route. Only flight routes supported by the dock are displayed in the list. A flight route duplicate will be created after selecting a flight route.

> - The duplicate cannot be modified after the plan is created, and the duplicate will be deleted after the plan is deleted.
> - Modifying the flight route in the flight route library will not affect the flight route duplicate. Users need to create a new plan to perform the edited flight task.

4. Dock for Takeoff

Select a dock for takeoff. Make sure there is an aircraft inside the dock before starting tasks.

5. Dock for Landing

Select a dock for landing. Make sure there is no aircraft inside the dock before starting tasks.

> Note: The firmware versions of the docks for takeoff and landing should be consistent.

6. AI Route Warning Notification (Only Supported by DJI Dock 3)

Select a dock for landing. Before starting the task, make sure that there are no aircraft inside the dock.

See Single-Dock Plans for more details.

7. Positioning Accuracy (for DJI Dock 2 and DJI Dock 3 only)

To ensure flight safety, only RTK can be selected in multi-dock task plans. The dock aircraft will take off and converge the RTK data in the air before performing the task. Users are unable to pause the task during the convergence.

8. Plan Timer

Users can select from Immediate, Timed, and Recurring.

- When the plan timer is set to Immediate, the aircraft will immediately perform the flight task once the plan is created.
- When the plan timer is set to Timed, the aircraft will perform the flight task when the set time is reached.
- When the plan timer is set to Recurring, the aircraft will perform repeated flight tasks when the set time is reached.

9. Optimal RTH Route Planning

- When the environment is suitable for the vision system to work properly or Obstacle Data is enabled, the aircraft will automatically plan an optimal RTH route to improve task efficiency.
- When the environment is not suitable for the vision system to work properly and Obstacle Data is disabled, the aircraft will return home based on the task altitude and RTH altitude settings.

- When Optimal RTH Route Planning is enabled, the aircraft will intelligently adjust the flight altitude and speed based on the obstacle data and the environment conditions such as the wind speed and direction, so that the aircraft can reach the FlyTo destination or the Home Point with improved efficiency.
- It is recommended to enable Obstacle Data in Task Area Management for the optimized route planning. See Obstacle Data for more details.
- When the environment is not suitable for the vision system to work properly or other issues occur when the aircraft is performing FlyTo tasks or returning home, the aircraft will not be able to plan an optimal route. Users should set an appropriate RTH altitude before the aircraft returns home.
- When Optimal RTH Route Planning is disabled but the environment is suitable for the vision system to work properly or Obstacle Data is enabled, the aircraft can still avoid obstacles by adjusting the flight route intelligently.
- If the maximum flight altitude is lower than the current aircraft altitude, the aircraft will descend directly to the maximum flight altitude before continuing tasks. If the maximum altitude is higher than the current aircraft altitude, the aircraft will stop ascending when the aircraft reaches the maximum flight altitude.

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- When there are obstacles such as wires and electric towers that are hard for the vision sensors to detect, users should disable Optimal RTH Route Planning and make sure the set task altitude and RTH altitude are higher than the obstacle altitude along the route.

10. RTH Altitude (Relative to dock)

The aircraft altitude relative to the dock when the aircraft is returning to the dock. For DJI Dock and DJI Dock 3, the altitude range is 20 - 1500 m, and for DJI Dock 2 is 15 - 1500 m. The RTH altitude should be set based on the actual flight condition, surrounding environment, and GEO information. It is recommended that the altitude is set higher than the highest geographical point in the flight area and should be lower than the maximum flight altitude.

11. Signal Lost During Flight

The aircraft will return home or continue the flight task when it is disconnected from the dock.

12. Upon Completion

Only Return to Home supported when creating task plans.

13. Resume Flight from Breakpoint

When a task cannot be completed by one single flight, a new task will automatically be generated, and the aircraft will resume the flight from the breakpoint and complete the task after being fully charged. In multi-dock task plans, the aircraft can resume the task from the breakpoint only from the dock that it lands on. If the aircraft stops the task at the breakpoint and returns to the set dock for landing, a plan will be automatically created as a single-dock task plan.

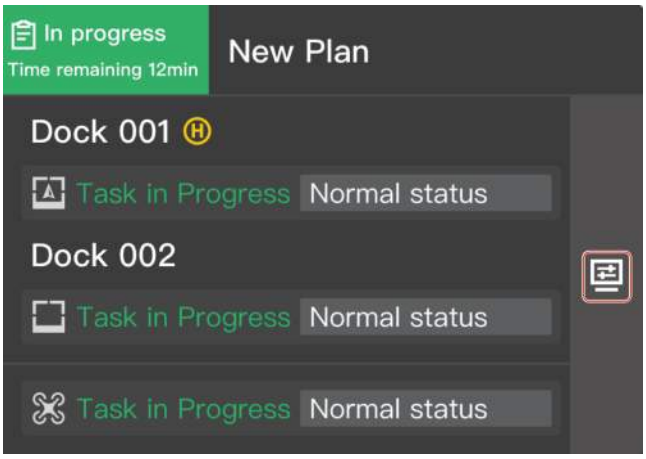
Note: Tasks resuming from breakpoint will automatically expire if the tasks are not performed for more than 3 days.

14. Media File Direct Transfer

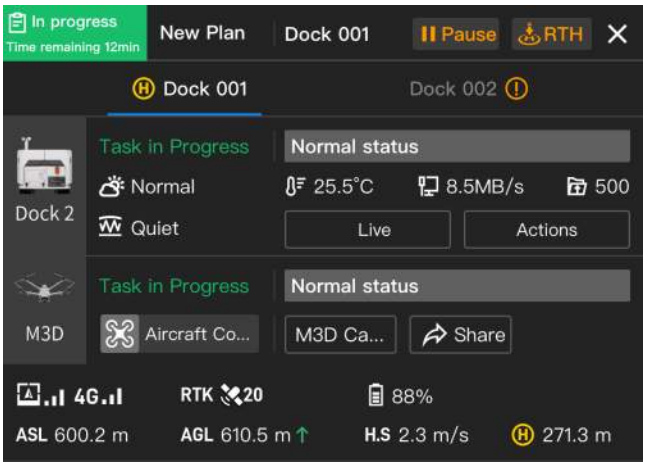
When enabled, media files collected by current plan will be directly transferred to third-party platforms.

Perform Plans

Users can view the status of the multi-dock task plan in the dock panel after the task starts. Click the device status window to view the device details and livestream.

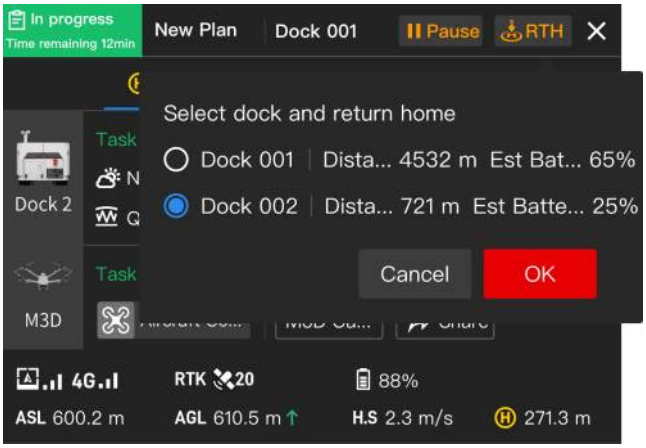


Click the dock name to view the status of the dock.



- Ⓗ indicates that the current dock is the set dock for landing.
- ⓘ indicates that there are warning messages about the current dock. Users need to pay attention to the messages.

Click  and the aircraft will return home. DJI FlightHub 2 will automatically recommend a dock for RTH. Users can also analyze the RTH distance and battery level and select a dock for RTH. The aircraft will automatically return home after the dock is selected. Pay attention to the aircraft status and livestream view. Fly with caution.



Note: Live Flight Controls is not supported when the aircraft is performing multi-dock task plans.

Manage Plans

See Single-Dock Plans for more details.

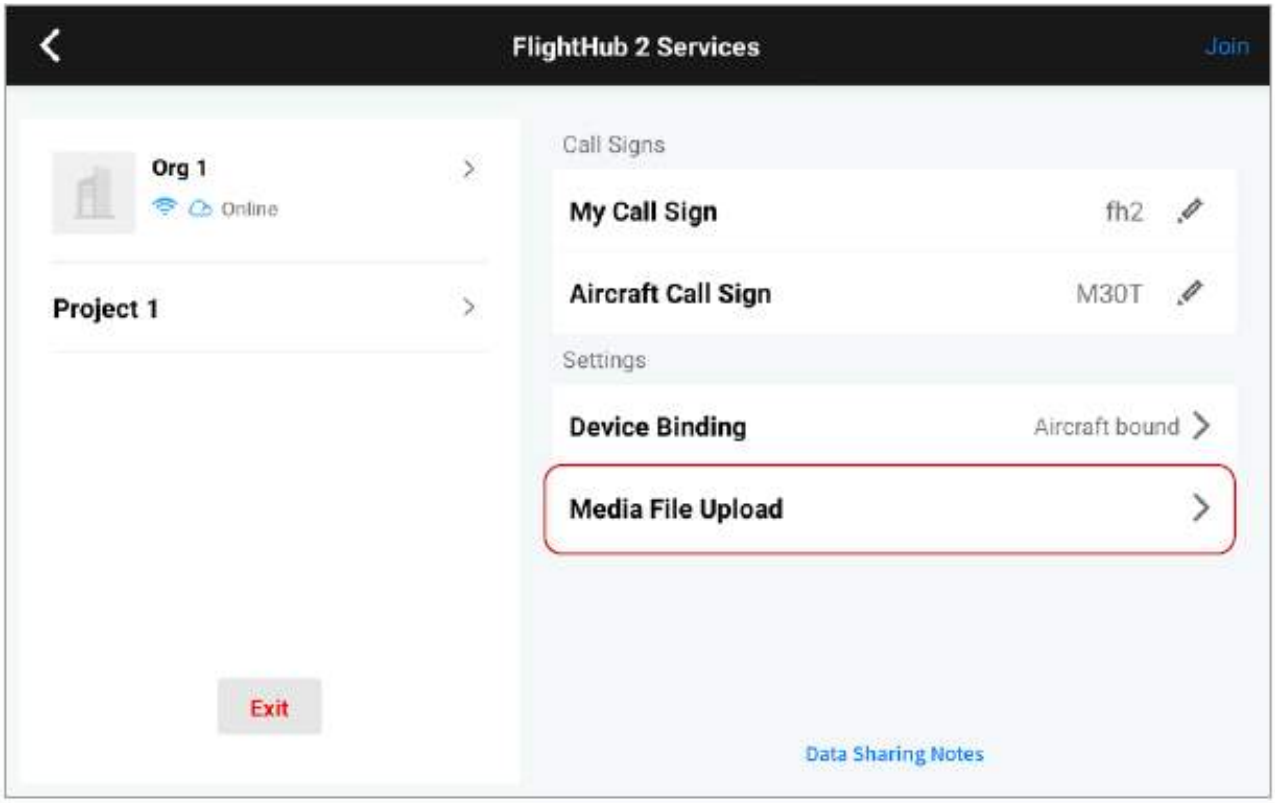
Media File Library

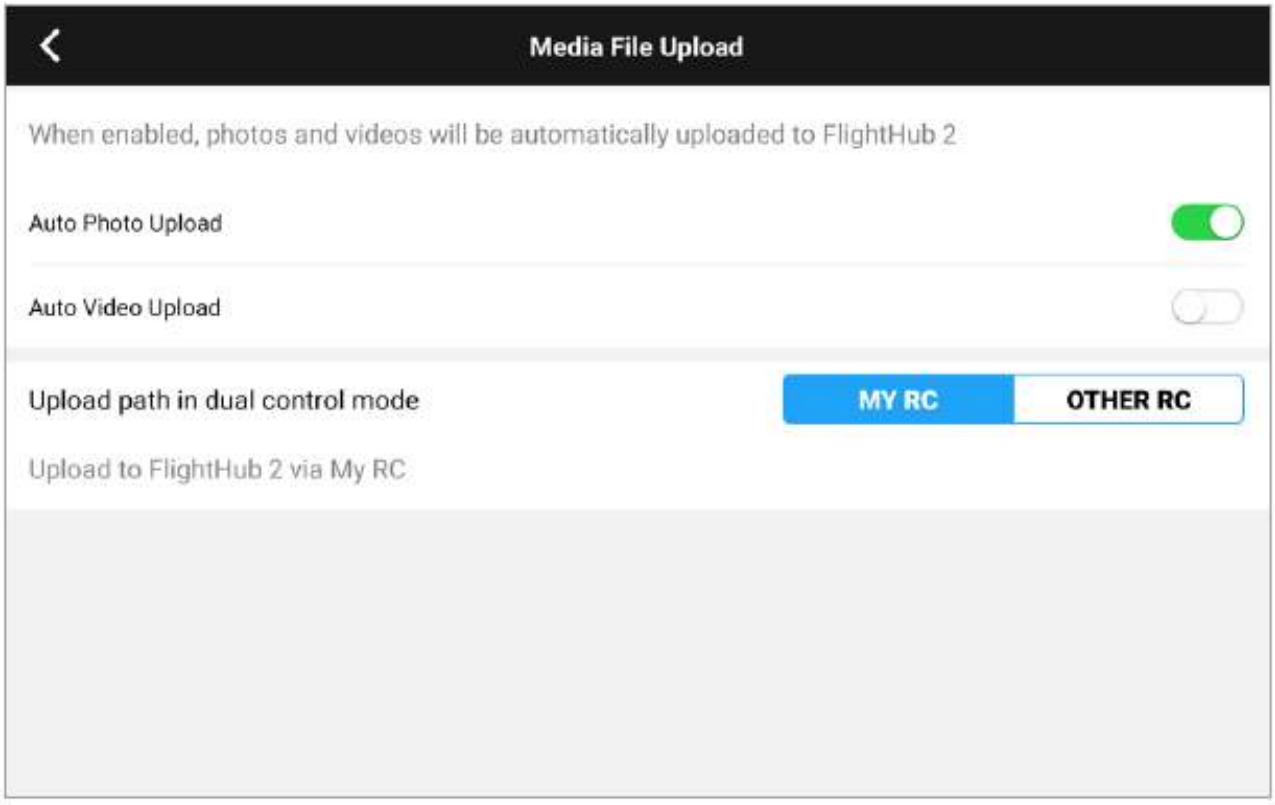
- Upload Media Files
- Import Media Files
- Manage Media Files
- Preview Media Files

Project members can click to enter the Media Files page to manage all media files uploaded from DJI Dock or DJI Pilot 2 or files that are imported locally.

Upload Media Files

The automatic upload of media files in DJI Pilot 2 is disabled by default. To enable the function, DJI Pilot 2 users can tap Media File Upload in DJI FlightHub 2 Services and choose to upload photos and videos to DJI FlightHub 2 automatically. In the dual control mode, media files will be uploaded to DJI FlightHub 2 via the first remote controller that is linked to the aircraft. Users can also change the settings and upload media files from another controller.



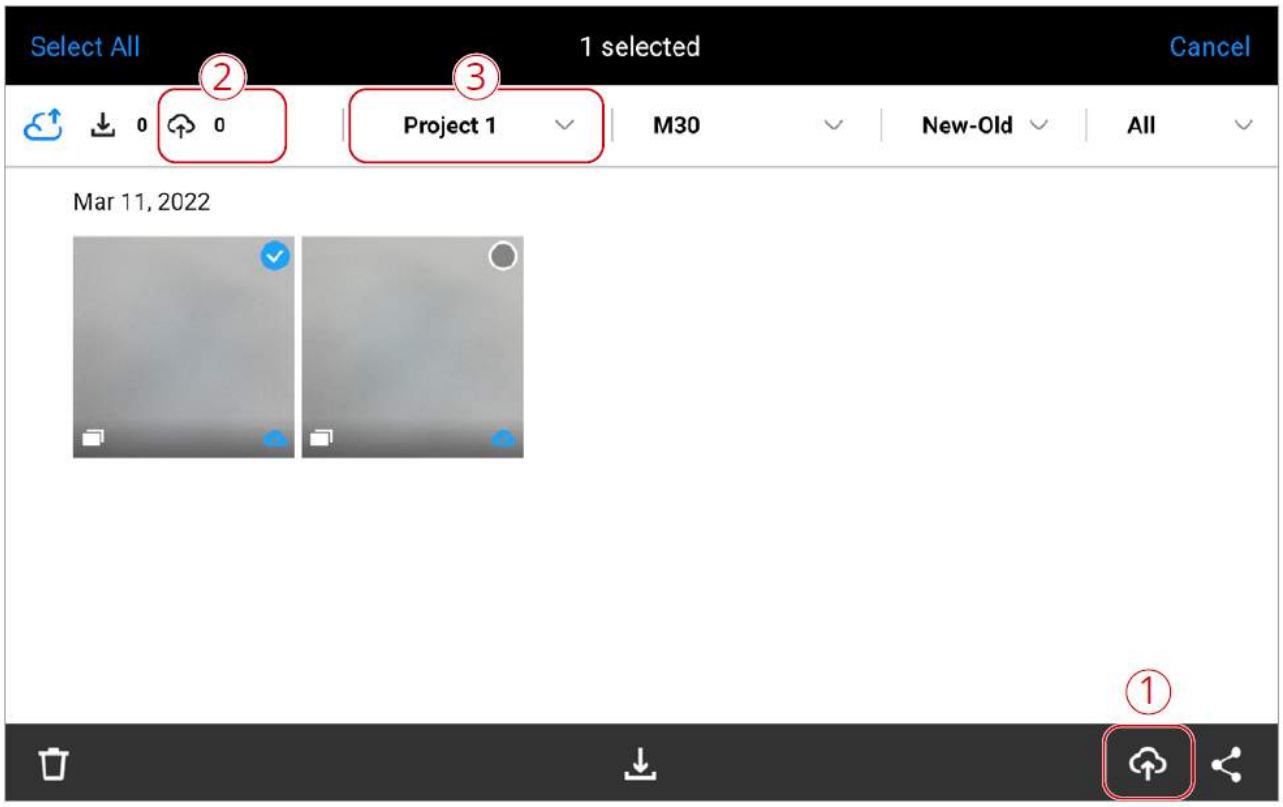


DJI Pilot 2 users can also enter the camera view and upload media files on the left panel.



To manually upload media files, DJI Pilot 2 users can enter Album and select files that need to be uploaded.

1. Select project files, tap in the lower right corner of the screen, and upload files to DJI FlightHub 2.
2. The number of files waiting to be uploaded is displayed in the upper left corner.
3. To upload media files from other projects, tap the project name, select files, and tap in the lower right corner to upload files to the corresponding project media file library.



Import Media Files

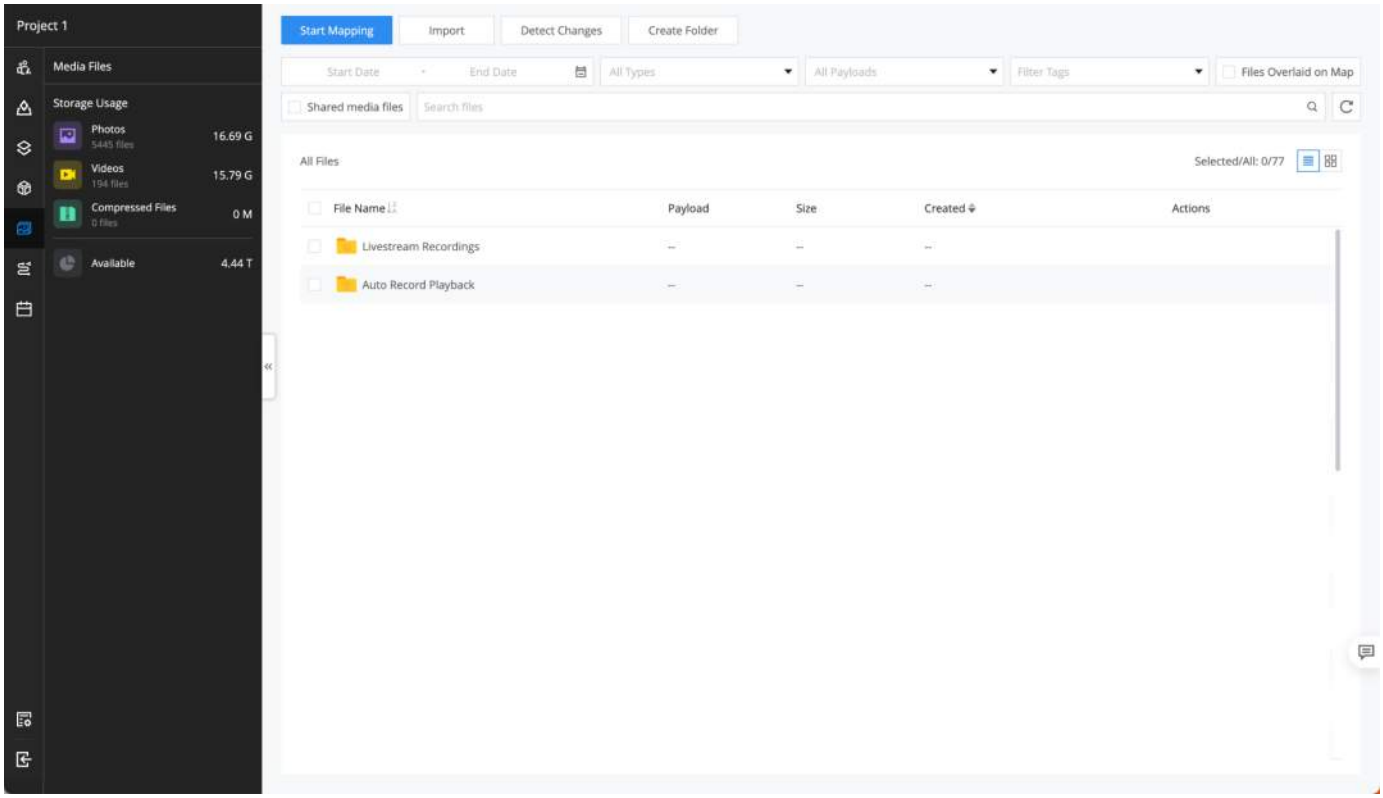
DJI FlightHub 2 supports importing files or folders with files collected by DJI devices. Compressed files are currently not supported. Supported media file types and formats are as follows:

Media Type	Format
Wide-angle/zoom/infrared photo	JPG/JPEG/PNG
Panorama	JPG/JPEG/PNG
Liveview screenshot	JPG/JPEG/PNG
Video	MP4
PPK file	MRK/NAV/OBS/RTK/BIN

Procedures:

1. Click Import to enter the Import Media Files page.
2. Click Import File or Import Folder to select a single file or folder and click Upload.
3. After files are uploaded, the files will be stored at the target path and maintain the original file structure.

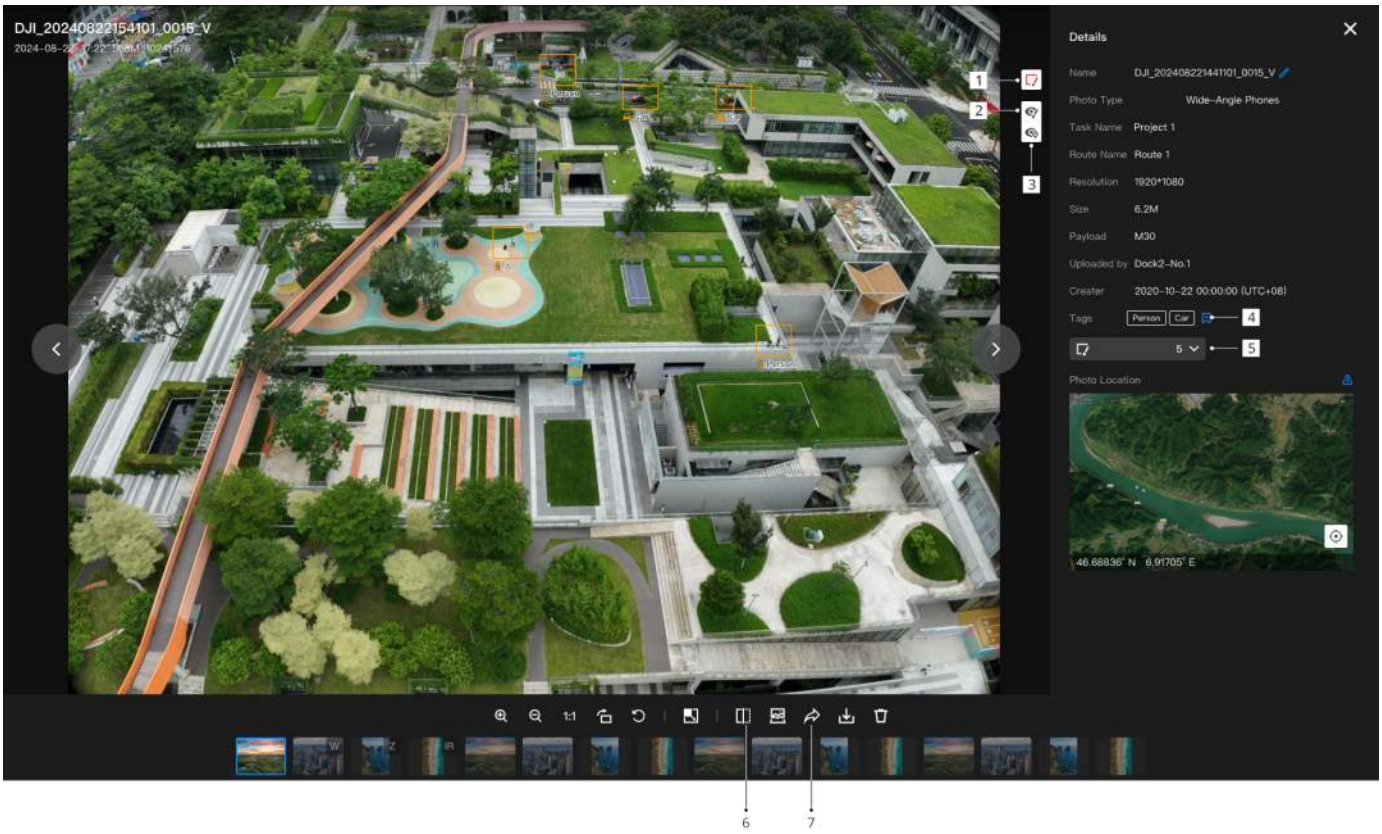
Manage Media Files



1. Project members can view, edit, transfer, delete, and download media files.
2. Click Start Mapping to select media files and start mapping tasks. See Mapping for more details.
3. Click Detect Changes to use AI to detect and mark the change regions between two phases of media files. See Media File Change Detection for more details.
4. Click to customize the sharing settings and share a single media file or the entire media file folder.
5. Members can enter a tag to filter media files with the same tag and select "Files Overlaid on Map" to view all the photos that are overlaid on the map.
6. Click "Overlay on Map" to overlay photos with location information onto the map. Panoramas are overlaid on the map by default. Go to Map Photos to manage media files that are overlaid on the map.
7. When performing Waypoint and Area routes with DJI Matrice 3D, transferring PPK files with file types such as MRK, NAV, OBS, and RTK (BIN) is supported. Downloading and accessing PPK files through FlightHub Sync or Cloud API are also available.
8. Embedding SRT files in videos captured by DJI Dock 2 is supported. Downloading and accessing videos with SRT files through FlightHub Sync or Cloud API are also available.
9. DJI Dock 2 supports transferring the base station PPK files to FlightHub 2, and the files will be stored in the corresponding flight route folder in Media Files.

Preview Media Files

Users can click a photo to preview. PinPoints that are added within five kilometers of where the photo is taken will also be displayed. When previewing panoramas, photos and panoramas that are captured within five kilometers of where the panoramas are taken will also be displayed. Click the photo or panorama thumbnail to view details.



1. Click to markup photos. Users can add frames and notes on the photos. The notes will automatically become the tags for the photos and can be used for filtering the photos. Users can also filter photos with unnamed markups.

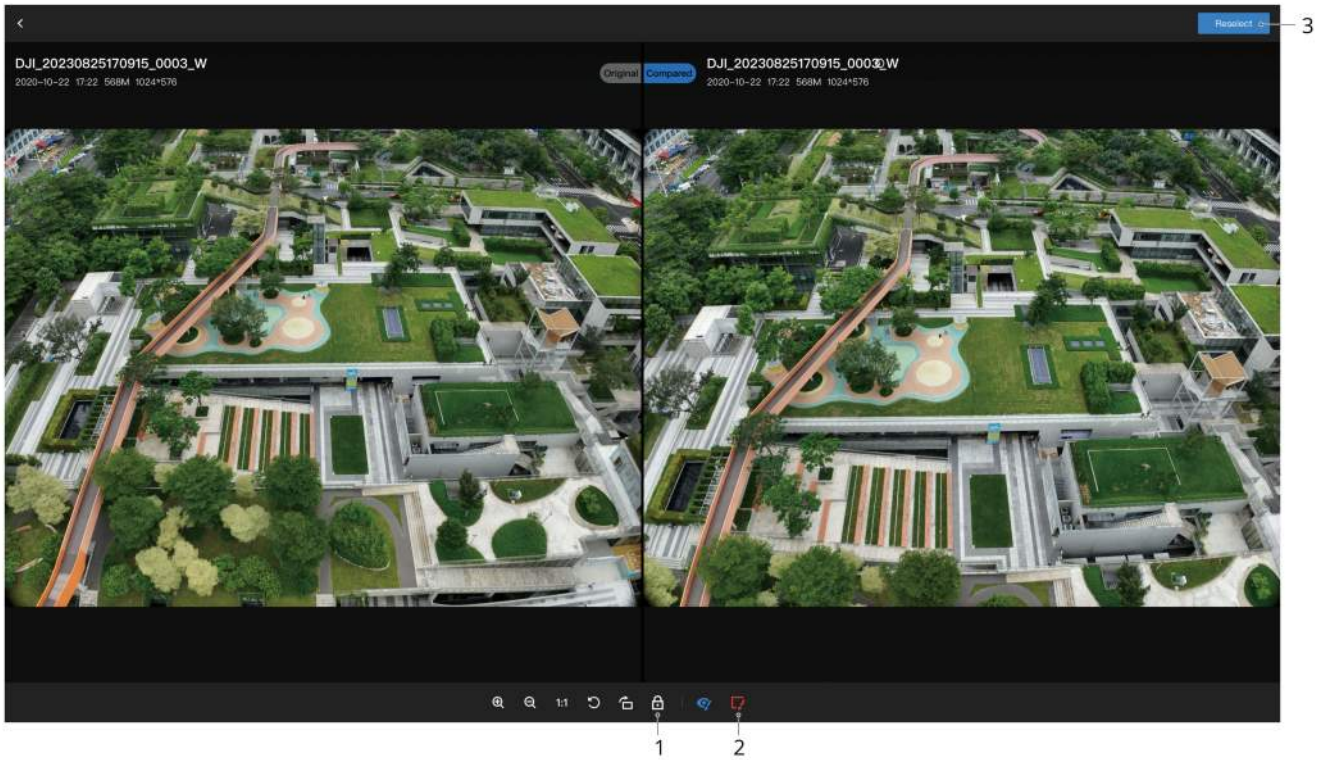
   AI recognition results will be displayed as photo markups. Markup boxes indicate subject locations, and text descriptions indicate recognized content.
   - Text descriptions are automatically generated as photo tags and can be used for filtering media files.
   - Editing markups is supported.

2. Click to hide the markup.
3. Click to hide annotations.

   - Panorama markup is currently not supported.

- Users can choose to download the photo with the photo markup.

4. Click to add tags for photos or videos.
5. Click to display a count of each type of markups.
6. Click to compare photos captured by the same Take Photo (Fixed Angle) action at the same waypoint. Comparing wide-angle, zoom, and infrared photos is currently supported.
   When comparing photos, the original photo will be displayed on the left, and on the right is the recommended photo for comparison. The recommended photo is the last captured photo in the same format.



   1. Click to cancel the synchronization of operations on the photos.
   2. Click to add markup on one of the photos.
   3. Click Reselect to change the photo to be compared.
7. Click to customize the sharing settings and share the current media file.

Media File Change Detection

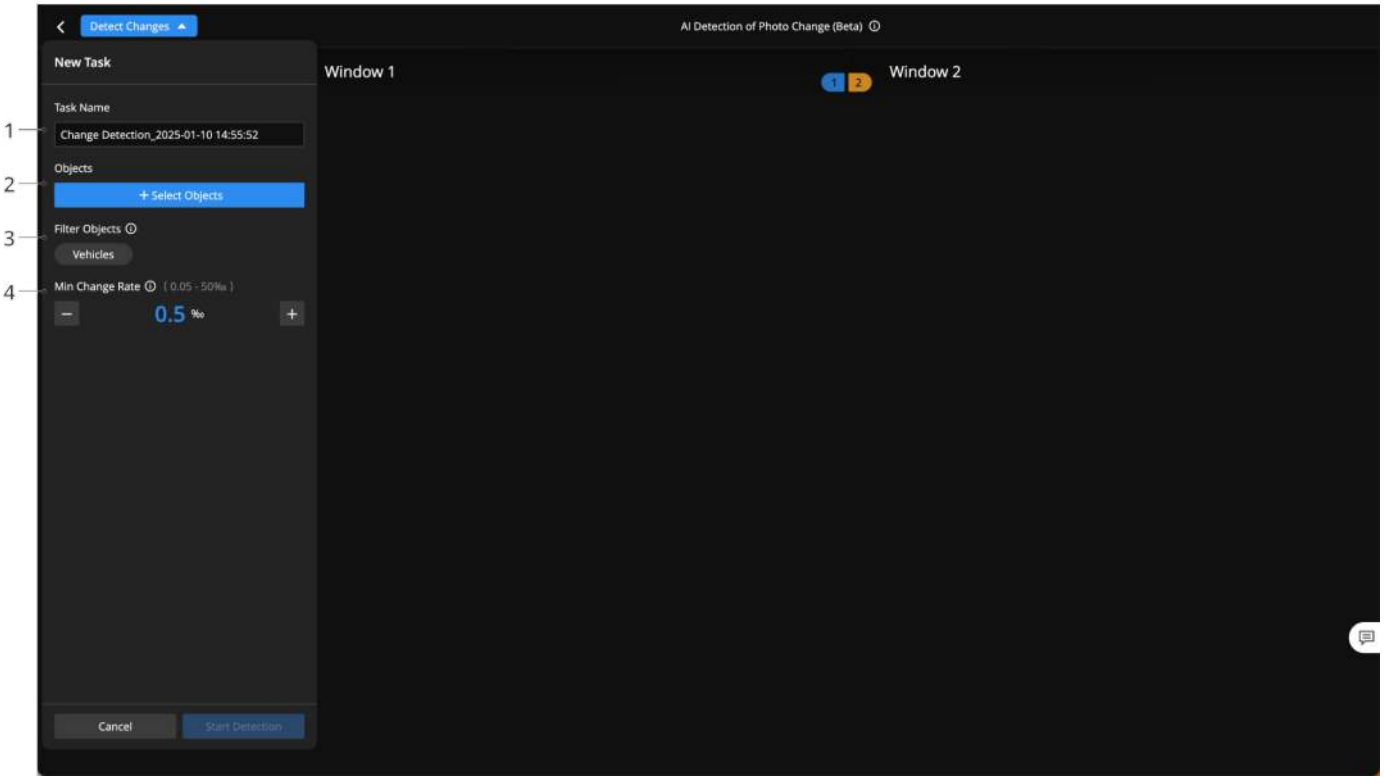
- Media File Change Detection
- Notes on On-premises Version

Media File Change Detection

AI can detect and mark the regions of change between two phases of photos. Now available for free during our limited-time public beta.

- Supports comparing two phases of photos from media folders generated by the same waypoint route task.
- Supports overhead wide-angle and zoom photos with the same resolution.
- Local uploads or media files transferred from DJI Pilot 2 are not supported.

New Task

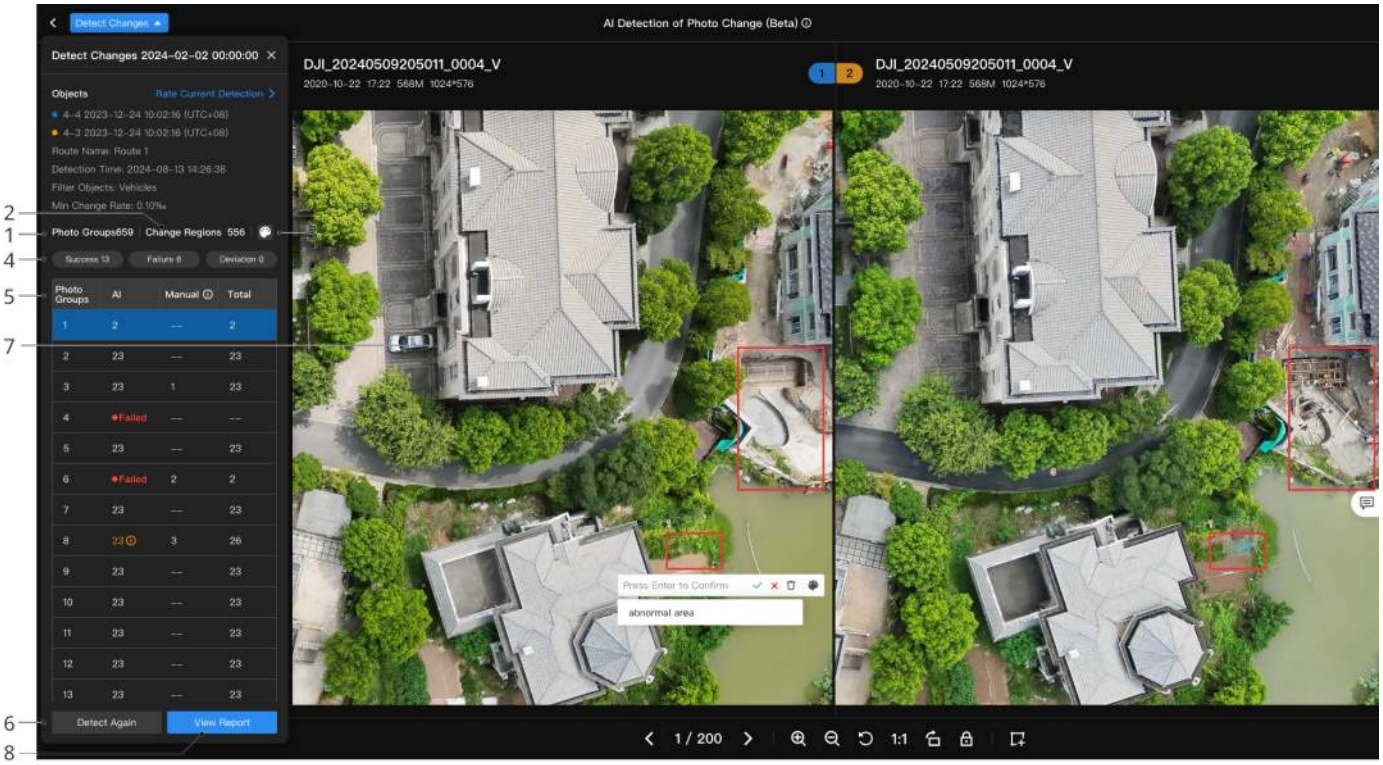


1. Task Name: Enter the detection task name.
2. Objects: Click to select objects. Choose a waypoint route first and then the media files generated by the waypoint route. After selection, photos of the same type taken in the same Take Photo (Fixed Angle) action will be automatically matched.
3. Filter Objects: If Vehicles is selected, vehicles will not be recognized as changes.
4. Min Change Region: A region will not be considered a change if the ratio of change-region pixels to total photo pixels falls below the specified threshold.

Click Start Detection and wait for the detection to complete.

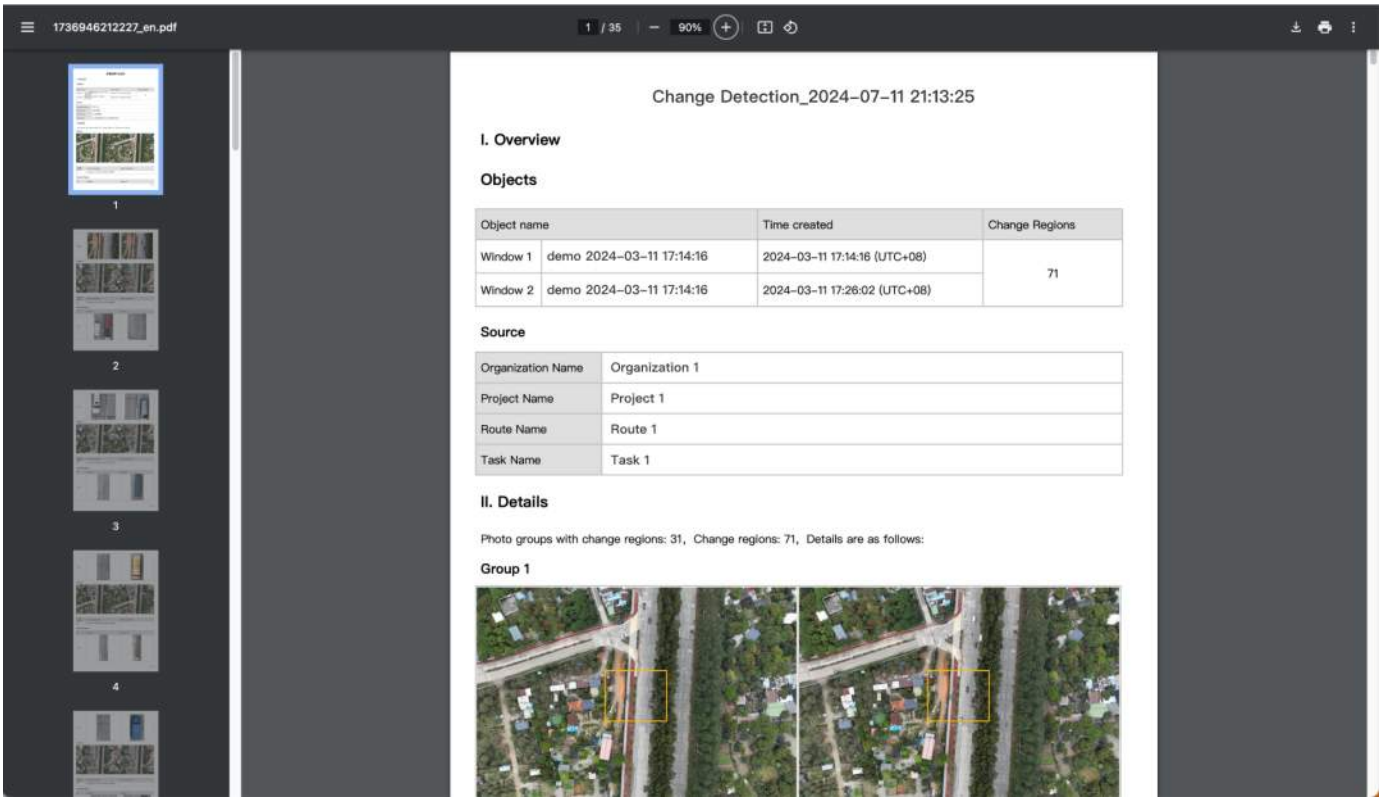
Viewing and Editing Results

After detection is complete, you can view the change regions marked by AI.



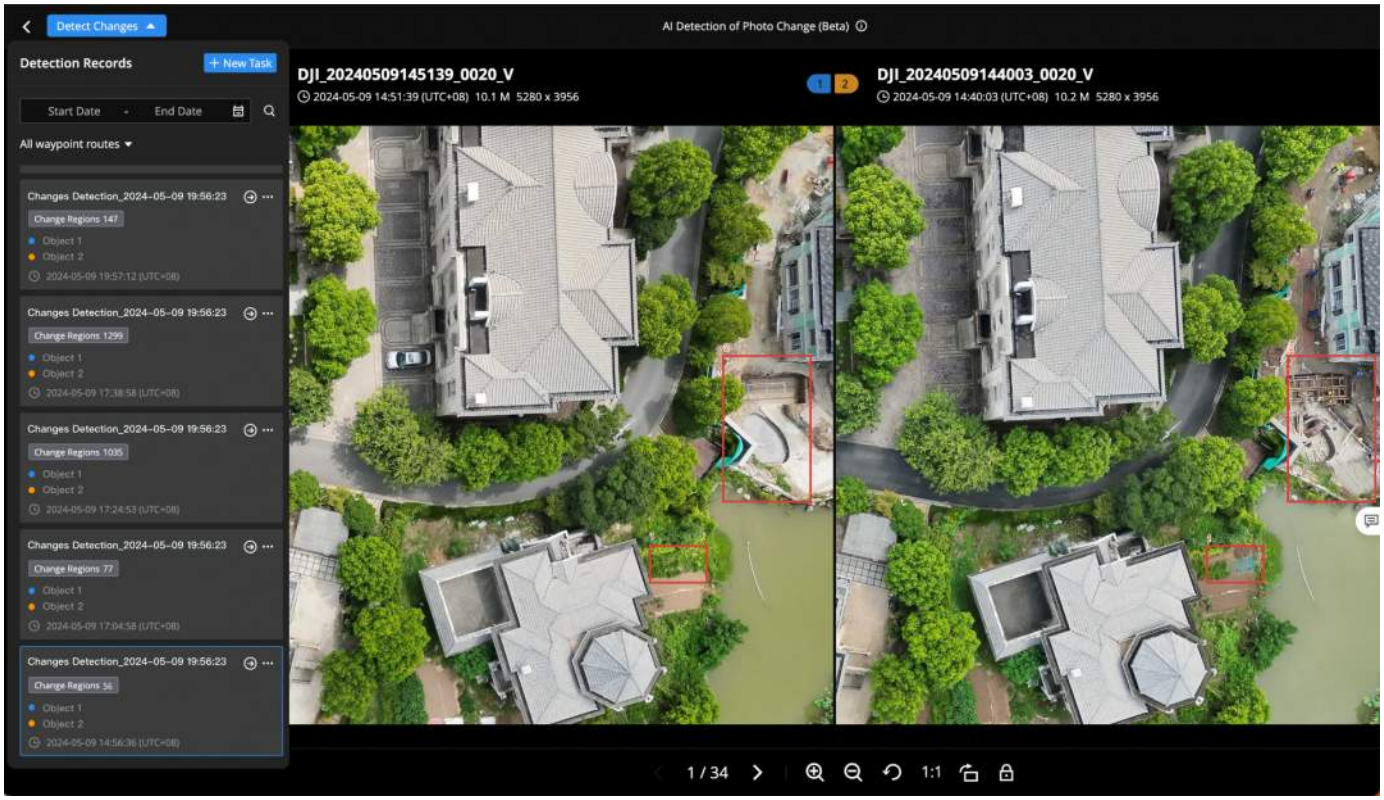
1. Photo Groups: Number of photo groups involved in detection.
2. Change Regions: Total number of change regions.
3. Modify the color of all change regions.
4. Filter photo groups with successful detection, failed detection, or detection results with deviation. Detection results with deviation occur when the shooting angles of a group of photos vary significantly. In this case, manual review is recommended.
5. Change Region List for Photo Groups: Displays the number of change regions detected by AI, manually modified or added change regions, and the total number of change regions.
6. Detect Again: Detecting again will overwrite the current detection results.

7. Result Editing: Supports editing of AI-detected change regions, including adding and deleting change regions, or modifying borders, colors, or texts. Modifying a change region in one window will also modify the corresponding change region in the other window.
8. View Report: Click to view the report. A report will be generated, including detected object information, change region statistics, and photos and coordinates for each change. Exporting reports in PDF or DOC format is supported.



Detection Record Management

You can create, view, and manage all detection records.



Notes on On-premises Version

The FlightHub 2 On-premises version currently does not support the media change detection feature.

Intelligent Media Search

- Creating a New Search Task
- Reviewing and Managing Search Results
- Managing Search History
- For On-Premises Users

Smart Media Search is a powerful feature that helps you quickly find and tag specific objects within a large library of media files. You can access Smart Search from the navigation bar in the Media File Library or under the Media Files tab in the Analyzer.

Please be aware of the following limitations during the free public beta period:

- Unsupported Media: Panoramic and infrared photos
- File Size and Resolution Limits:
  - Files with a resolution exceeding 36,000,000 pixels are not supported.
  - Files larger than 10 MB are not supported.
- Task Limits:
  - A single search task can include a maximum of 5,000 files (photos + video frames).
  - Only one search task can run per project at a time.
  - A single user account can run a maximum of 20 search tasks concurrently across all projects.

Creating a New Search Task

1. Select Media

Choose the media files you want to analyze. Smart Search supports wide-angle photos, zoom photos, and videos.

2. Define Your Search Object

- Text Description: Simply type what you want to find.
- Image Description: Upload a reference photo and mark up the object you want to find. The AI model will interpret your input and convert it into effective search tags, which you can modify or delete as needed. You can define multiple search objects in a single task.

3. Set Video Frame Capture Interval

If your selection includes videos, you can set the frame capture interval. This helps prevent the model from missing objects or detecting the same object repeatedly.

4. Start the Search

Once you start the task, the page will display real-time progress and update with results as they are found.

Reviewing and Managing Search Results

1. Viewing Results

- Found objects will be marked with annotations on the photos and videos. You can show or hide these markups.
- Filter the results by search tags to focus on specific objects.
- For videos, the timeline will highlight the time periods where objects are found. You can switch between two views:
  - Time Series Chart: Shows the exact time points when an object appears.
  - Area Chart: Displays the number of objects at each time point.

2. Editing Results

- You can add, modify, or delete objects.
- You can also remove any irrelevant photos, video frames, or entire videos from the results.

3. Saving Your Results

By default, the markups generated by a search will not be saved to the media file library. You can click Save Markups. This will sync the results to the original media files in your media file library and the analyzer.

4. Downloading Media

You can download the original media files or download files with the marked search results.

5. Generating a Report

Create a PDF report of the search results for easy archiving, sharing, and documentation.

6. Important Note on Video Frames

- Storage: Video frames generated during a search are automatically saved in a subfolder and will consume storage space.
- Deletion: If you remove a video frame from the search results, the corresponding frame will also be permanently deleted from the subfolder.

Managing Search History

All past and current search tasks are listed here, allowing you to easily view, manage, and revisit your search history.

For On-Premises Users

The Smart Search feature is also available for on-premises deployments. This version offers the additional benefit of allowing you to integrate custom AI models for your specific search needs.

Import Models

Project members can click to enter the Model library to import and manage 2D and 3D models.

Supported model types and formats are as follows.

Model Type	Model Format
2D model	PNG, TIFF, and PNG+TIFF
Point cloud model	PNTS and LAS
Mesh model	B3DM

For model files in the TIFF or LAS format, users can upload files directly. For model files in other formats, follow the provided example on the web to prepare the model file and compress the model into a ZIP file before uploading.

1. Click Import to enter the Import Model page.
2. Click Import Model to import one or multiple models at the same time. Users can choose Display Model on Map Once Imported, and the imported models will automatically be displayed on the map.

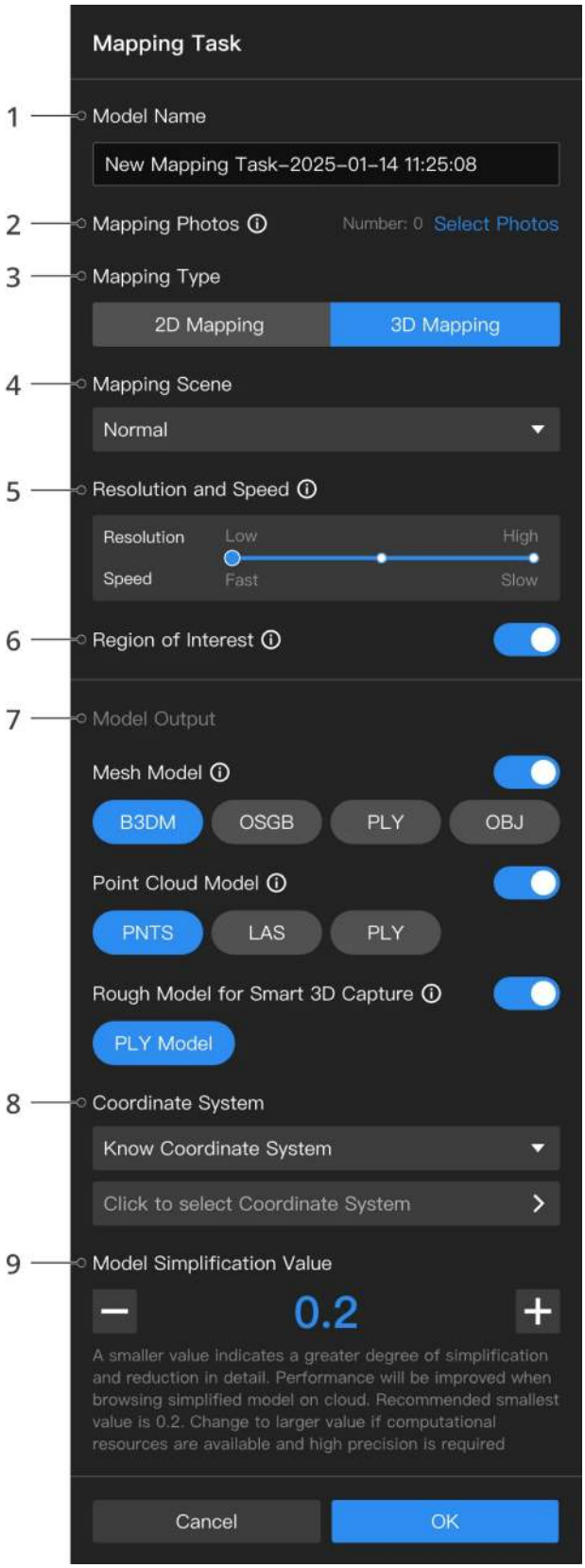
- The ZIP file will automatically be decompressed after it is imported.
- The imported LAS model will automatically be converted to the PNTS format.
- If the coordinate system information is missing in the imported LAS model, users can click Set GCS/PCS and enter the coordinate system name or its EPSG code to search for the coordinate system.

Mapping

- Mapping Introduction
- Using Ground Control Points for Mapping
- Notes on On-premises Version

Mapping Introduction

Enter the Model library and click "Start Mapping".



1. Model Name: Model name can be edited.
2. Mapping Photos: Click Select Photos and select the mapping photos from "Files captured by aircraft" or "Files in media file library".
3. Mapping Type: Users can select from 2D Mapping and 3D Mapping.

4. Mapping Scene: Users can select from Normal and Circle before generating 3D models. It is recommended to select Circle when the photos for mapping are collected by the geometric routes or other routes that circle around an area.

5. Resolution and Speed: The model resolution and mapping speed are inversely proportional. You can reduce the model resolution to increase the mapping speed.

Using 627 photos as an example for mapping, the reference effects of speed and resolution are as follows:



> Note: The mapping effects and speed are for reference only.

6. Region of Interest: When enabled, only photos within the region of interest will be used for mapping to increase efficiency.

> - Setting one region of interest is supported.
> - For the flight tasks that are planned on the cloud, the region of interest will automatically be set as the mapping area. If the photos for a mapping task cannot be collected in one single flight, blurriness at the edge of the model may occur. It is recommended to reduce the region of interest to be within the mapping area.

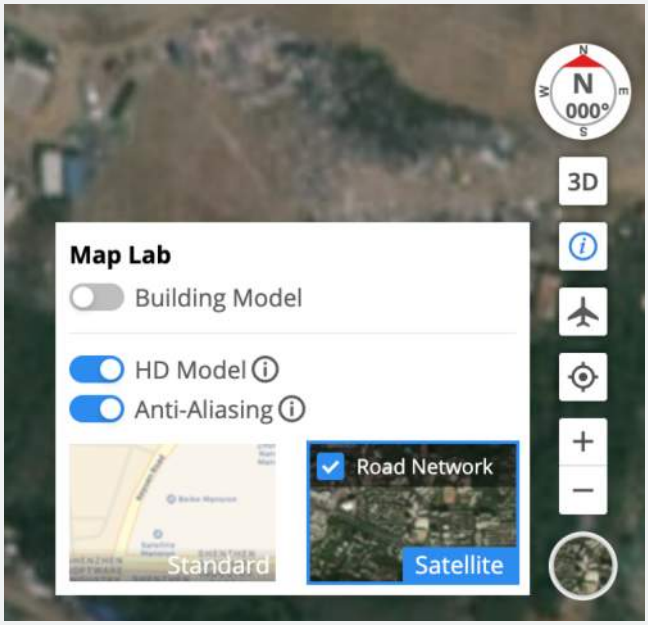
7. Model Output: Users need to select at least one output format before generating 3D models. To use the model for Smart 3D Capture route planning, users need to enable Rough Model for Smart 3D Capture.

8. Coordinate System: Users can select from Known Coordinate System and Arbitrary Coordinate System. If there are no specific requirements, it is recommended to use the default selection.

9. Model Simplification Value: It is recommended to set the model simplification value to 0.2 for enhanced mapping efficiency and better browsing experience.

Click OK to start the mapping task.

- Users can change to a larger model simplification value if the computer performance is good or high precision is required. Users can also enable HD Model in the lower right corner of the web page to enhance the model details.



- The mapping time required depends on the mapping type and number of photos.

Using Ground Control Points for Mapping

For more accurate model reconstruction, you can use Ground Control Points (GCPs). Enable the GCP feature after selecting the photos for your mapping task.

GCP Settings

Coordinate System and Data

1. GCP Coordinate System: Select horizontal and vertical coordinate systems using standard EPSG codes.
2. Image POS Data: Enable this to use the position data from your images. This improves reconstruction accuracy and can reduce the number of control points required.

Marker Type

Select the type of physical marker used in the mapping area.

- Standard Marker: Markers with red and white patterns.
- Non-standard Marker: Choose this for any other marker style.

Auto Mapping

1. Automatic marking is only available for Standard Markers.
2. When enabled, the software will automatically add marks after the aerotriangulation stage. After marking is complete, it will proceed to aerotriangulation optimization and final model mapping.
3. You can set a minimum number of required control points. If the software finds fewer control points than this threshold, the automated process will pause, allowing you to manually intervene. You can also review and edit the automatically added marks in the model library. Check values like Reprojection Error and 3D Point Error to identify and correct any issues, such as misidentification or intentional movement of markers.

Mapping Quality Alert

Set a maximum acceptable error threshold for your check points. If the final model's check point error exceeds this value, the system will display a warning, indicating that the model's accuracy may not meet your requirements. This helps you identify potential data accuracy issues with the model.

Importing and Configuring GCPs

1. You can import GCPs from local CSV or TXT files. Once imported, GCP files are automatically saved to the FlightHub cloud, making them accessible for future projects.
2. Saved GCPs can be managed from the model library.
3. After importing, you must set control or check points. For best results, make sure your GCPs are distributed as evenly as possible across the area, as shown on the map.

> Note: The GCP positions shown on the map are based solely on their EPSG coordinates. There might be some slight inaccuracies.

Notes on On-premises Version

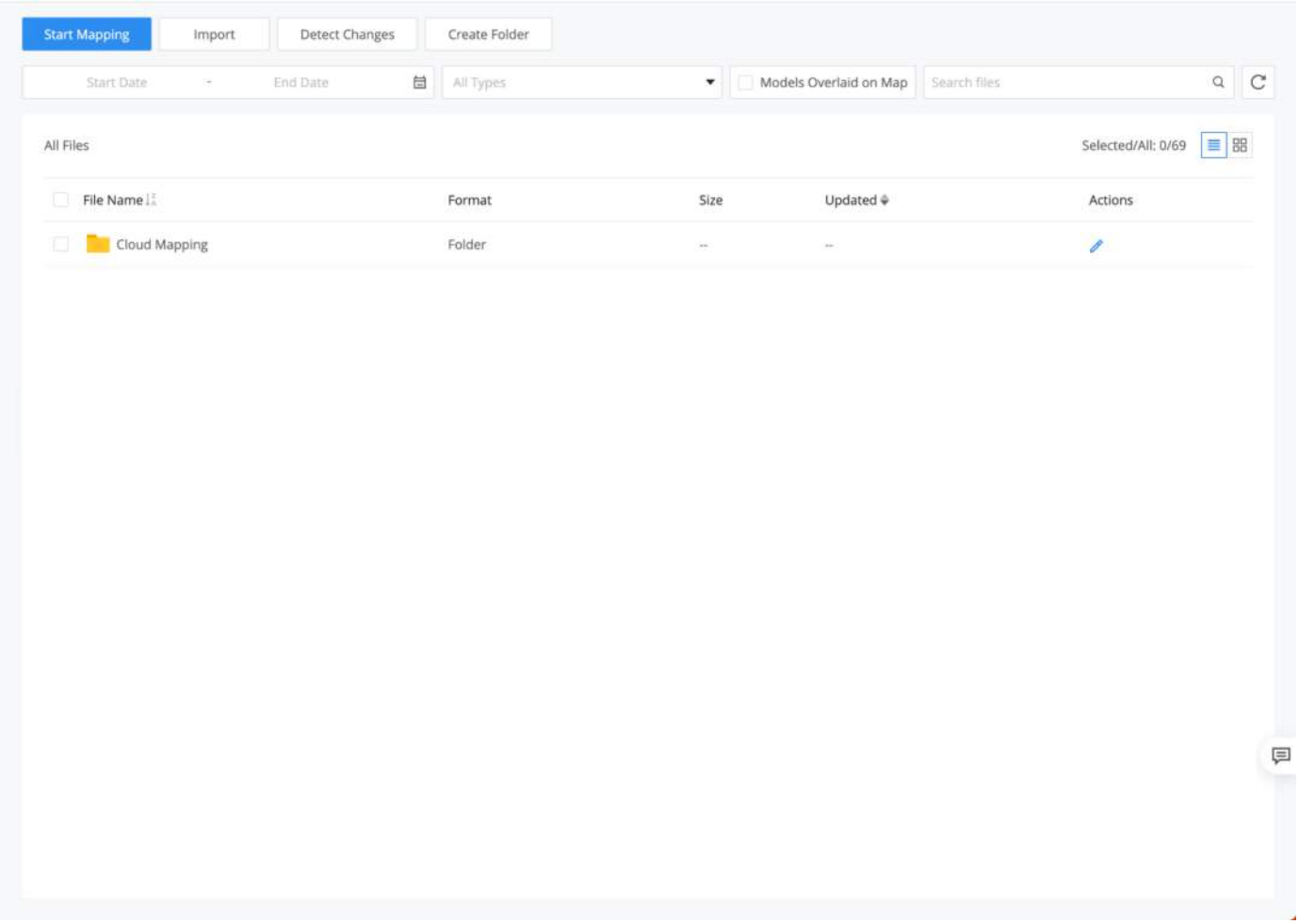
The model reconstruction feature of FlightHub 2 On-premises version requires a separate deployment of the Terra service together with a computing server. You can visit the official website or contact an authorized agent to request a trial.

Note: Only one reconstruction task can be initiated at a time, and each task is limited to no more than 2,000 photos.

Manage Models

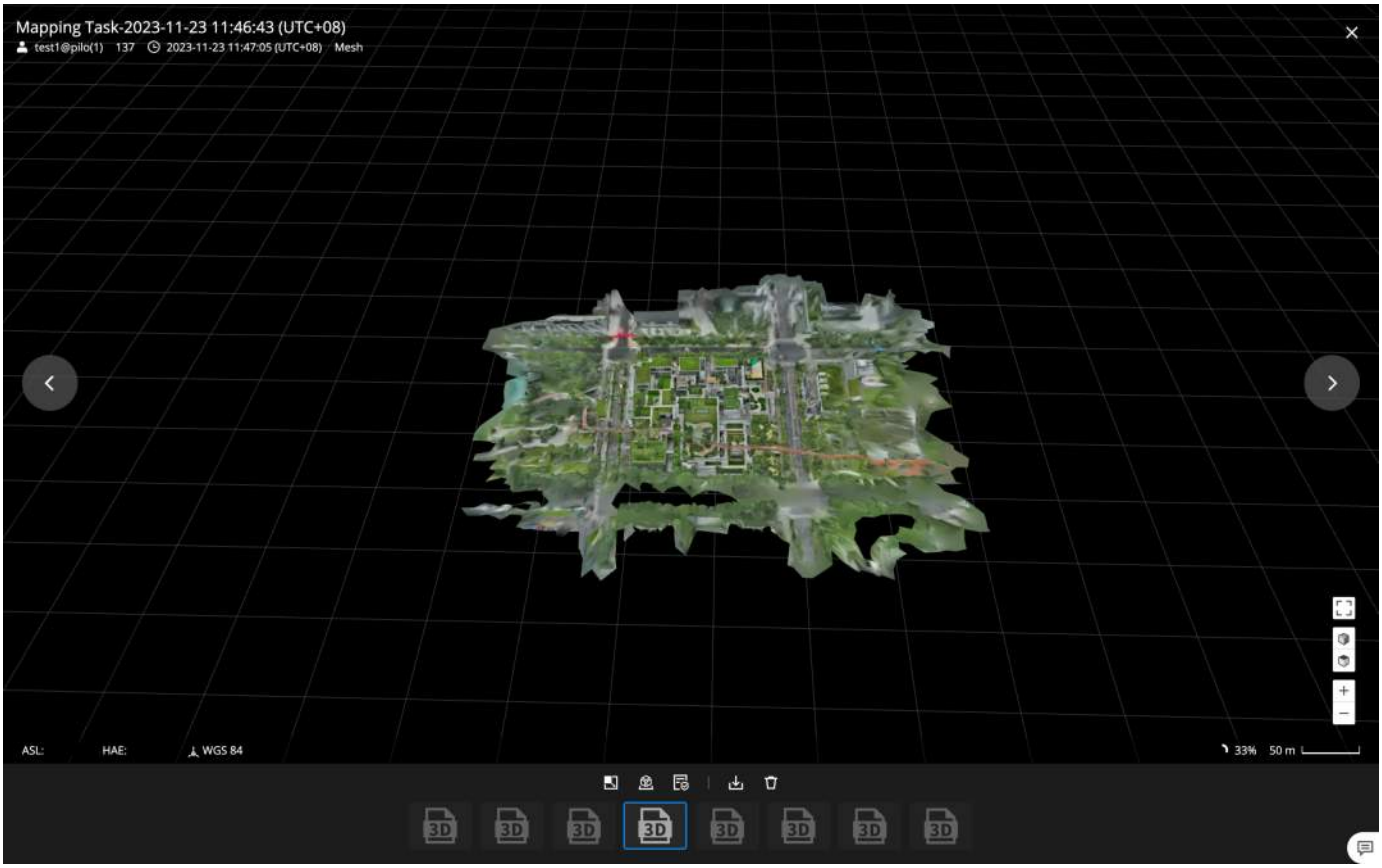
- Preview Models
- Compare Models
- Lock Models

Project members can preview, lock, download, move, rename, or delete models, as well as choose to display models on the map. The model files can be displayed in the list or grid view.



Preview Models

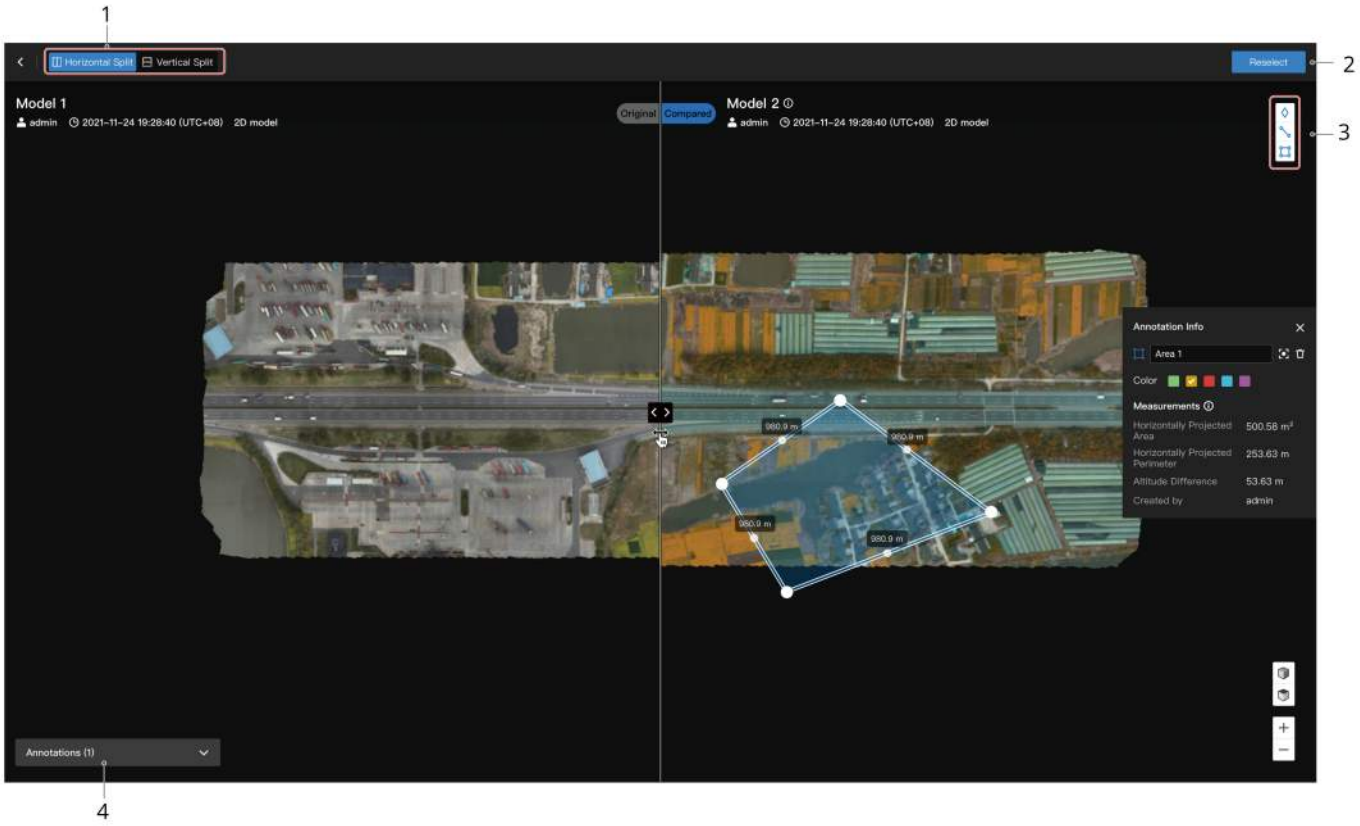
Users can click the file to preview the model. The model name, uploader, upload time, and model type will be displayed in the upper left corner. Project members can zoom, rotate, download, or delete models. Members can also choose to enter the full screen of the model, display the models on the map, and view the model quality report.



Compare Models

DJI FlightHub 2 supports comparing 2D models with overlapping areas.

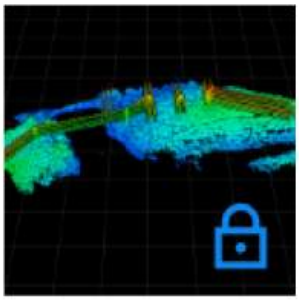
Users can click to start comparing models during the model preview. When comparing models, the original model will be displayed on the left, and on the right is the recommended model for comparison. The recommended model is the model last generated with overlapping areas.



1. Click Horizontal Split or Vertical Split in the upper left corner of the page to change the comparison layout.
2. Click Reselect to change the model to be compared.
3. Click to add points, lines, areas, and circles on a single model or both models. The added annotations will automatically be saved to a folder named Original Model vs Compared Model, and the changes made to the annotations will be synchronized to the annotations on the map.
4. Click Annotations in the lower left corner of the page to display or hide the annotations on the models.

Lock Models

After a model file or an entire folder is locked, project members will not be able to rename, move, or delete the model or the folder. Locking a model in the Model library will not affect its display on the map.



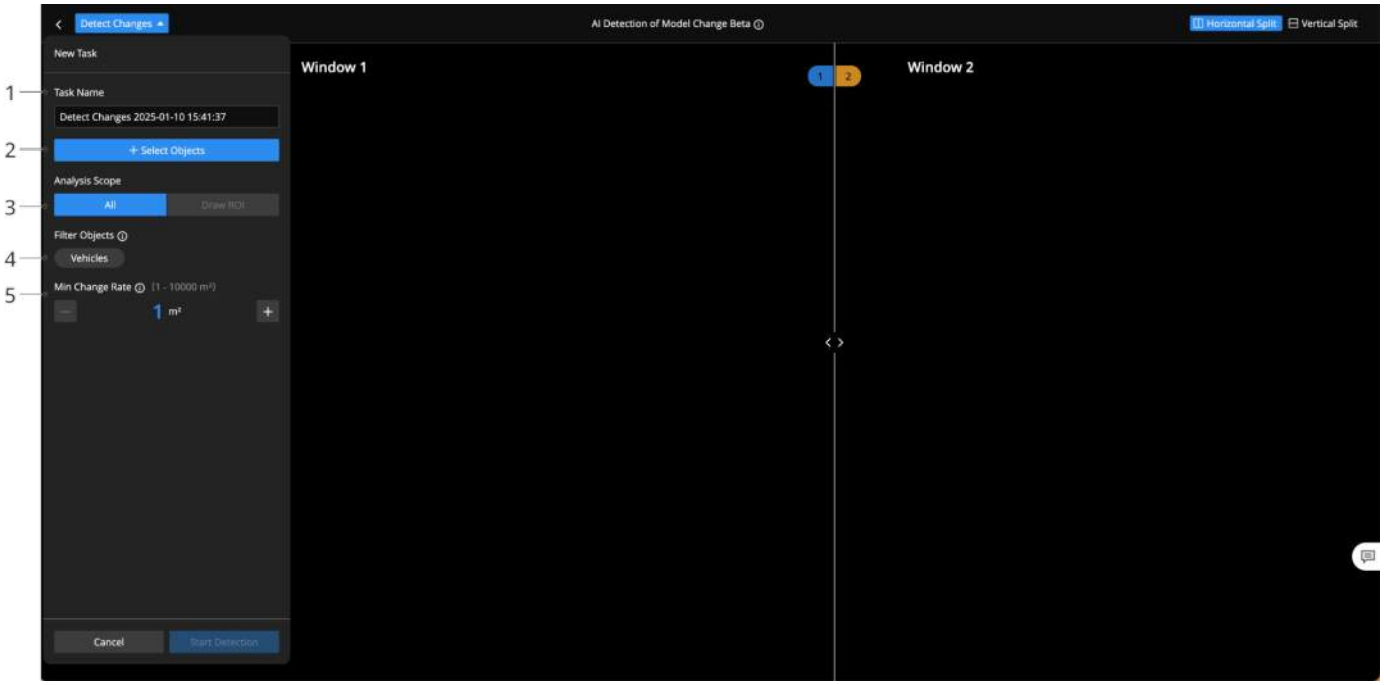
Model Change Detection

- Model Change Detection
- Notes on On-premises Version

Model Change Detection

AI can detect and mark the regions of change between two 2D models that have overlapping area. Now available for free during our limited-time public beta.

New Task

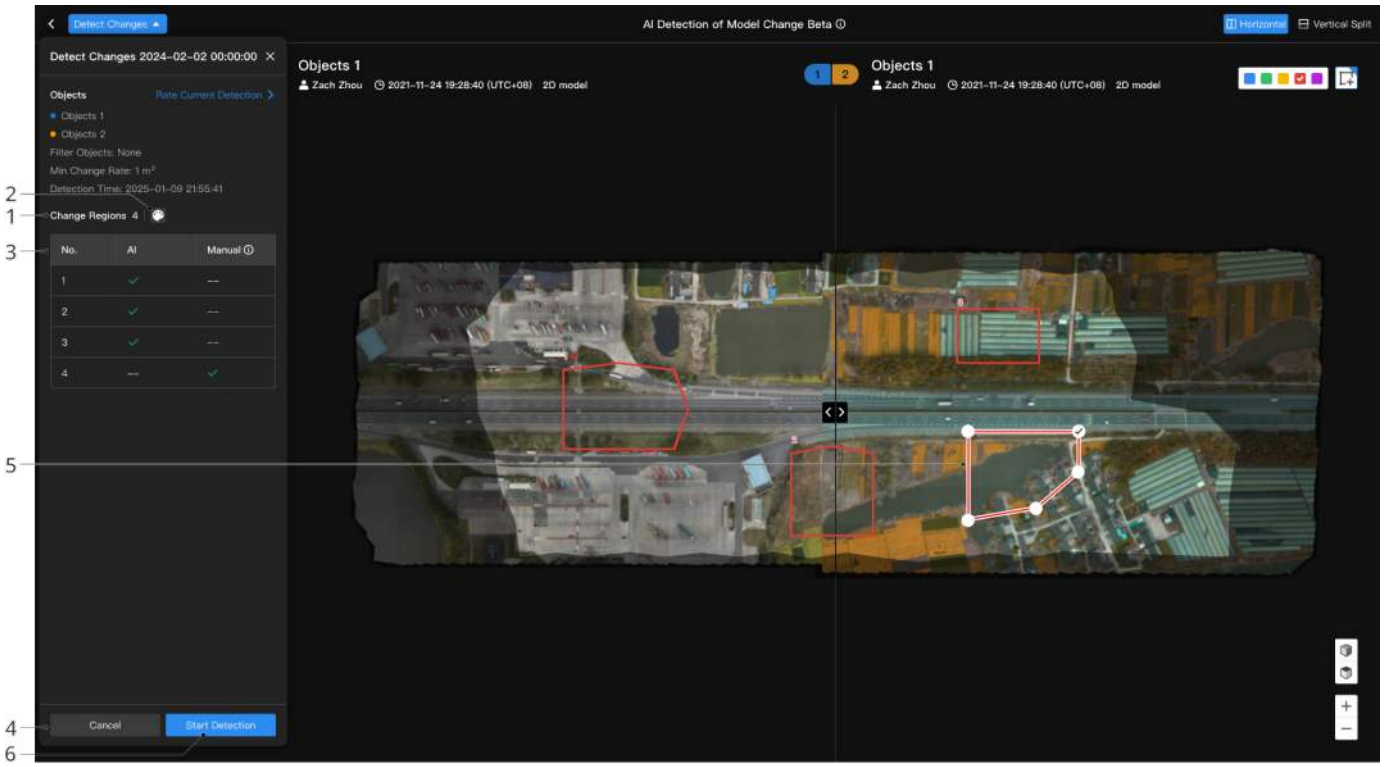


1. Task Name: Enter the detection task name.
2. Objects: Click Objects to select models.
3. Analysis Scope: Supports drawing a region of interest, and only changes within this region will be detected.
4. Filter Objects: If Vehicles is selected, vehicles will not be recognized as changes.
5. Min Change Region: A region will not be considered a change if the area of the change region falls below the specified threshold.

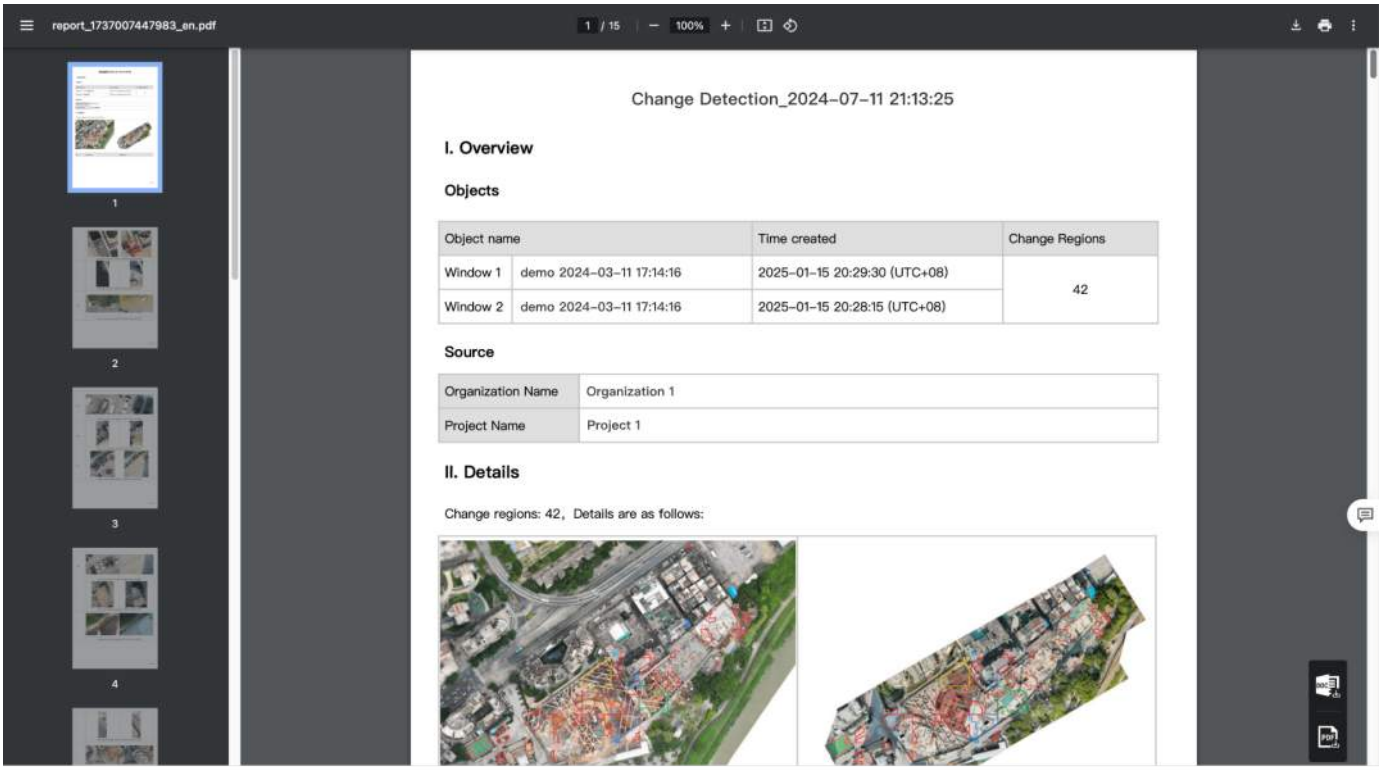
Click Start Detection and wait for the detection to complete.

Viewing and Editing Results

After detection is complete, you can view the change regions marked by AI.

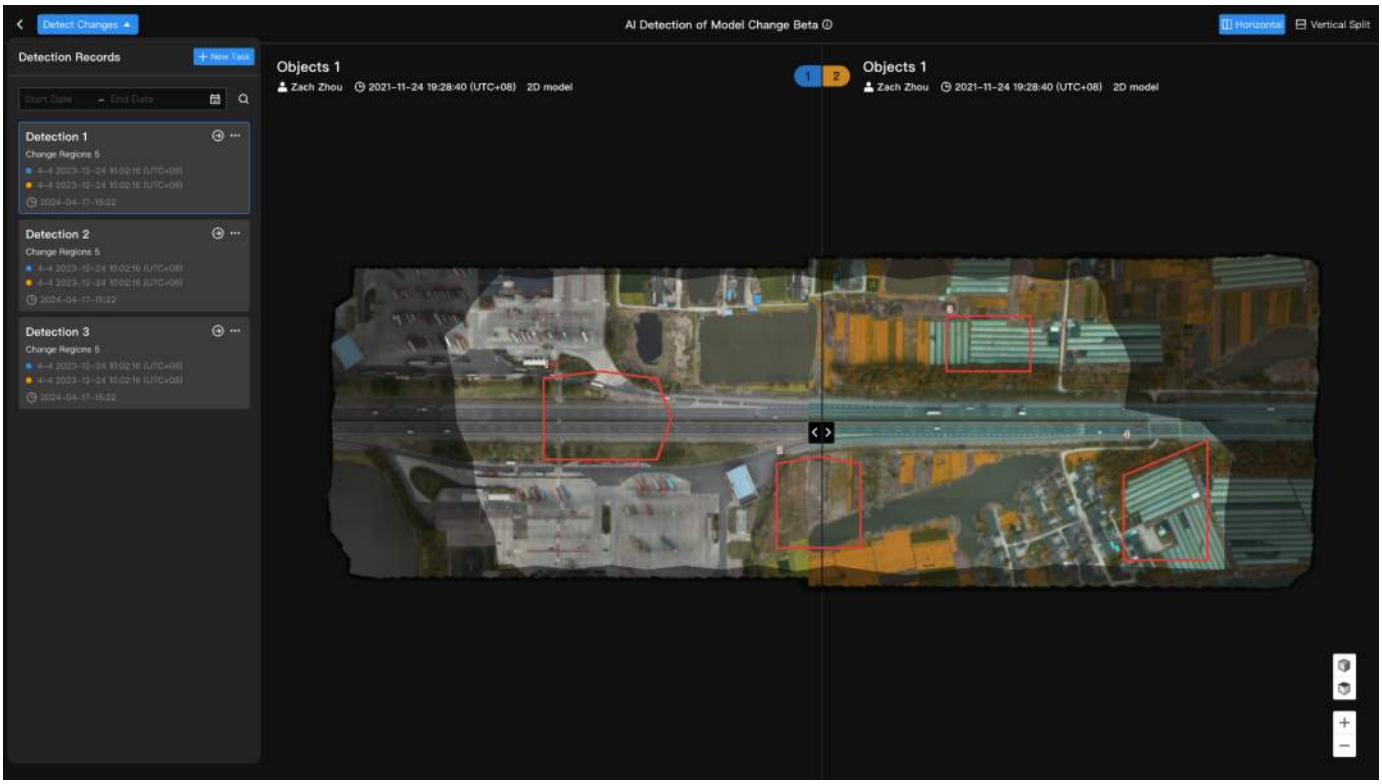


1. Change Regions: Total number of change regions.
2. Modify the color of all change regions.
3. Change Area List: Displays whether each change is detected by AI, manually modified, or newly added.
4. Detect Again: Detecting again will overwrite the current detection results.
5. Result Editing: Supports editing of AI-detected change regions, including adding and deleting change regions, or modifying shapes, colors, or texts.
6. View Report: Click to view the report. A report will be generated, including detected object information, change region statistics, and photos and center point coordinates for each change. Exporting reports in PDF or DOC format is supported.



Detection Record Management

You can create, view, and manage all detection records.



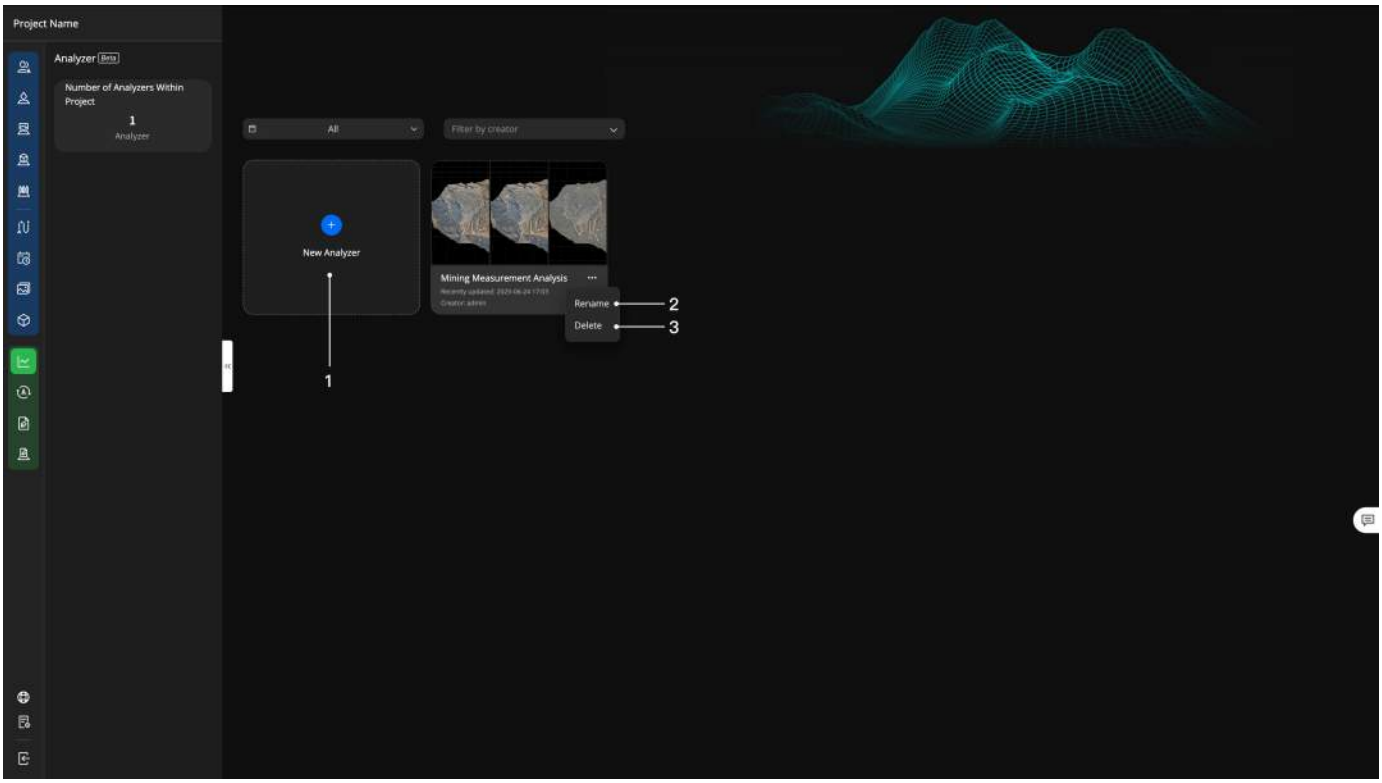
Notes on On-premises Version

The FlightHub 2 On-premises version currently does not support the model change detection feature.

Analyzer Management

The analyzer supports the management and volume calculation of design files and models, engineering project data analysis, timeline display of models and media, multiple measurement tools, and analysis report generation. After entering the project, project members can click on the left side to enter the analyzer, where they can create, rename, or delete analyzers.

Analyzer management interface



1. Project members can click + and enter the analyzer name to create an analyzer;
2. Project members can click ... and select rename to edit the analyzer name;
3. Project members can click ... and select 'Delete' to delete this analyzer.

Notes:

- Supports creating, renaming, and deleting analyzers within the project；
- Click on the analyzer card to enter the analyzer.

Analyzer Data Management

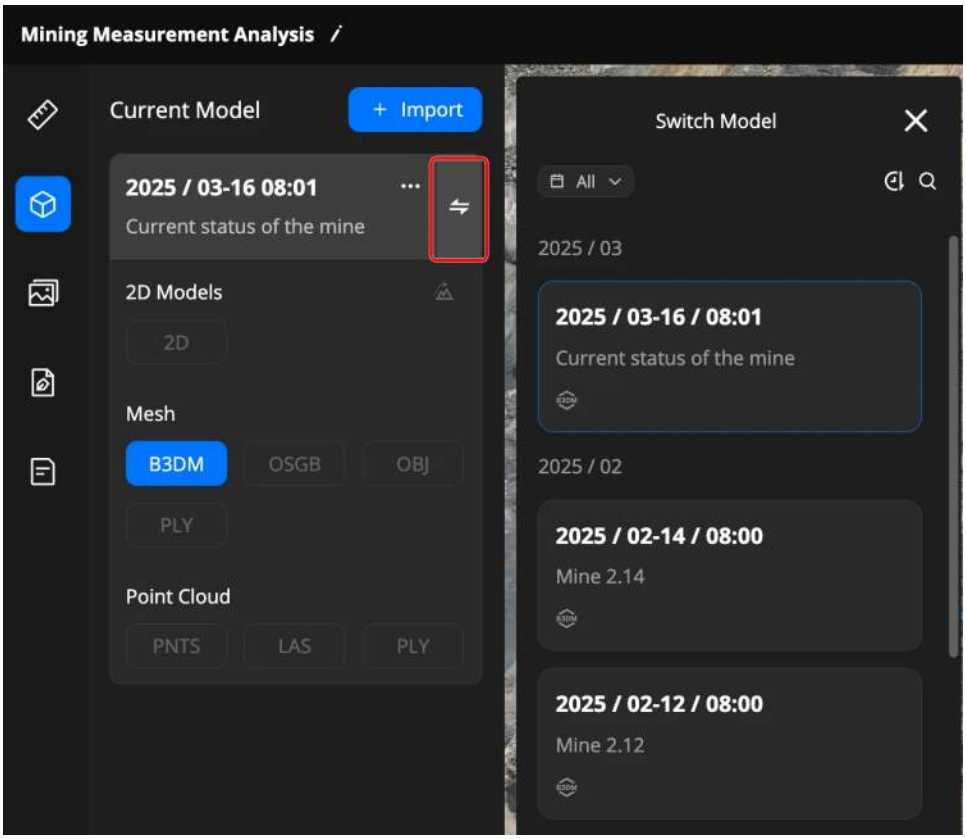
- Model Management
- Media File Management
- Design File Management

Model Management

Models created in different formats from the same data source are grouped together in the analyzer.

The analyzer uses a "current model" concept. The current model is displayed on the map, and measurement functions are based on the current model.

You can switch the current model among those imported into the analyzer, click ⇋ to view the list.



Media File Management

After entering the analyzer, project members can click on media management to import and manage media files.

1. Click the "Import" button to enter the media import page;
2. After selecting the file or folder that needs to be imported, click ✓ Import;
3. After successful import, the file will be displayed under "Media Management".

> Note:
> - Media file capabilities: Timeline view, rename, remove, and toggle media file visibility on the map;
> - Media file list features: Time filtering, sorting, and search.

Design File Management

After entering the analyzer, project members can click on media management to import and manage media files.

1. Click the "Import" button to enter the media import page;
2. After selecting the file or folder that needs to be imported, click ✓ Import;
3. After successful import, the file will be displayed under "Design Files".

> Note:
> - Basic capabilities: Geographic location calibration, recenter, rename, remove, and toggle visibility on the map;
> - Design file list features: Time sorting, search, and file type filtering;
> - PDF advanced settings: Supports color and transparency modification.

Timeline

- Model Timeline
- Media File Timeline

Model Timeline

A model timeline is located at the bottom of the map. Click the model timeline to arrange all models in chronological order based on their data collection times. Click the dot on the timeline to switch the model displayed on the map.

Media File Timeline

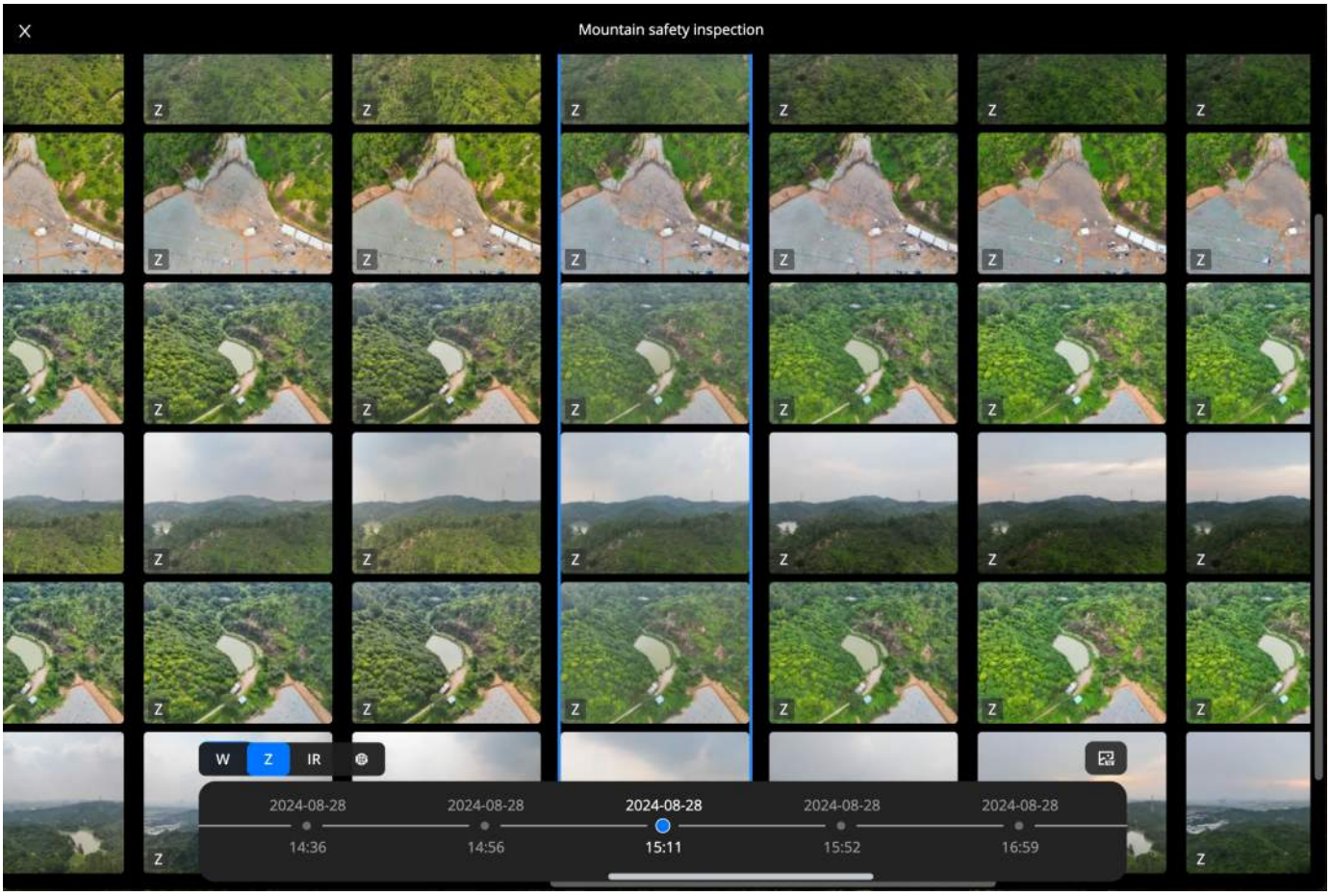
The media file timeline allows you to arrange media files in chronological order based on their data collection times.

- Wide-angle, zoom, and infrared photos: These are media files collected from the same waypoint route and using the same fixed-angle action.
- Panorama photos: These are media files collected from the same waypoint.

Palace grid style

Entry: Click the Timeline button in the media file folder. Vertical Axis: Represents spatial order, arranging media files from the same waypoint route by waypoint sequence. Horizontal Axis: Represents time, with media files collected from the same waypoint route and by the same fixed-angle action in chronological order. Features:

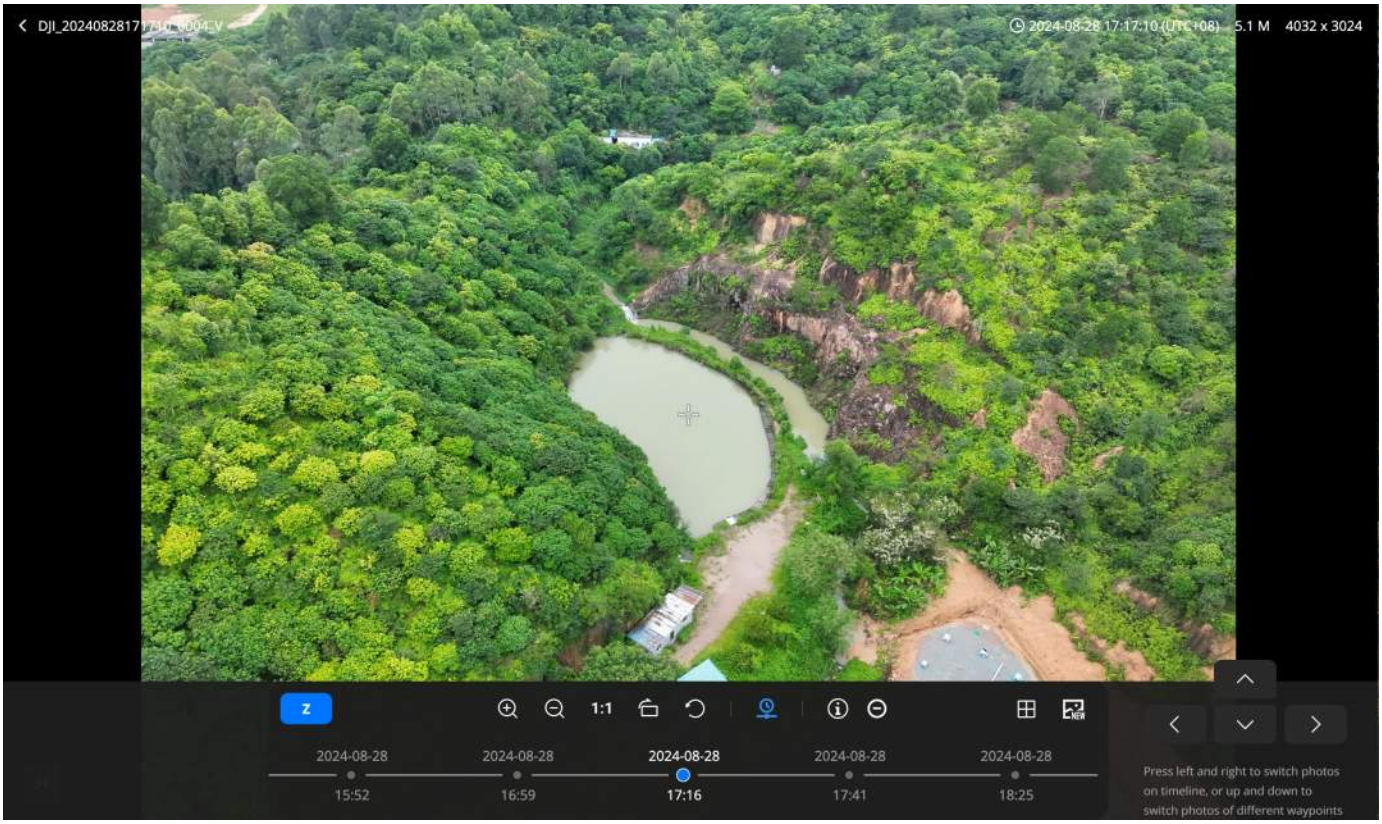
- Filter media types by clicking W, Z, or IR. Multiple selections are supported.
- Click  to quickly jump to the latest media file list.
- Click a media file to enter single image style.



Single sheet style

Entry: Click the Timeline button in the media file folder. Features:

- Click a dot on the timeline to display media files collected at the corresponding time, from the same waypoint route and by the same fixed-angle action.
- View and switch between different media file types.
- Click the grid icon to switch to grid style.
- Click the NEW icon to quickly jump to the latest media files collected from the same waypoint route and by the same fixed-angle action.


2024-08-28 17:17:10 (UTC+08) 5.1 M 4032 x 3024
Z
1:1
2024-08-28
15:52
2024-08-28
16:59
2024-08-28
17:16
2024-08-28
17:41
2024-08-28
18:25
Press left and right to switch photos on timeline, or up and down to switch photos of different waypoints

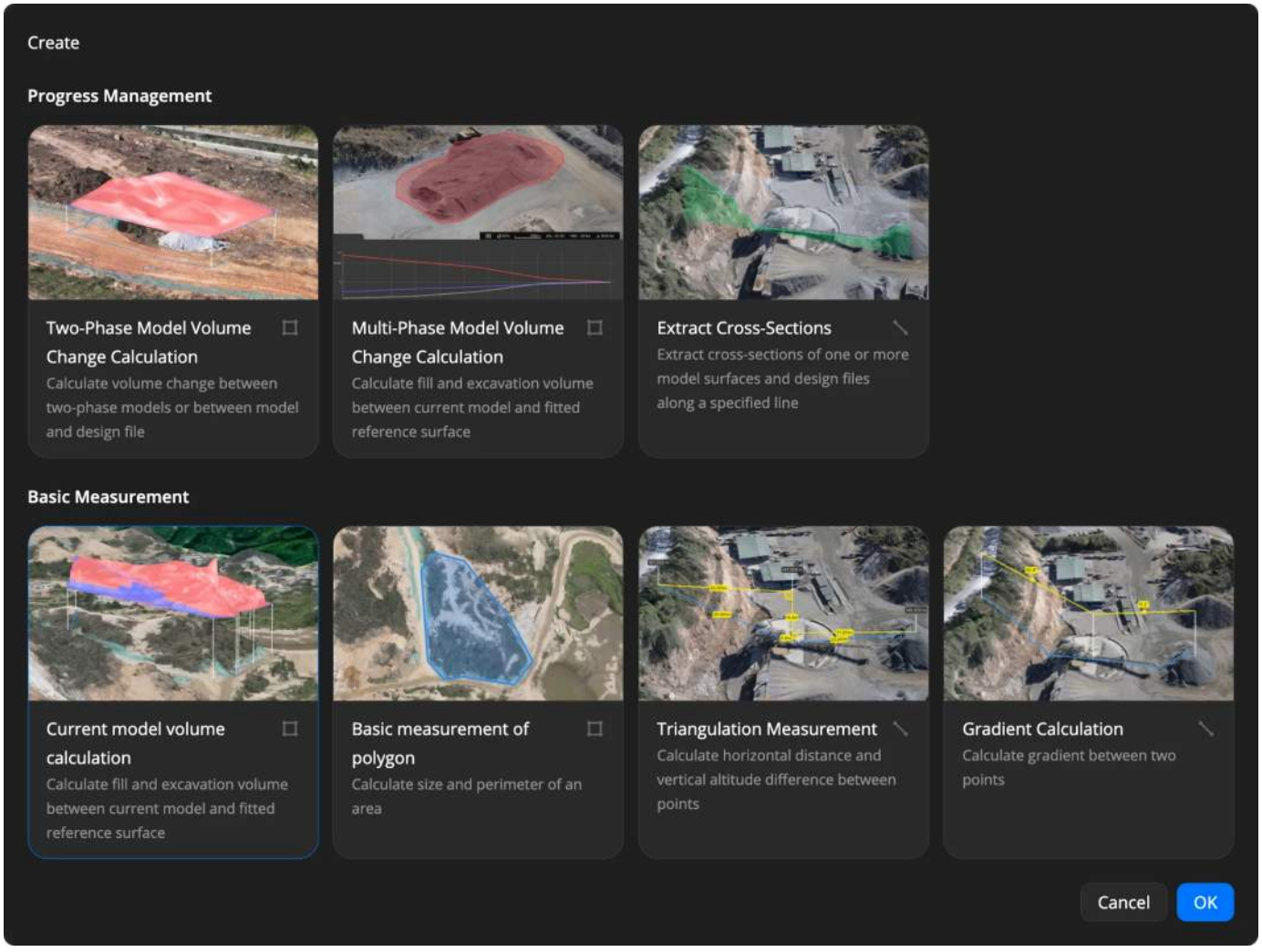
Measurement Calculation

- How to Use Measurement
- Surface Calculation Tools
- Line Calculation Tool

How to Use Measurement

Create Measurement

Method 1: In the analyzer, click Create on the left to access the measurement function . click + Create ,Select the desired calculation tool to create a corresponding measurement.



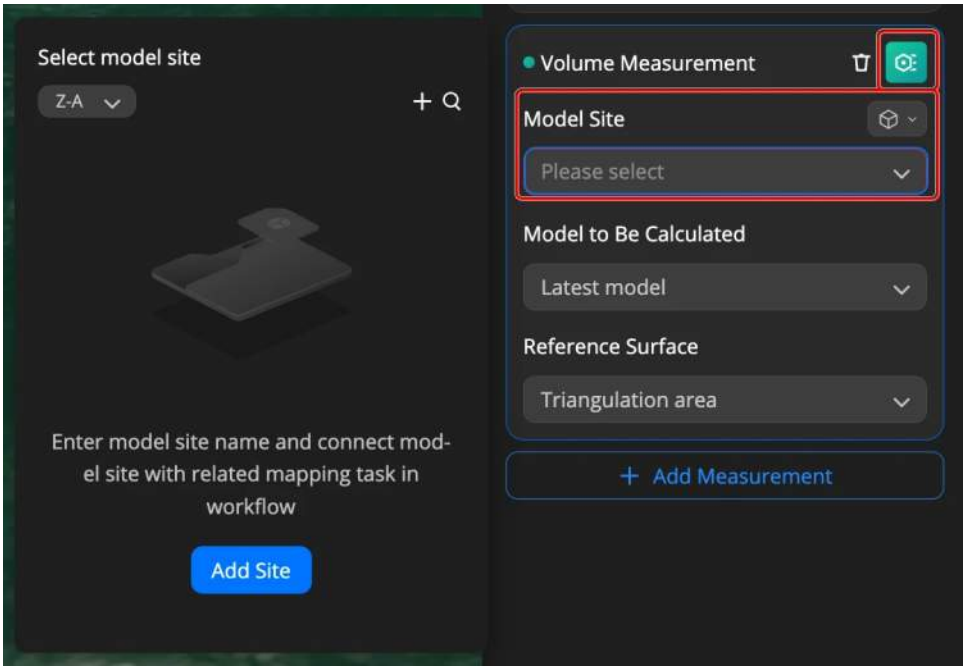
Method 2: On the analyzer map, click or , use the shortcut toolbar on the right to quickly draw and create a measurement.

Calculation Tools

- Measurement refers to depicting the geometry of the measurement area. Calculation tools are specific rules or algorithms applied to the measurement area to generate results.
- A single measurement can be configured with multiple calculation tools, allowing the same measurement area to be analyzed using different rules.
- In the measurement property panel on the right, click different calculation tools to view their respective results.
- Click 「Add Measurement」 to add, delete, or reorder calculation tools for a measurement.

Advanced Measurement

- When Advanced mode is enabled, measurements can be integrated with automated workflows, supporting the full process: Flight data collection > Model mapping > Measurement calculation > Analysis report
- In the Advanced mode, you can select model sites. Model sites are groups of models associated with model mapping tasks in automated task configurations, representing periodically reconstructed model groups.



Surface Calculation Tools

Basic Measurement of Polygon

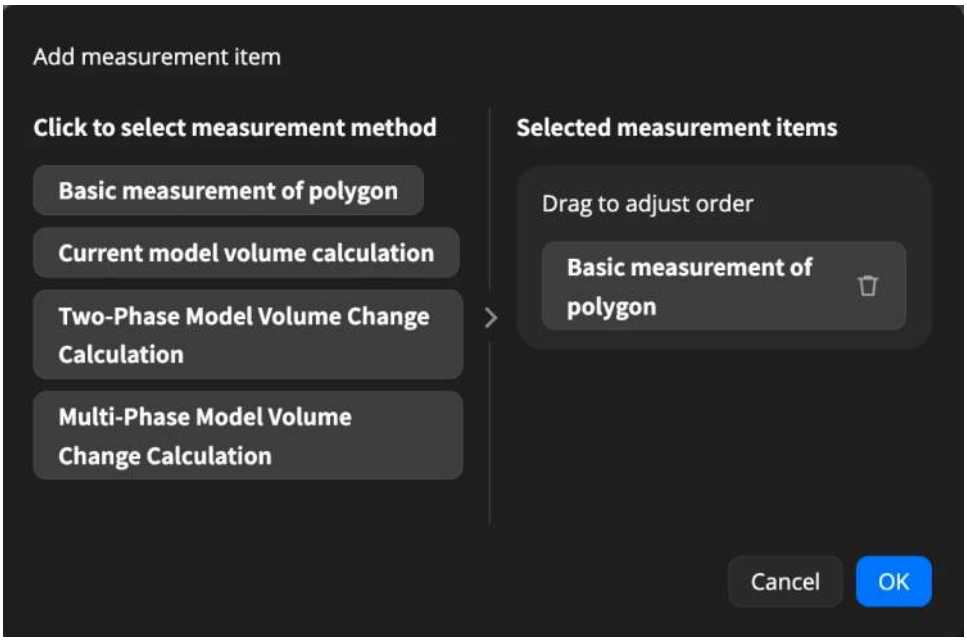
After drawing a specific polygon, you can measure the following properties:

Horizontally projected area, triangulation area, horizontally projected perimeter, spatial perimeter, and altitude difference.

You can also adjust the name and color of the surface as needed.



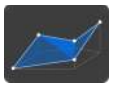
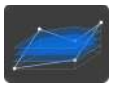
For the same polygon, you can initiate multiple measurement tasks simultaneously by clicking "Add Measurement" below.



- Note: For optimal measurement accuracy, it is recommended to use model data collected at a flight altitude of 120 meters or below.

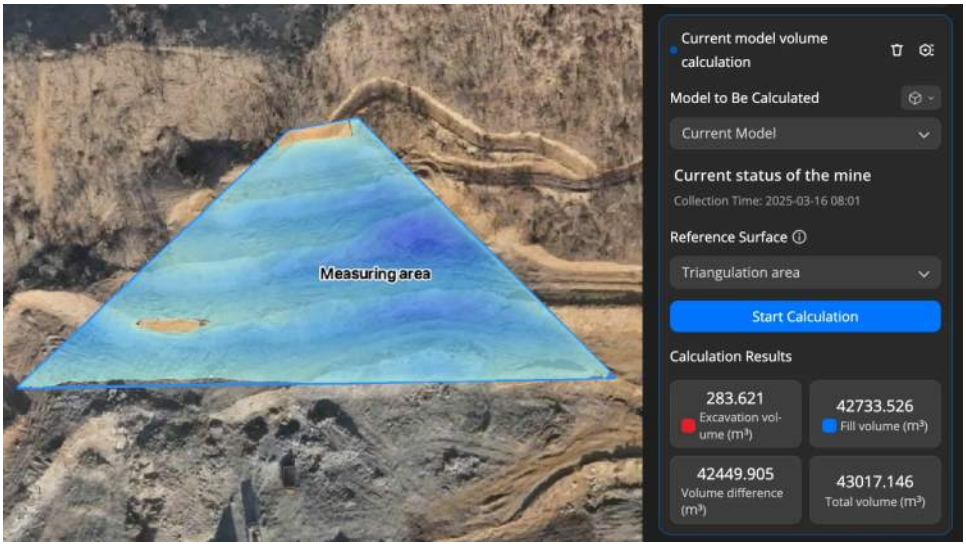
Current Model Volume Calculation

By using the current model as the calculation basis, you can perform volume calculations for different scenarios and requirements by specifying different reference surfaces. Currently, four types of volume calculations are supported.

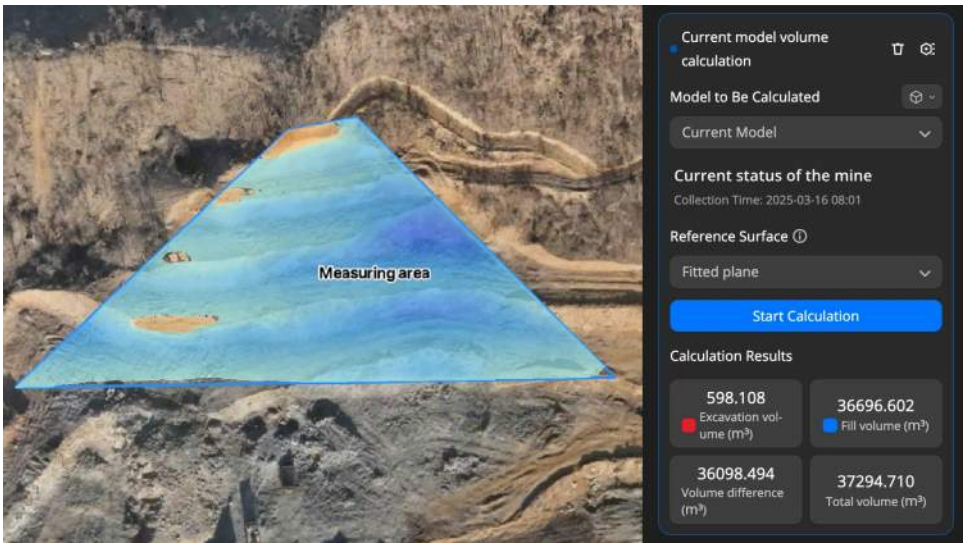
Reference Surface	Surface Generation Method	Applicable Scenarios	Sketch Map
Triangulation area	Based on the polygon triangulation algorithm, triangulation is performed on the target surface to form a three-dimensional triangular mesh surface	Ideal for terrain mapping, original site surveys, and volume measurement of narrow, elongated stockpiles, large stockpiles, and sloped environments	
Fitted plane	The algorithm processes endpoints of the target area to fit an absolutely flat reference surface in 3D space. This theoretical surface is positioned such that the sum of the distances from all endpoints to the surface is minimized	Ideal for conventional volume measurement of individual stockpiles on flat sites and slope leveling design and construction at uniform elevation	
Reference level	By manually entering ASL value or ellipsoidal height, the algorithm generates a reference level at the specified value	Suitable for scenes requiring a specific horizontal elevation, as well as conventional volume measurement of individual stockpiles on flat sites	
Model from last phase	Calculate volume difference using selected reference surface and model from previous phase	Quickly obtain progress between two adjacent phases	

The schematic effects of different calculation methods for the current model volume calculation are as follows:

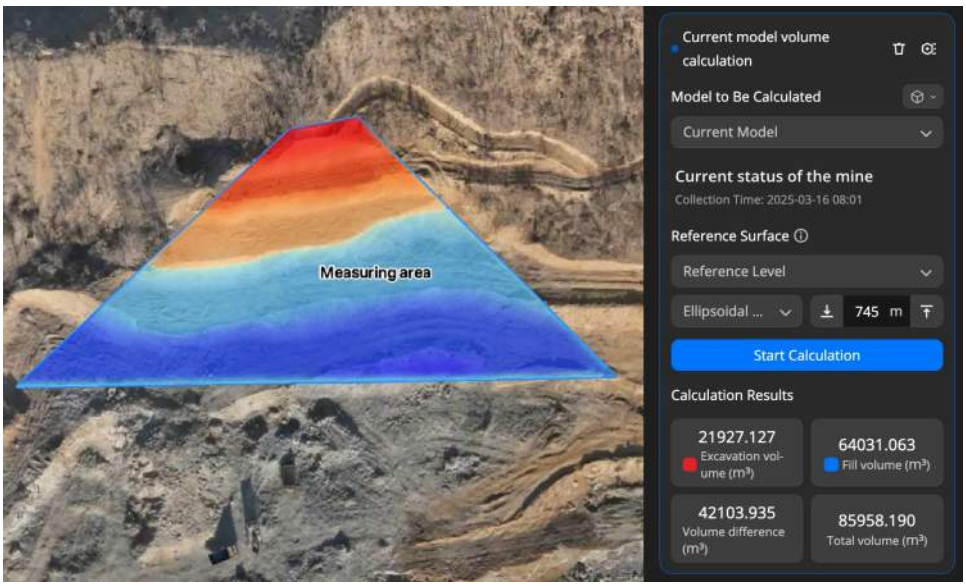
Triangular network fitting surface



Plane fitting surface



Custom horizontal plane



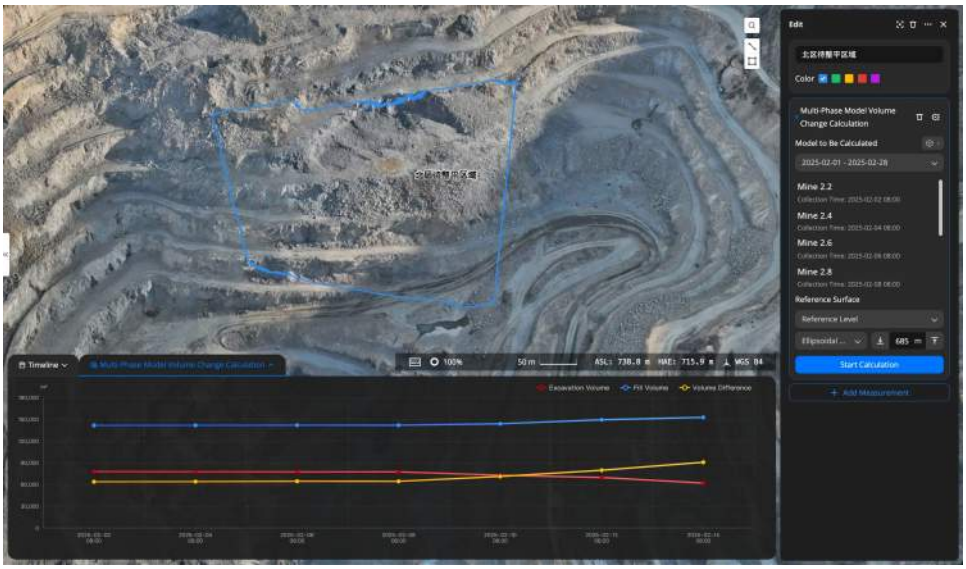
Calculation of Volume Changes in Two Phase Models

The calculation of volume changes in the two-phase model will default to selecting the current model as the calculation model. The calculation benchmark can be selected from the previous model (the previous model of the calculation benchmark), a specified custom model, or a DXF design file containing 3DFace. By calculating the volume change of the two models, relevant information on the comparison between the two models can be obtained:



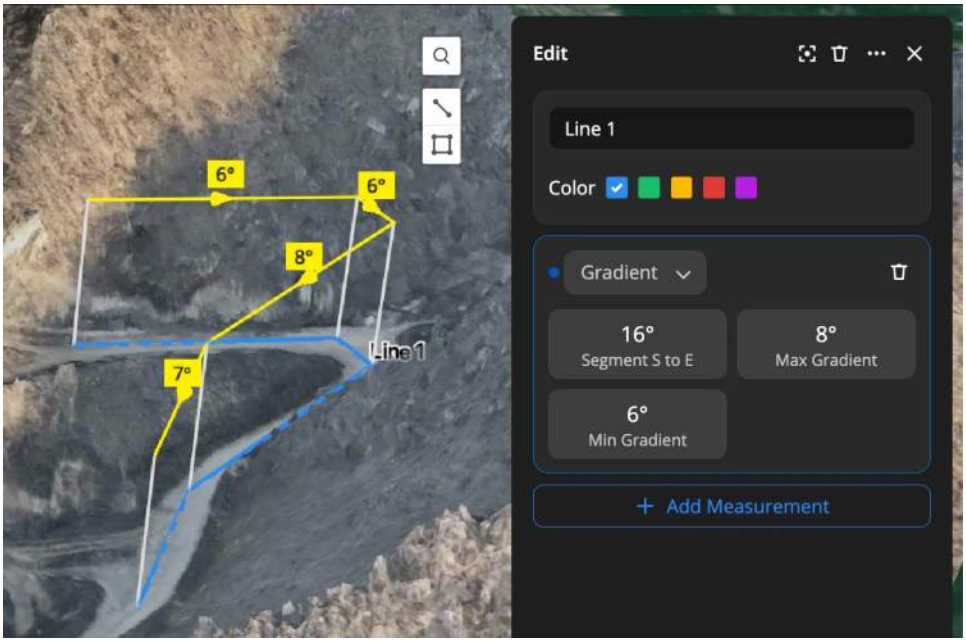
Calculation of volume changes in multi-stage models

Calculate the volume change of a multi-stage model by selecting a set of multi-stage models and comparing them to a fixed reference plane (design file or reference model) to calculate their volume change. Calculate the benchmark by selecting the progress of adjacent two phases of the model, which can calculate the change between each phase.



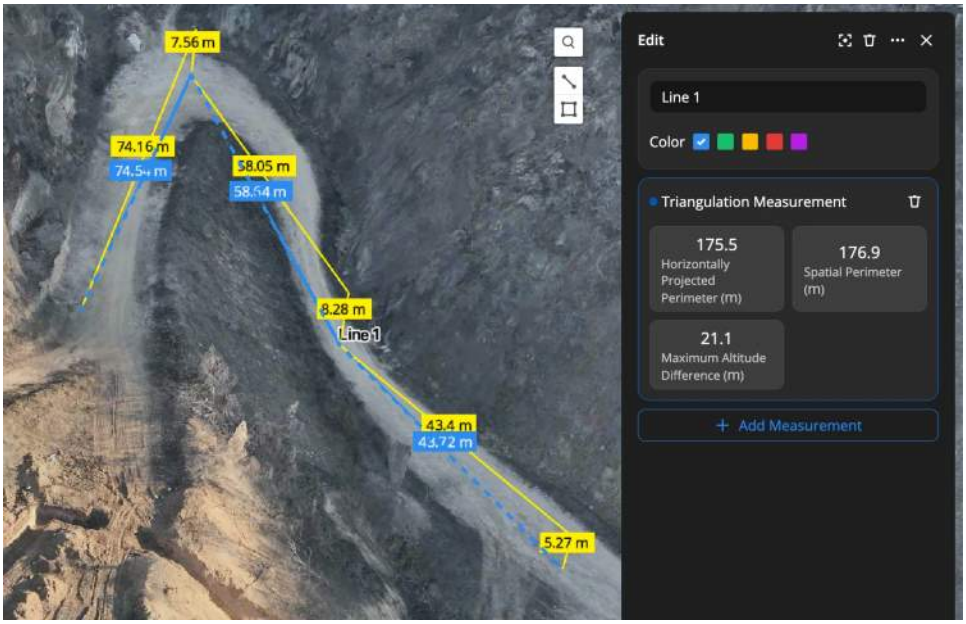
Line Calculation Tool

Gradient Calculation



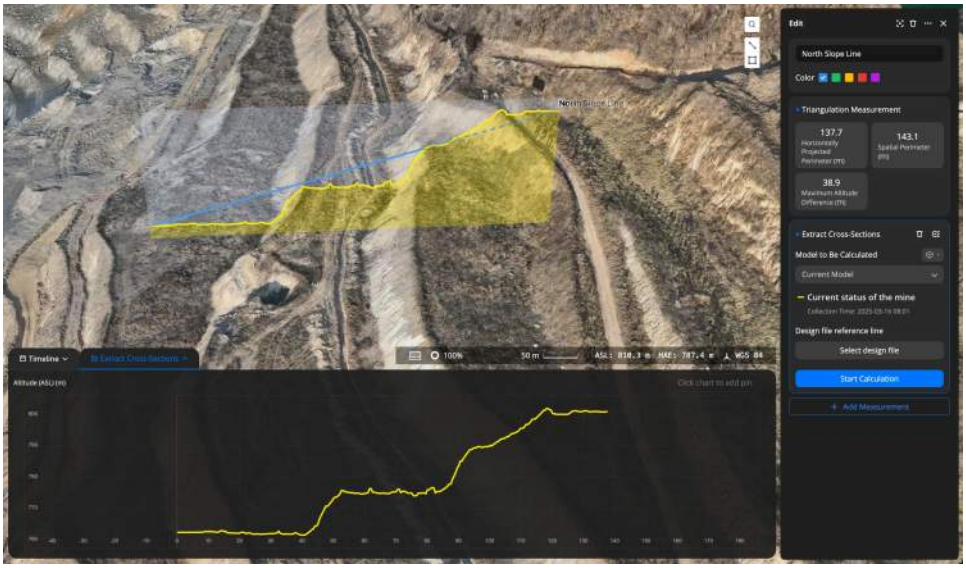
The gradient measurement tool is used to measure slope gradient information along a line, supporting three display formats: gradient, gradient percentage, and gradient ratio.

Triangulation Measurement



The triangulation measurement tool calculates the following information between the endpoints of multiple line segments: horizontal distance, elevation difference, and spatial length.

Extract longitudinal and transverse sections



Extract the longitudinal and transverse sections of a single or multiple reconstructed model surfaces and design files along a specified route. You can obtain detailed height information by hovering over the mouse or clicking on the add pin.

Analysis Report

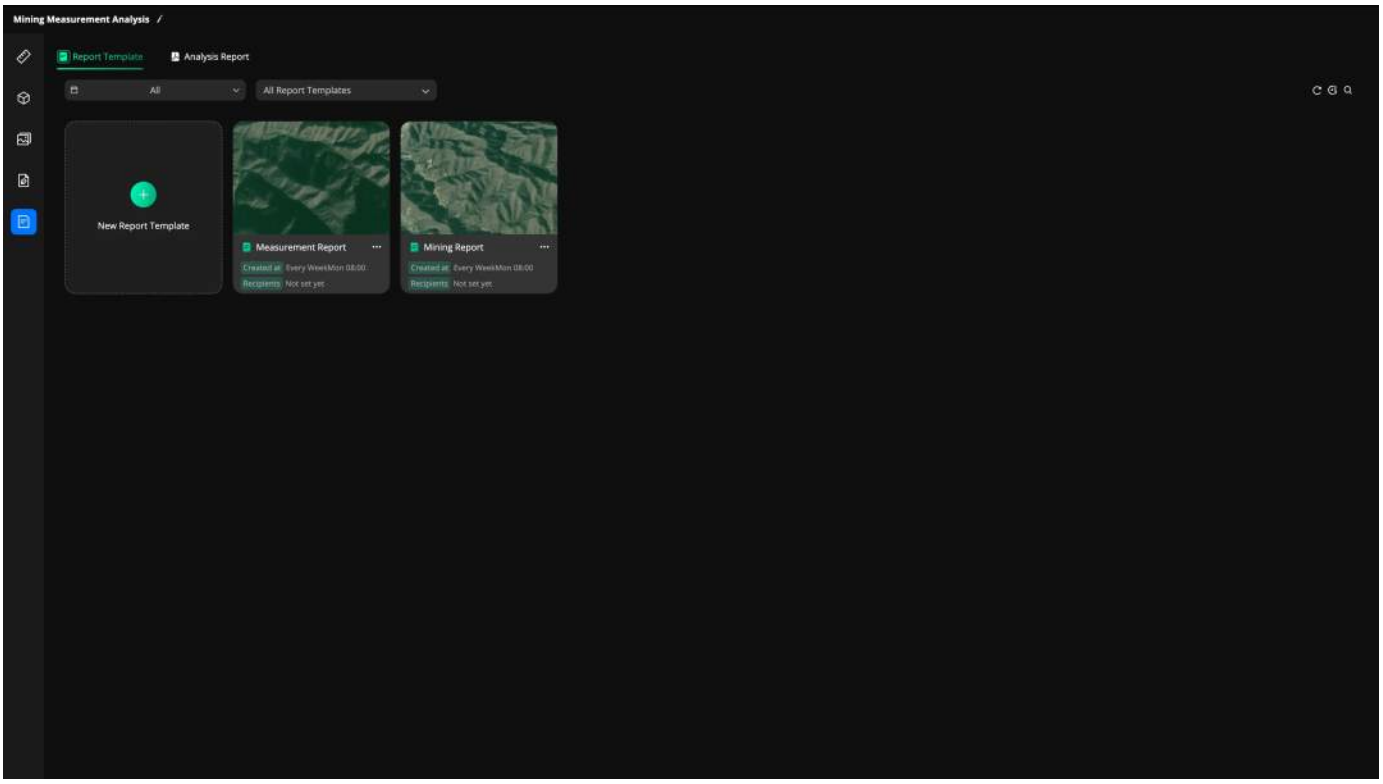
- Report Template
- Analysis Report and Management
- Automated Workflow Report

Click the analysis report icon in the analyzer to enter the analysis report page.

Report Template

Create Report Template

Click "New Report Template" in the report template tab to start a new template. Report templates are designed for content that is repeatedly generated, and are often used together with automated workflows and model sites. This enables a complete process of automated data collection, mapping, and analysis reporting. Users can receive the latest measurement analysis reports on a scheduled basis.



Cover Configuration

1. Enter the report title;
2. Select a model to display on the report cover:

- Latest Model Snapshot: When generating a report, use the latest model snapshot from the analyzer as the report cover.
- Existing Models: When generating a report, use the selected model as the report cover.
- Advanced Mode: Specify the model site, associate the model generation rules of the area in the automated workflow, and use the latest model of the specified area as the report cover.

3. Adjust the model angle on the right map page and capture a snapshot of the model within the frame for the report cover;
4. Supports uploading and adding a company logo.



Content Configuration

1. Select the measurements to include in the report;
2. Select the calculation tools to be used for each measurement;

- Basic measurement: Includes Current Model Volume Calculation, Basic Measurement of Polygon, Triangulation Measurement, and Gradient Measurement.
- Progress Management: Includes Two-Phase Model Volume Change Calculation, Multi-Phase Model Volume Change Calculation, and Extract Cross-Sections

- Advanced Mode: The measurement calculation tool rules include the model site associated with the automated workflow.

Report Generation and Delivery

1. Auto Report Generation

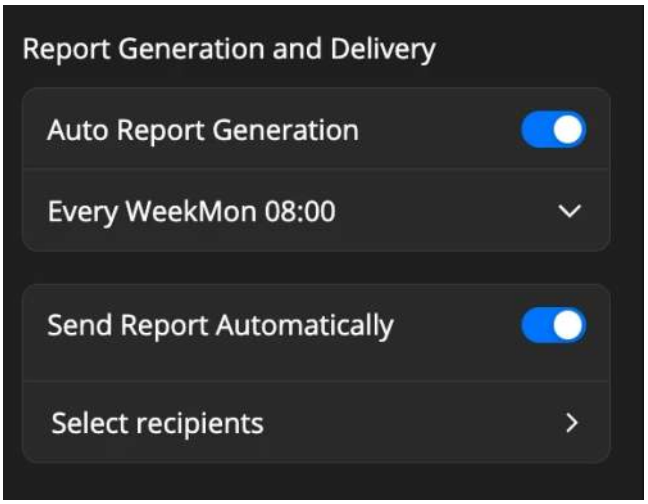
These settings apply to report templates only. It is recommended to use this feature together with automated workflows. Enable Auto Report Generation and set the periodic generation time.

> Note:
> - The automatic generation time of the report will affect the measurement calculation of the model site within the report template;
> - The automatic generation time of the report should be set after the corresponding automated modeling task time, and sufficient time should be reserved in between for cloud reconstruction.

2. Report Sending

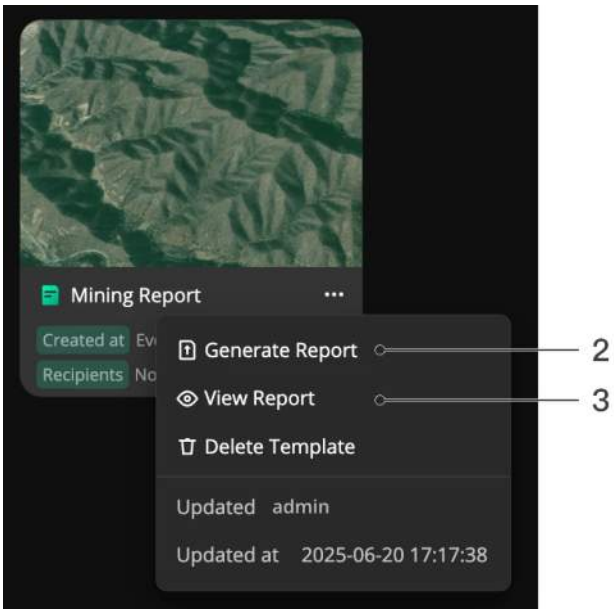
Turn on the send switch, set the email recipients, and the latest report generated will be sent automatically.

> Note:
> - The current automatic report sending setting only applies to report templates.



Report Template Management

1. Report templates can be filtered by creation time and whether auto-generation is enabled.
2. Click on a report template module for more settings, to quickly generate a report, confirm the model, enter report editing, view the report, and access the full history of reports generated from this template.



3. Click on the report template card to view the report in more settings, and you will be redirected to view the history of all reports generated under this report template

Analysis Report and Management

Create Analysis Report

Click "Create Report" in the analysis report tab to create a new analysis report. The creation process is similar to that of a report template, including cover and content configuration.

Analysis Report Management

1. Analysis reports can be filtered by time and by report template.
2. Click on the analysis report module for more settings. Enter an email address to share the analysis report file, and quickly download the analysis report file.

Automated Workflow Report

Report templates are designed for content that is repeatedly generated, and are often used together with automated workflows and model sites. This enables a complete process of

automated data collection, mapping, and analysis reporting. Users can receive the latest measurement analysis reports on a scheduled basis.

Standard Mode Example

1. Create an automated workflow.
2. Plan a flight route task, ensuring the mapping area covers the required area, and schedule automatic flight data collection every Sunday at 12:00 noon.
3. Create a cloud mapping task and associate it with the flight route task. Configure relevant mapping parameters, and obtain the model every Sunday.
4. In the analyzer, draw a polygon for the area to create a measurement. Add the calculation tool "Current Model Volume Calculation", and select "Current Model" as the calculation model.
5. In the analyzer, create a new report template. Configure the report cover to display the "Latest Model Snapshot". Choose the previously created measurement for content configuration. Enable basic measurement in the standard calculation rules. Set the automatic report generation time to every Monday at 10:00 AM. Add the recipient’s email address for automatic report sending.
6. In the automated workflow, associate the cloud mapping task and the analyzer. This ensures the model is automatically imported into the analyzer every Sunday.

- Note: The analyzer defaults to the current model as the latest model, which means that the measurement P is calculated based on the latest model at the time of report generation for volume calculation. That is, when the report is generated at 10:00 am every Monday, the latest model in the analyzer is the reconstructed model Q from the previous Sunday, and the measurement P is calculated based on this model for the current model volume. The results will be sent to email B in the form of report template J.

Advanced Mode Example

1. Create an automated workflow.
2. Plan a flight route task, ensuring the mapping area covers the required area, and schedule automatic flight data collection every Sunday at 12:00 noon.
3. Create a cloud mapping task and associate it with the flight route task. Configure relevant mapping parameters, and obtain the model every Sunday.
4. In the analyzer, draw a polygon for the area to create a measurement. Enable Advanced mode in the upper right corner. Add the calculation tool "Current Model Volume Calculation". Create a

new model site. Select "Latest Model" as the model to be calculated.

5. In the analyzer, create a new report template. Configure the report cover to select Advanced mode. Choose the newly created model site. For content configuration, select the previously created measurement. Enable Advanced mode and check the basic measurement in the advanced calculation rules. Set the automatic report generation time to every Monday at 10:00 AM. Add the recipient’s email address for automatic report sending.
6. In the automated workflow, associate the cloud mapping task and the model site in the report template within the analyzer. This ensures the model is automatically imported into the analyzer every Sunday and becomes the designated model site.

- Note: Compared to the regular mode, the advanced mode allows for the setting of model sites, more precise configuration of specific model calculation rules, and supports multiple model sites. It is often suitable for larger projects that pursue accuracy and require local reconstruction of more refined models.

Automated Workflow

- Pre-permission Instructions
- Workflow Creation
- Workflow Editing
- Workflow Management

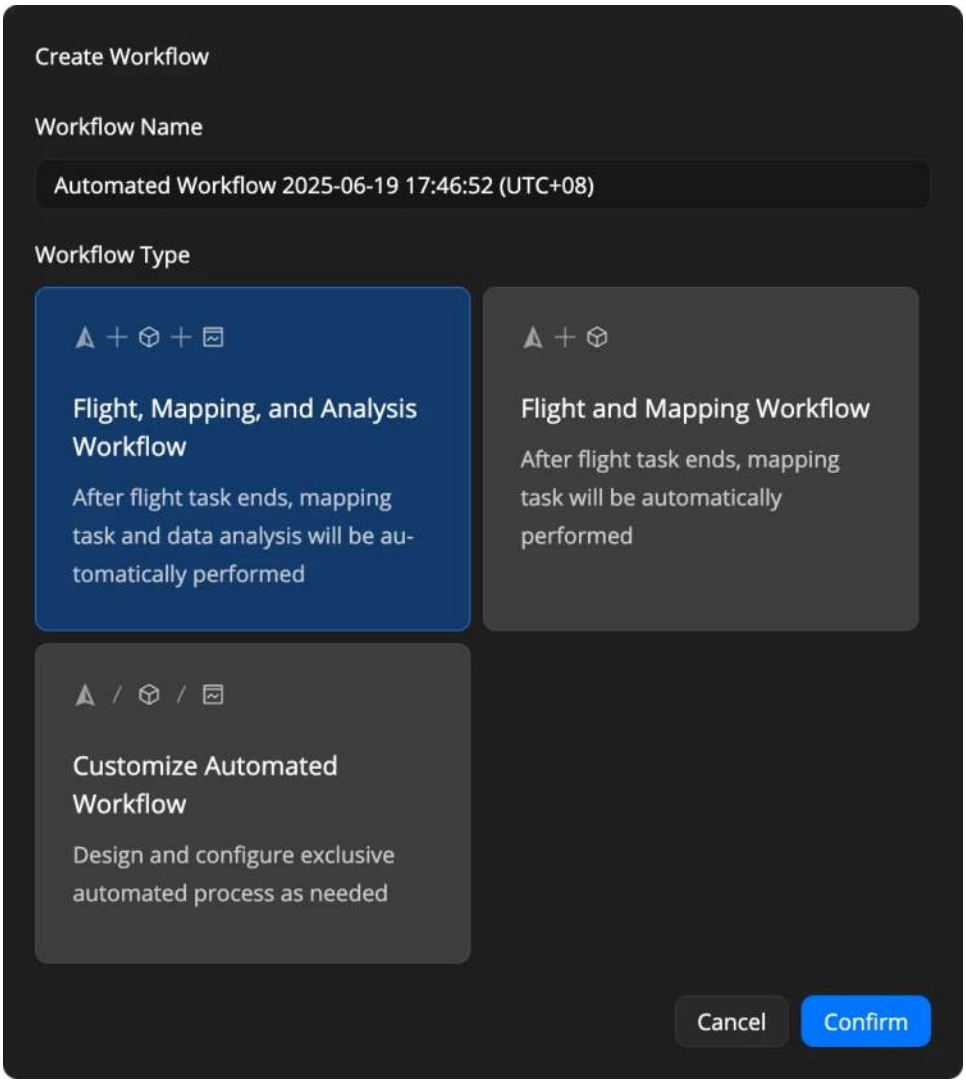
Pre-permission Instructions

1. To use automation, project members must have permissions for automated workflows in their project roles.
2. Alternatively, you can assign the Project Administrator role to project members, which includes all necessary permissions.

> - Before enabling the automated workflow, make sure that the flight plan, analyzer, and report template configurations are completed.

Workflow Creation

Click Create Workflow to open the workflow template page and fill in the required information.



Workflow Name

Enter the workflow name (required, within 60 characters).

Workflow Template

Select the appropriate workflow template based on the task scene. Click OK to complete automation creation.

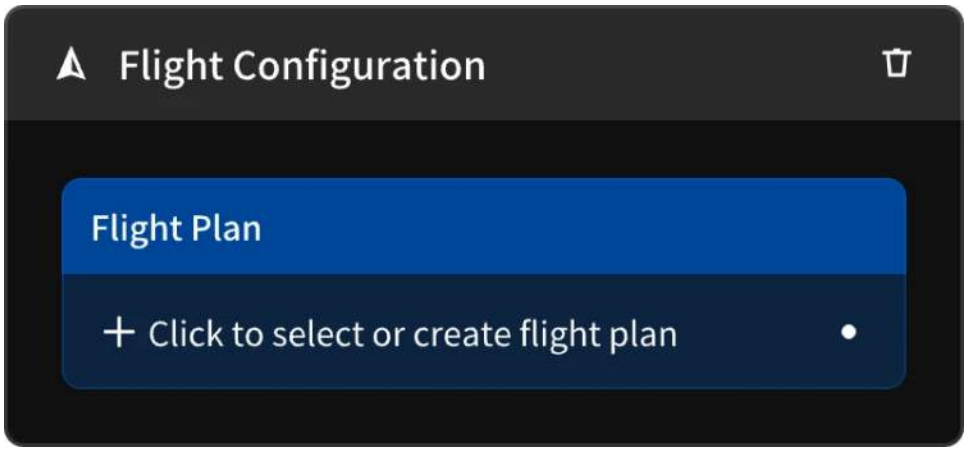
Workflow Editing

Take flight, mapping, and analysis workflow as an example.

Select or Create Flight Plan

Select an existing flight plan

1. Click "+" or the flight plan module to open the Select Planned Task panel.



2. Click to select one or more flight plans.



- Only recurring tasks are supported in the automated workflows.
- After linking a flight plan to an automated workflow, it will be upgraded to an automated flight plan. The task performance date will automatically adjust based on the workflow status, and the plan will be rescheduled as needed.
- Media File Direct Transfer will be automatically disabled for flight plans linked to an automated workflow.

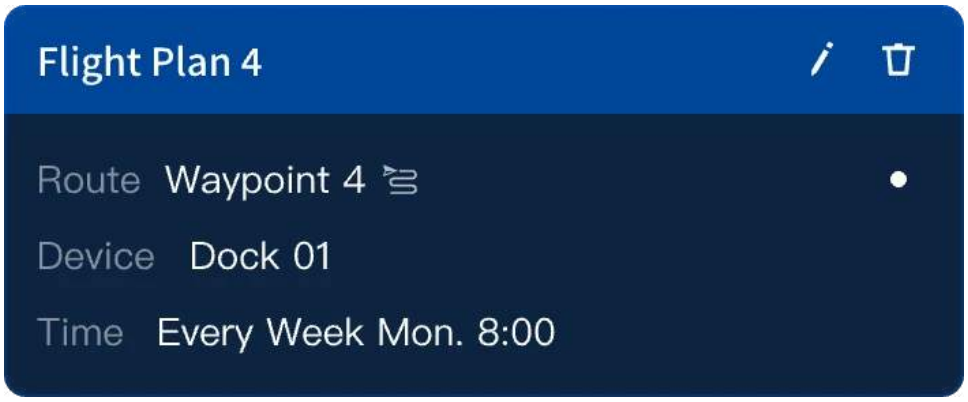
Create a new flight plan

1. Click "+" or the flight plan module to open the Select Planned Task panel.

2. Click Create Plan to create a recurring task.

Edit flight plan

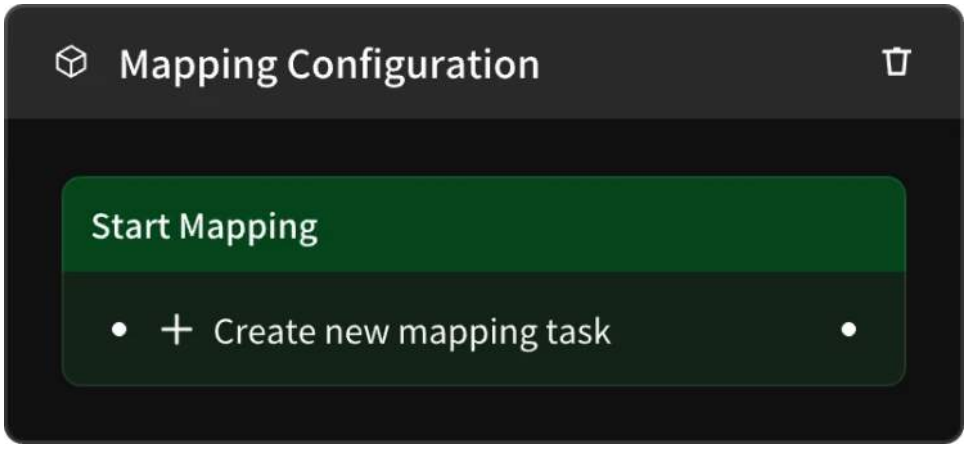
Click the edit button to edit the flight plan.



Create New Mapping Task

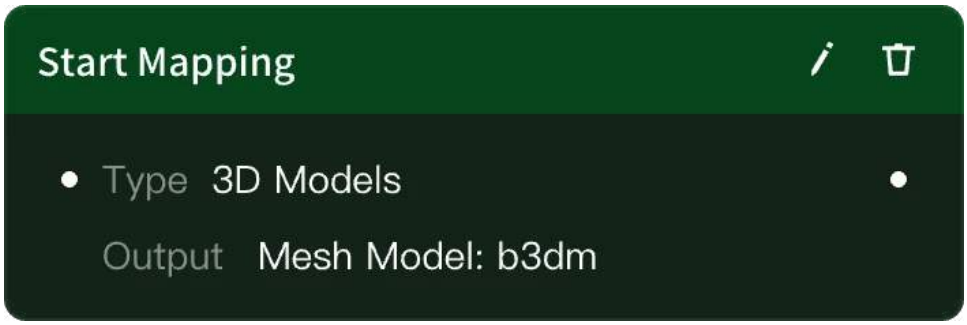
Create a new mapping task

Click "+" or the mapping task module to open the Mapping Task panel.



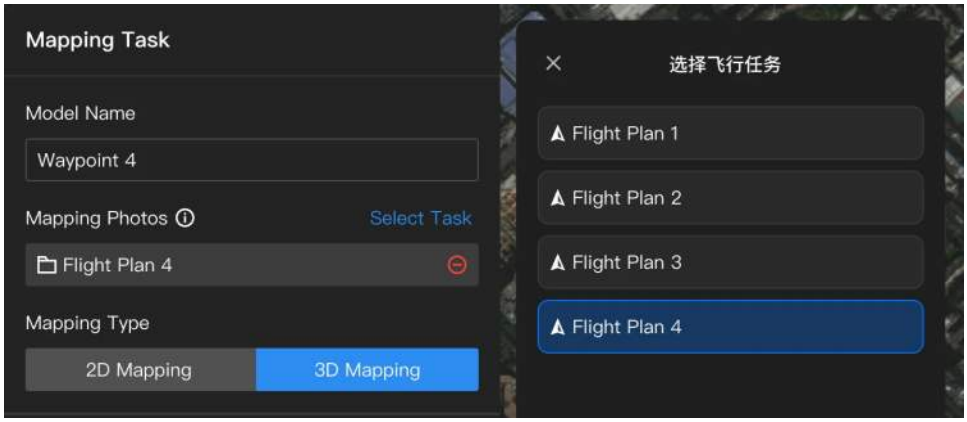
Edit mapping task

Click the edit button to edit the mapping task.

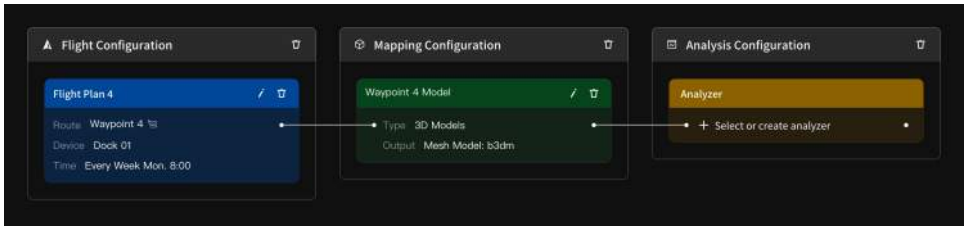


Select mapping photos

On the mapping task page, select the photo data captured by the relevant flight plan for this task.



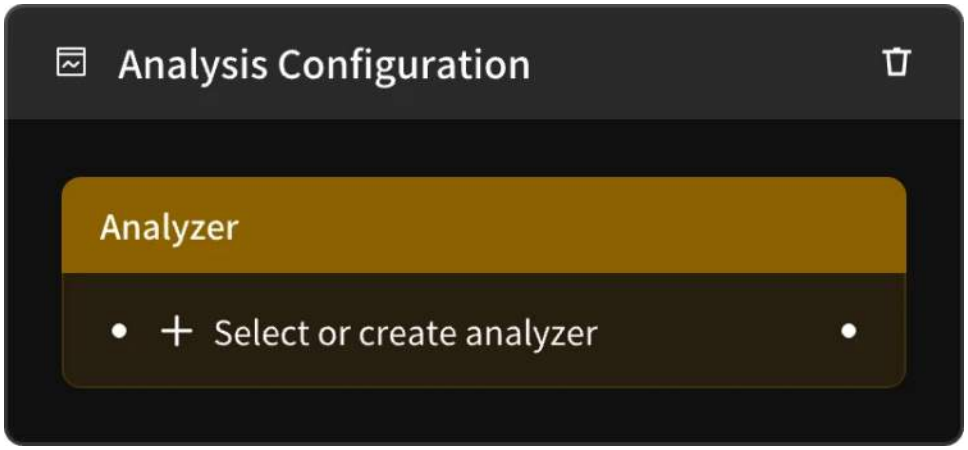
Alternatively, you can link the flight plan to the corresponding mapping task on the automation configuration page. The photo data generated by the flight plan will then be automatically imported into the mapping task.



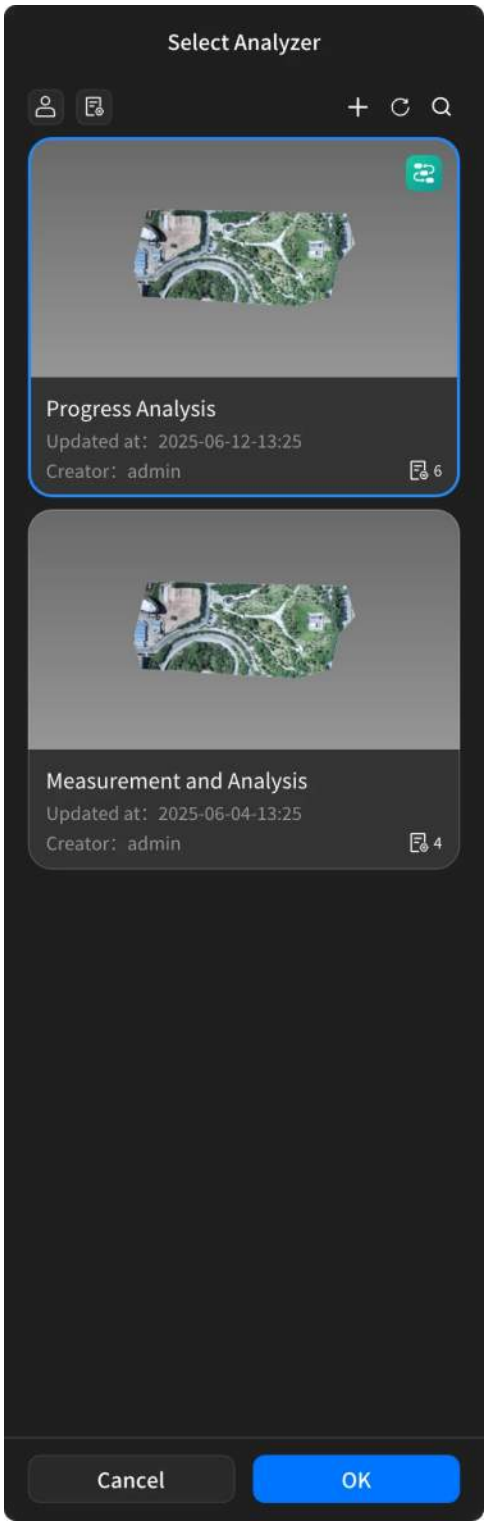
Select Analysis Task

Select analyzer

1. Click "+" or the analysis task module to open the Select Analyzer panel.



2. After selecting an analyzer, click Confirm. You can also click Create to add a new analyzer.



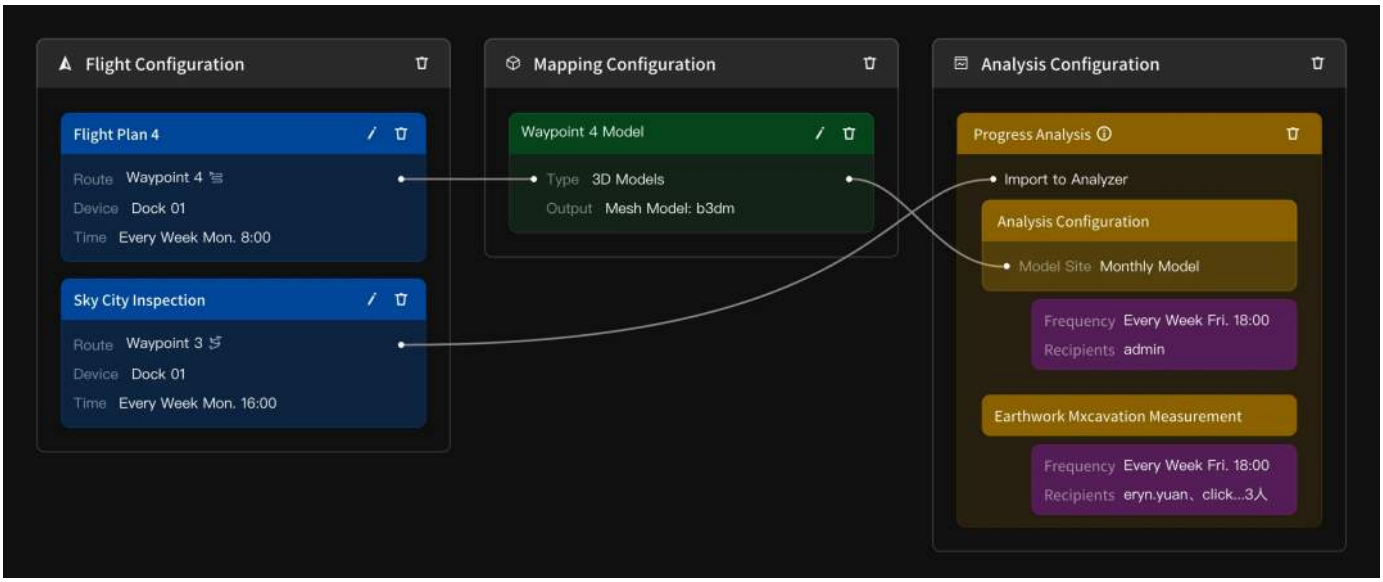
3. Return to the Automation Workflow configuration page, click Refresh, and select the newly created analyzer.

Associate flight plan, mapping task, and analysis task

1. On the automation configuration page, you can link the flight plan with the mapping task and analyzer. Once the media file upload is complete, model mapping will be performed automatically, and the results will be synced to the analyzer for calculation.

2. You can also link the flight plan with the analyzer, and the media files will be automatically imported into the analyzer for processing.

> - If the report in the selected analyzer contains a model site, associate the mapping task with the model site. The measurement area will be calculated based on the model generated by the task.
> - If the report in the selected analyzer does not contain a model site, associate the mapping task with the analyzer, and all models in the analyzer will be used for calculation by default.



Preview

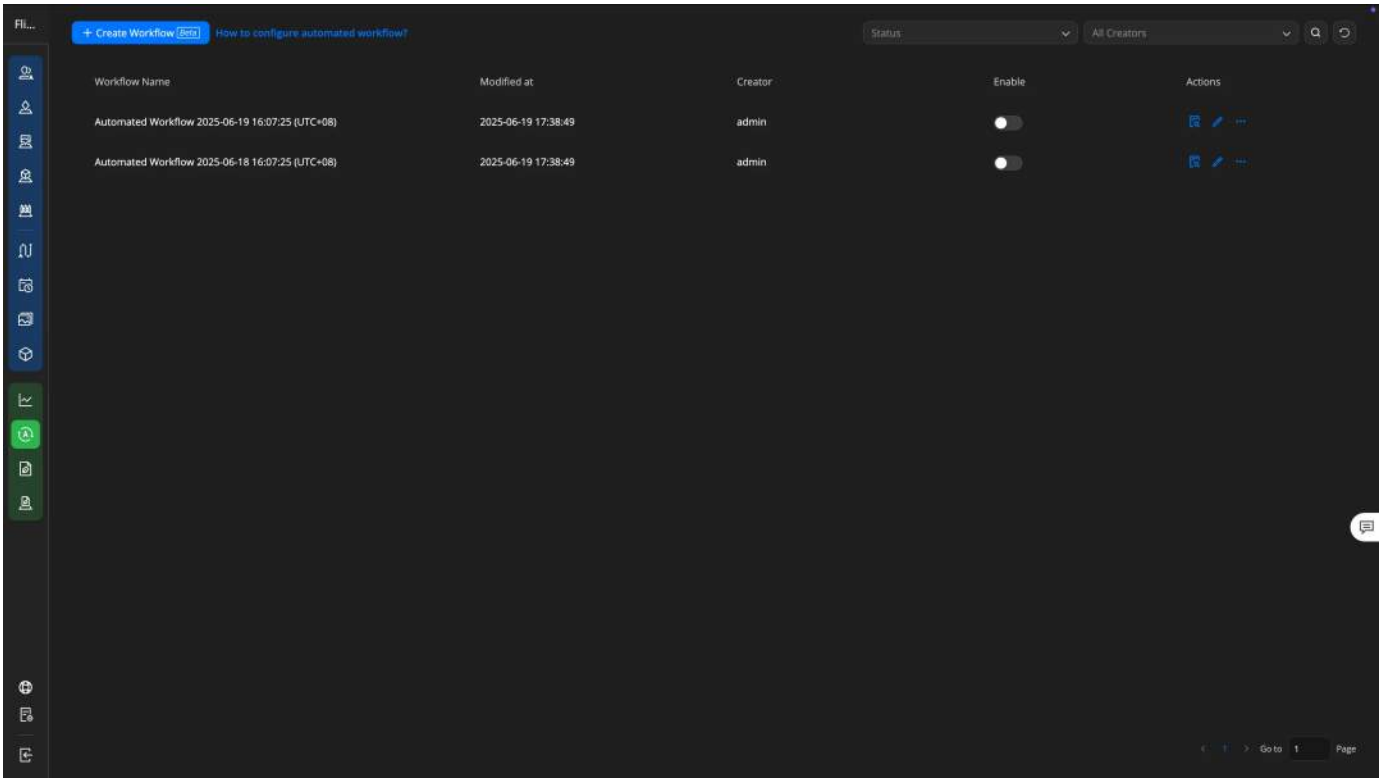
Click the Preview button to open the preview page. Click to view the results of flight, mapping, and analysis tasks.

Save and Enable Configuration

After completing the configuration, click the Save button to save the configuration. Once the configuration is saved, click Enable to start the automation.

Workflow Management

Users can preview workflow content, view task and operation logs, and edit or preview the workflow as needed.



View Task Logs

Click Task Logs to view the execution status of the automated workflow.

View Operation Logs

Click Operation Logs to view the operator information and operation records of the automated workflow.

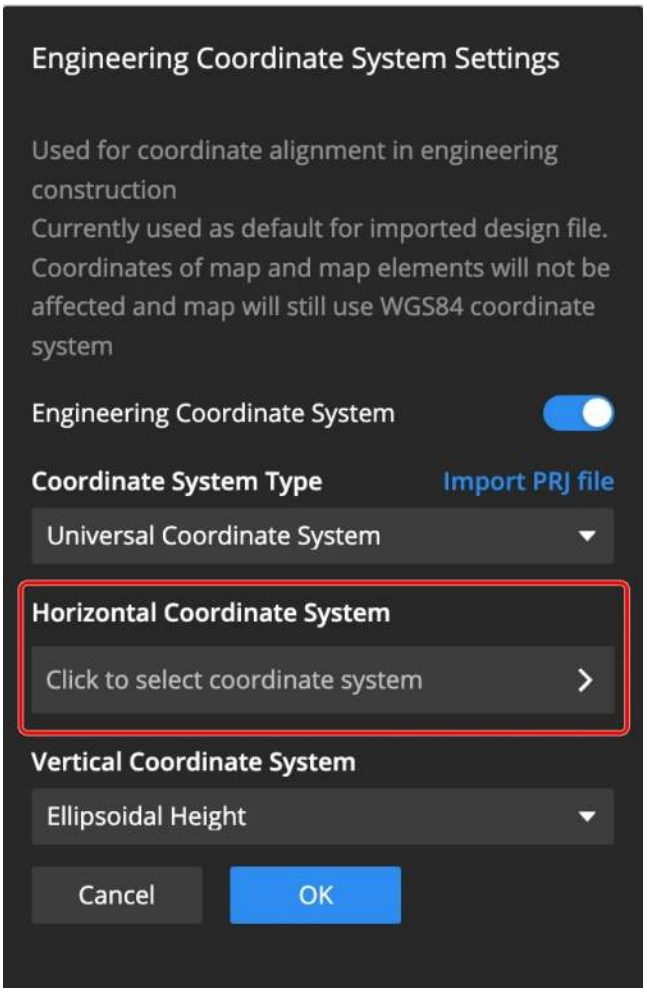
Project Engineering Coordinate System Settings

- General Coordinate System
- Custom Projected Coordinate System
- PRJ File Import

In the project settings, you can enable the engineering coordinate system settings. This coordinate system setting is only used when importing design files, and does not affect the coordinate system of the map or map elements within the project. The map will still use the WGS84 coordinate system.

General Coordinate System

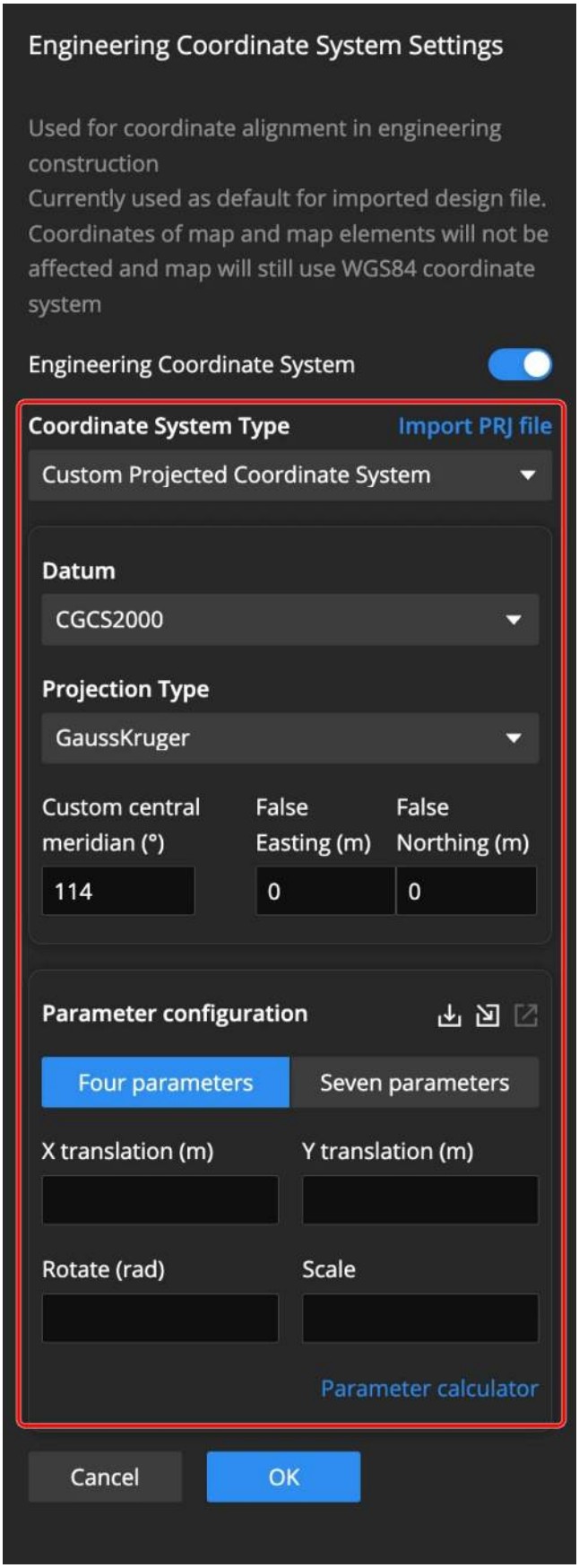
Supports setting EPSG code for the general coordinate system.



Custom Projected Coordinate System

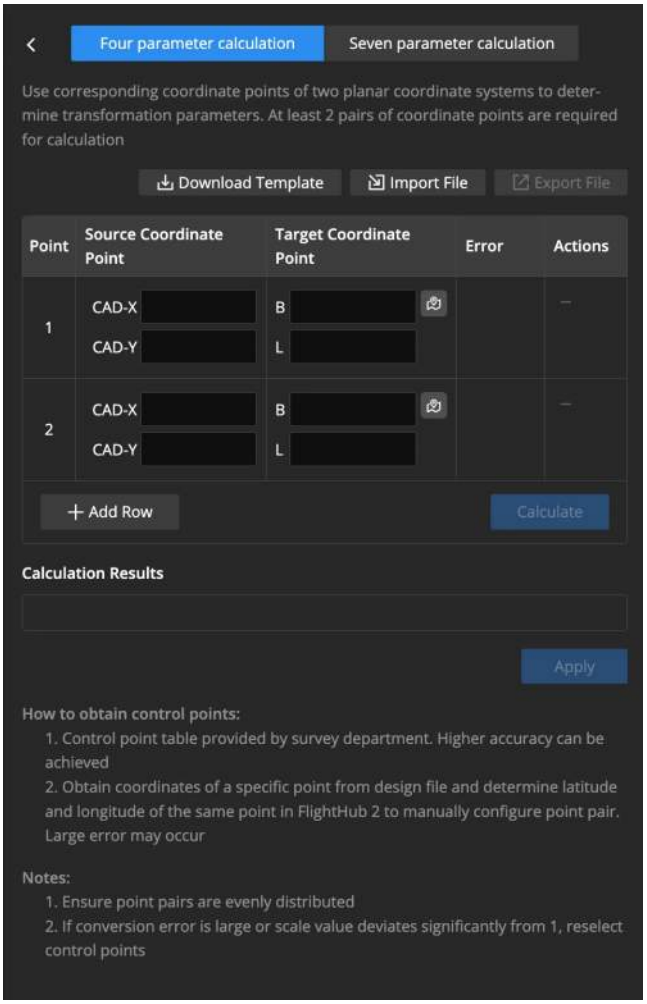
Supports customizing the projected coordinate system by setting the following parameters:

- Datum: CGCS2000, WGS84, Beijing 54, or Xi'an 80
- Projection Type: Gauss-Kruger, UTM, or Web Mercator
- Custom central meridian
- False easting and northing



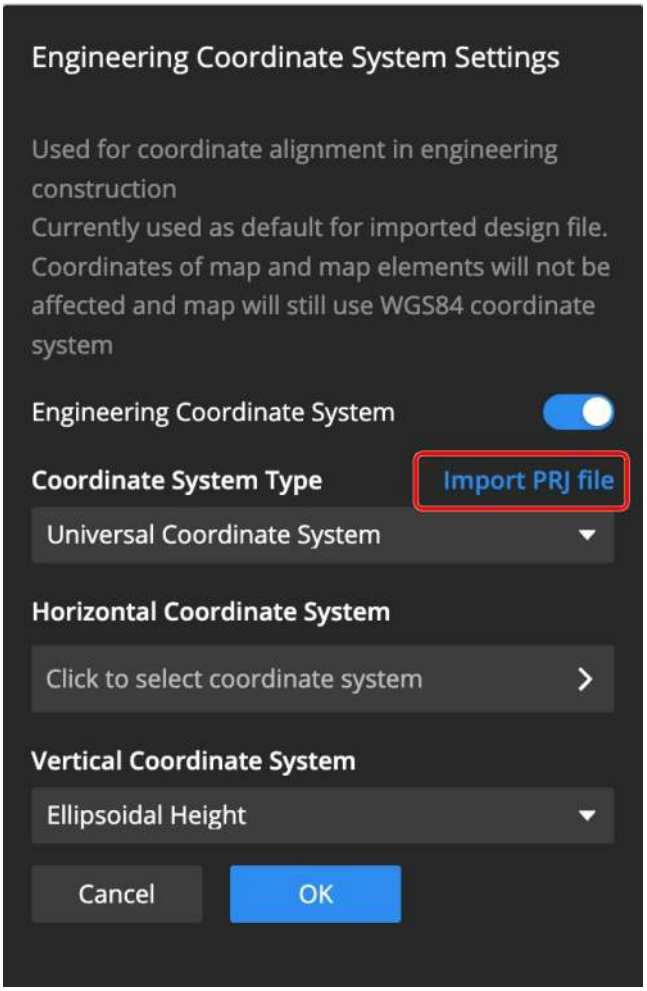
Four- or Seven-Parameter Configuration

- Supports direct import of parameter files in the CSV format.
- Supports four- or seven-parameter transformations using control point pairs.



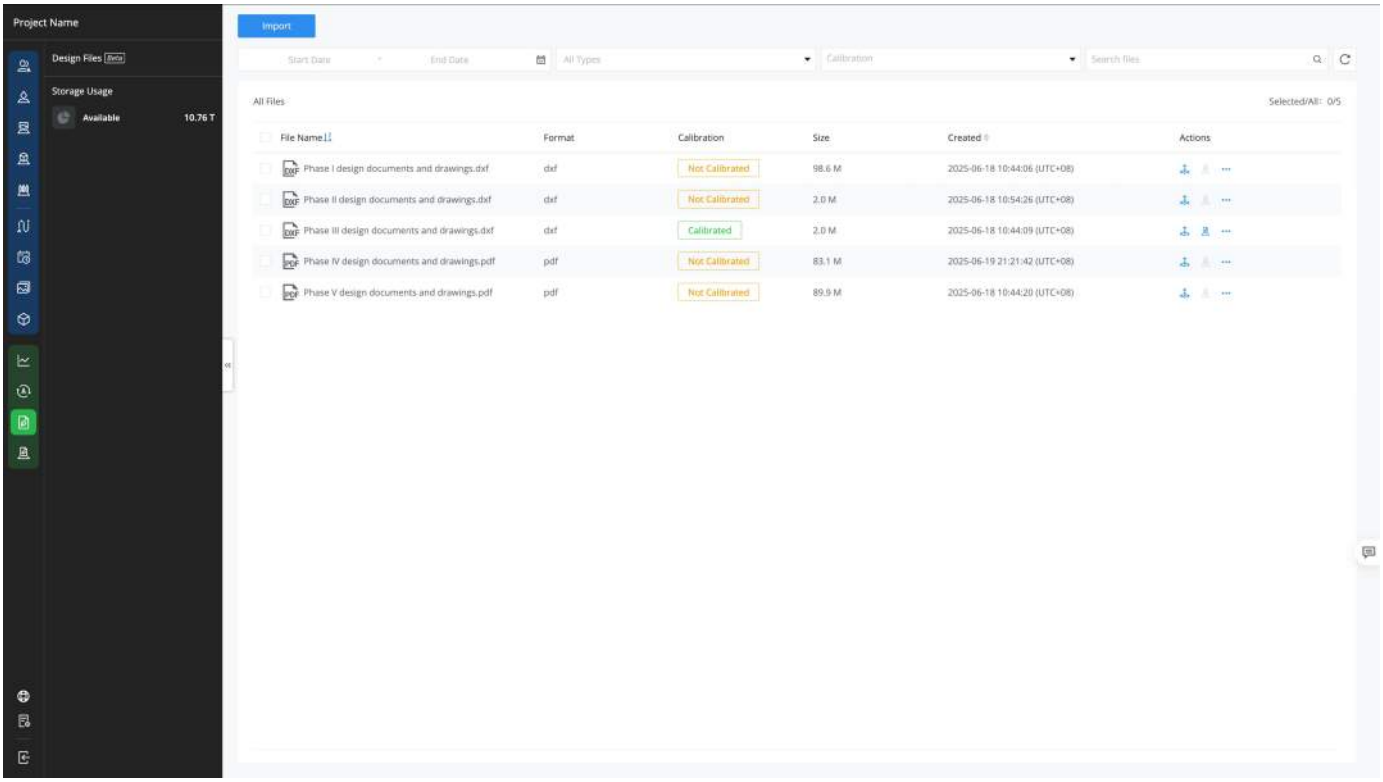
PRJ File Import

You can import PRJ files that define coordinate systems. The system will read and apply the coordinate system information from the PRJ file automatically.


Engineering Coordinate System Settings
Used for coordinate alignment in engineering construction
Currently used as default for imported design file. Coordinates of map and map elements will not be affected and map will still use WGS84 coordinate system
Engineering Coordinate System
Coordinate System Type
Import PRJ file
Universal Coordinate System
Horizontal Coordinate System
Click to select coordinate system
Vertical Coordinate System
Ellipsoidal Height
Cancel
OK

Design File Import

DXF or PDF design files can be imported and displayed within the FlightHub 2 project map and analyzer. You can upload DXF files with 3DFACE entities. The system calculates volumes and visually tracks construction progress based on your selected models and design files.



Note:

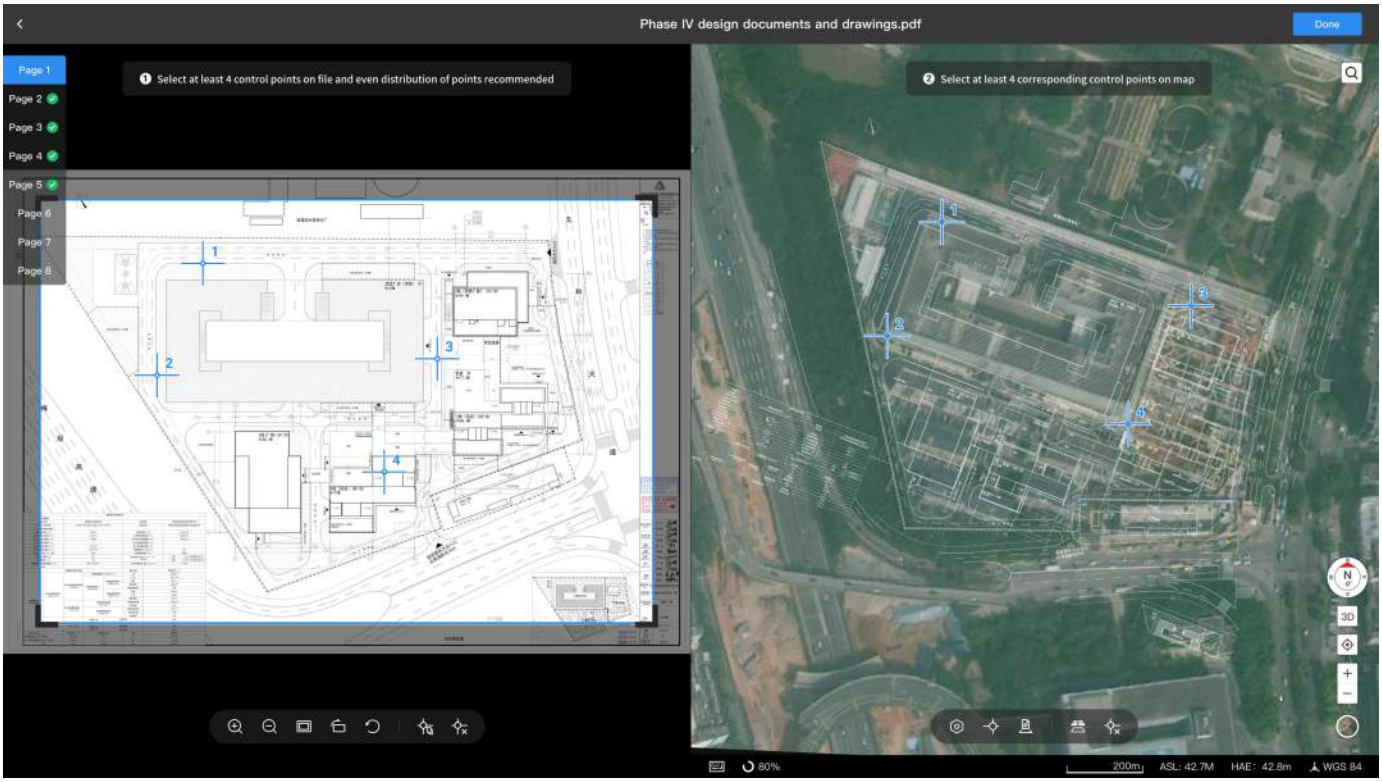
- Multi-page PDF file can be uploaded and be displayed on the map after matching points are set and calibrated in the design file management;
- DXF files less than 100 MB can be uploaded and be displayed on the map after matching points are calibrated or coordinate system is converted in the design file management;
- The above design files can only be referenced by the analyzer after calibration is completed.

PDF File Calibration

- Calibration Process
- Toolbar Description

Calibration Process

After importing the PDF file, you can click to enter the calibration interface and calibrate the PDF file to the specified position on the map.



Please add at least 4 matching points, and ensure the matching points are as dispersed as possible and not aligned in a straight line to achieve the best calibration effect.

If the calibration is incorrect, you can click on a specific matching point and double-click the button to delete that matching point.

Toolbar Description

PDF Interface:



1. Zoom in the file
2. Zoom out the file
3. Scale the file to fit the current screen size
4. Rotate the file
5. Reset the page size and orientation
6. Copy all matching points from the previous page of the current file
7. Delete all matching points on the current page

Map interface:



1. Set the color and transparency style of the PDF file after being overlaid on the map
2. Adjust the coordinates of matching points
3. Choose whether to overlay the file on the map after calibration
4. Show or hide map elements on the current page
5. Delete all matching points on the current map page

DXF File Calibration

- Precise Calibration
- Matching Point Calibration

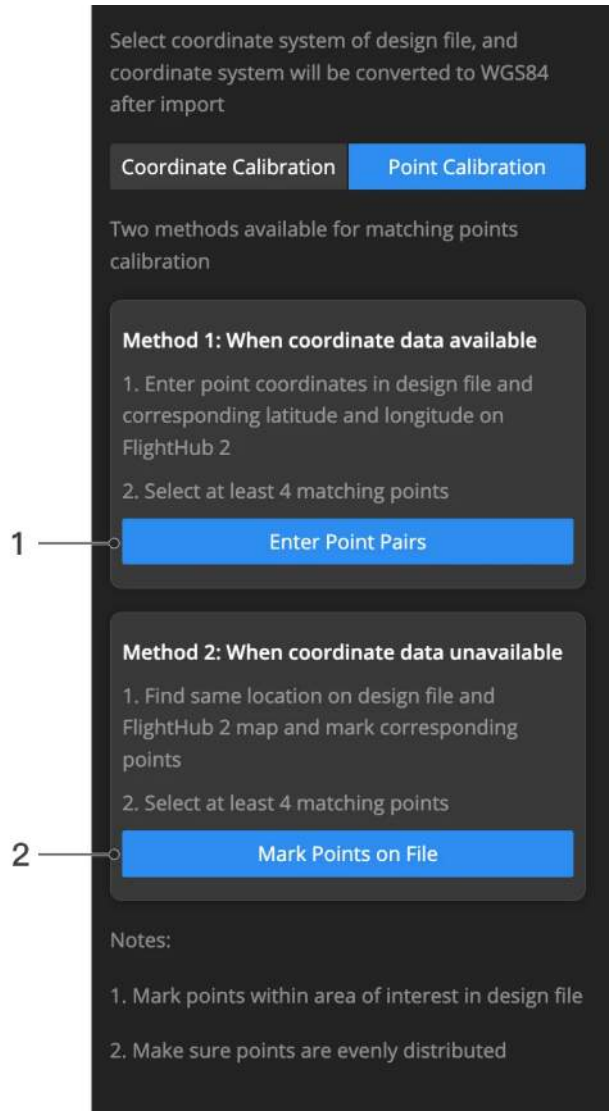
After importing the DXF file, you can choose to calibrate the file through precise calibration or matching point calibration.

Precise Calibration

Supports setting custom projected coordinate systems and general coordinate systems, same as the engineering coordinate system settings.

Matching Point Calibration

Method 1: If coordinate data is available, you can mark points on the map or directly enter the coordinates of matching points.



Method 2: If coordinate data is not available, you can refer to the PDF file calibration method to calibrate the DXF file.

Design Files on Map

- Prerequisites
- Steps

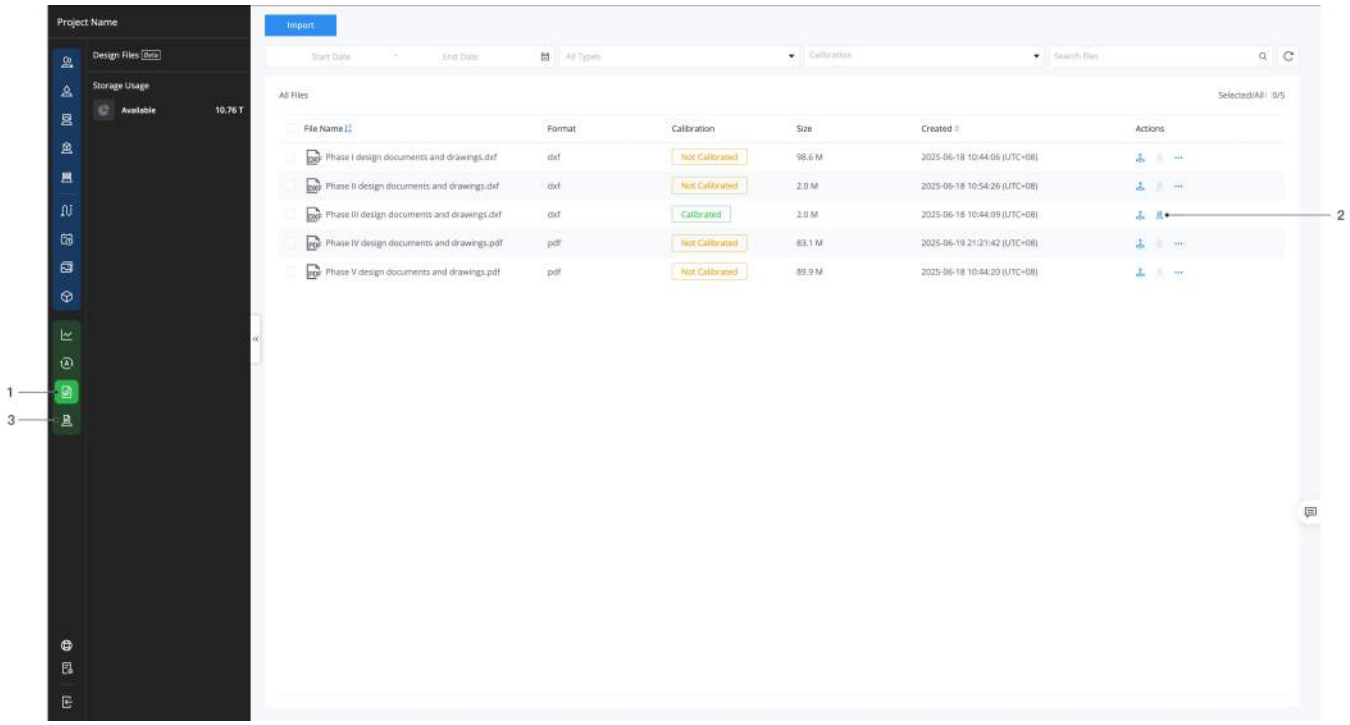
This section mainly introduces how to load design files onto the map.

Prerequisites

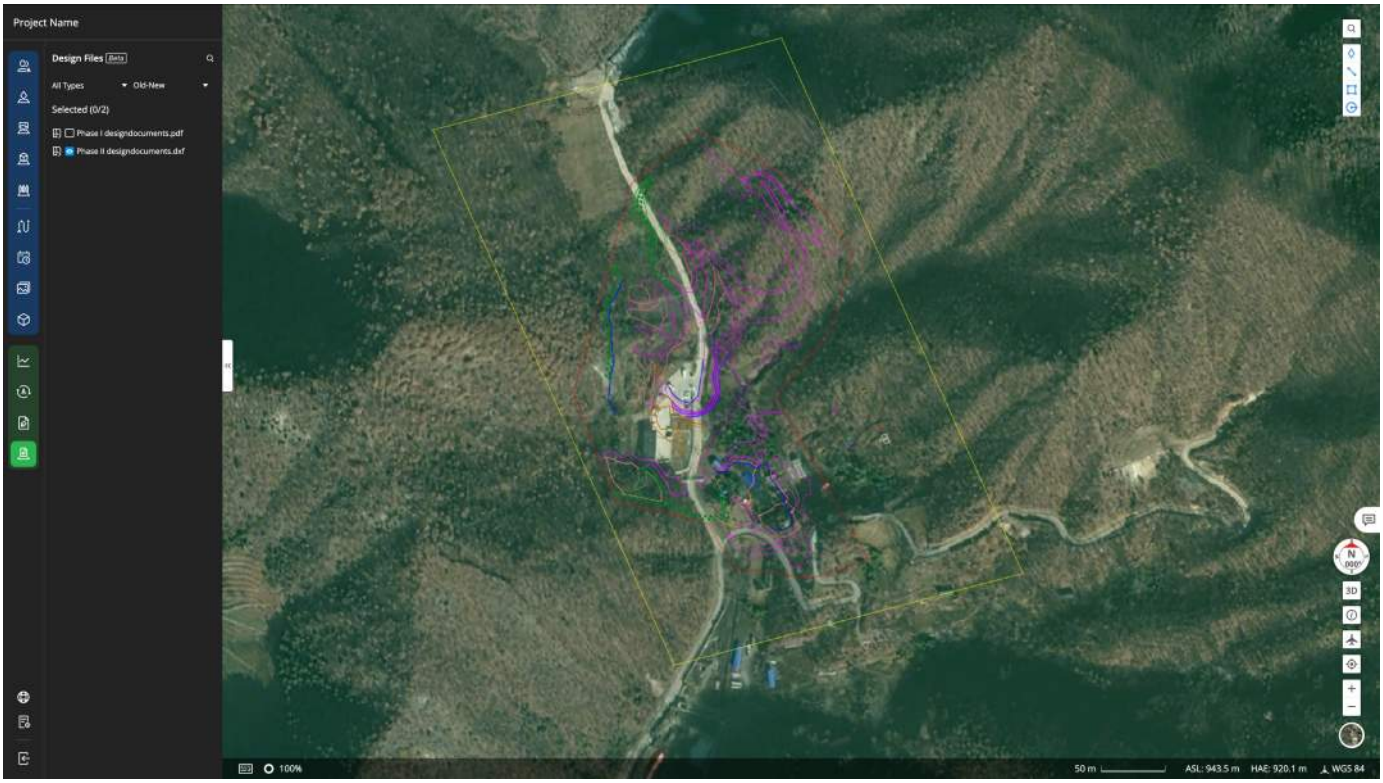
1. Only calibrated design files can be loaded onto the map.
2. Data Management > Design File Management permissions are required.

Steps

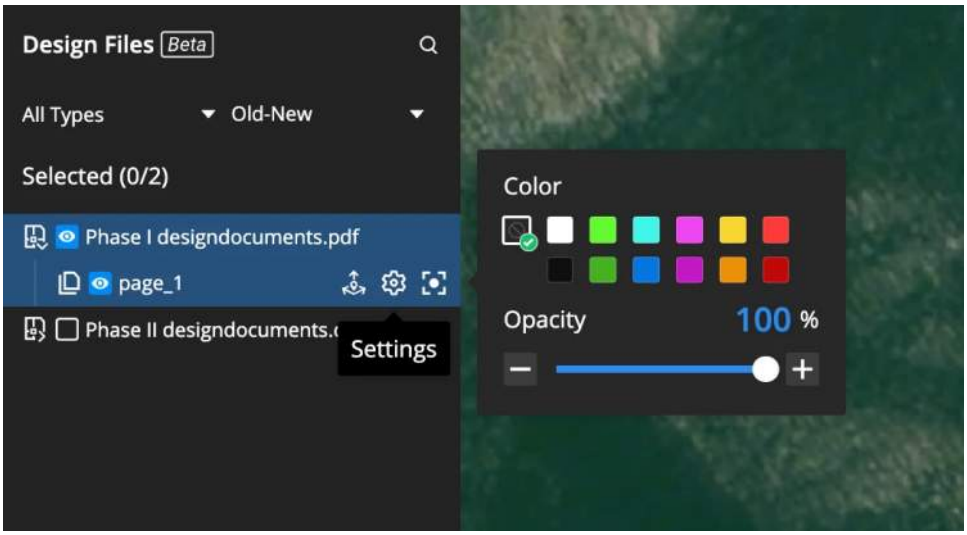
1. Log in to FlightHub 2, enter a project, and click  to enter the Design Files page.
2. Select the design file you want to import, click  , and load the design file onto the map.
3. After the design file is successfully loaded onto the map, click  to enter the "Design files on map" page.



4. Check the loaded design files, and the design files will be displayed on the map.



5. Click the dropdown arrow next to the design file to open the secondary menu. Here, you can adjust the color and opacity of the design file.



- Note: When selecting as a PDF file, this option can be set. If selecting a DXF file, only the return function is supported.

Introduction

- Upgrade Notice
- Basic Features
- Configure Information on FlightHub Sync Beta
- Configure Media File Direct Transfer
- Configure Telemetry Data Transfer
- Configure Stream Forwarding
- Sync Mapping Files
- Sync Flight Route Files
- Push Notifications
- Distribute Tasks from Third-Party Platforms
- Notes on On-premises Version

Upgrade Notice

FlightHub Sync Beta is now upgraded to FlightHub Sync.

1. FlightHub Sync Beta features are integrated into FlightHub Sync, and will cease maintenance by the end of 2025.
2. Learn more about FlightHub Sync.

Basic Features

DJI FlightHub 2 provides APIs to communicate with third-party cloud platforms. The available API services include transferring media files, telemetry and livestream data, and mapping and flight route files, as well as displaying notifications on both FlightHub 2 and third-party platforms.

Configure Information on FlightHub Sync Beta

Organization or super administrators can enter My Organization, click to enter the organization settings, and click Add Service to fill in the basic information on FlightHub Sync Beta.

1. Organization Key: The unique identifier of the current organization

2. Third-Party Cloud Name: The name of the third-party cloud platform
3. Webhook URL: A unique URL for receiving notifications from FlightHub 2

Click OK to complete the configuration.

Configure Media File Direct Transfer

When enabled, media files captured during tasks will not be stored in FlightHub 2, but transferred directly to the third-party storage bucket.

1. Complete the FlightHub Sync Beta configuration.
2. Click Configure Media File Direct Transfer and fill in the storage location. See FlightHub Sync Beta Documentation for more details.
3. Click ••• > Edit to edit the configuration information or Delete to delete the configuration and stop the file transfer.

Configure Telemetry Data Transfer

When enabled, related telemetry data will be synced to the third-party platform when the dock aircraft is performing tasks.

1. Complete the FlightHub Sync Beta configuration.
2. Click Configure Telemetry Data Transfer and fill in the MQTT Broker information. For more information, see DJI Dock MQTT Details and the Aircraft MQTT Details.
3. Click ••• > Edit to edit the configuration information or Delete to delete the configuration and stop the data transfer.

Configure Stream Forwarding

When enabled, livestream data can be transferred from FlightHub 2 to third-party platforms.

1. Complete the FlightHub Sync Beta configuration.
2. Click Configure Stream Forwarding to fill in the RTMP Server information.
3. Enable Stream Forwarding: Call the `Start Pushing Livestream` API service, and the livestream data will be pushed to the third-party cloud server.
4. Disable Stream Forwarding: Call the `Get Livestream Channel Transcoder` API service to access the `converter_id` value. Call the `Stop Pushing Livestream` API service and configure the `converter_id` value to disable the stream forwarding.

5. Click ••• > Edit to edit the configuration information or Delete to delete the configuration.

Note the following when configuring stream forwarding:

- Only livestream data in the RTMP format is supported.
- Users can call the `Get Project Device List` API service to access the device SN.
- After completing stream forwarding, users should call the API service to end the stream forwarding. Otherwise, the organization livestream minutes will still be consumed.
- If multiple transcoders are created for one camera, the consumption of each transcoder is calculated separately and added up together.

Sync Mapping Files

1. Complete the FlightHub Sync Beta configuration.
2. After a photo mapping is completed, users can call the `Notify of File Completion` API service, and a notification will be sent to the third-party platform through the Webhook URL. Users can obtain the `file_id` value and call the `Get File Information and Download Address` API service to access the download link.

Sync Flight Route Files

FlightHub 2 supports bidirectional transfer of flight route files.

Get Files from FlightHub 2

1. Complete the FlightHub Sync Beta configuration.
2. After a photo mapping is completed, users can call the `Notify of File Completion` API service, and a notification will be sent to the third-party platform through the Webhook URL. Users can access the `file_id` value and call the `Get File Information and Download Address` API service to access the download link.

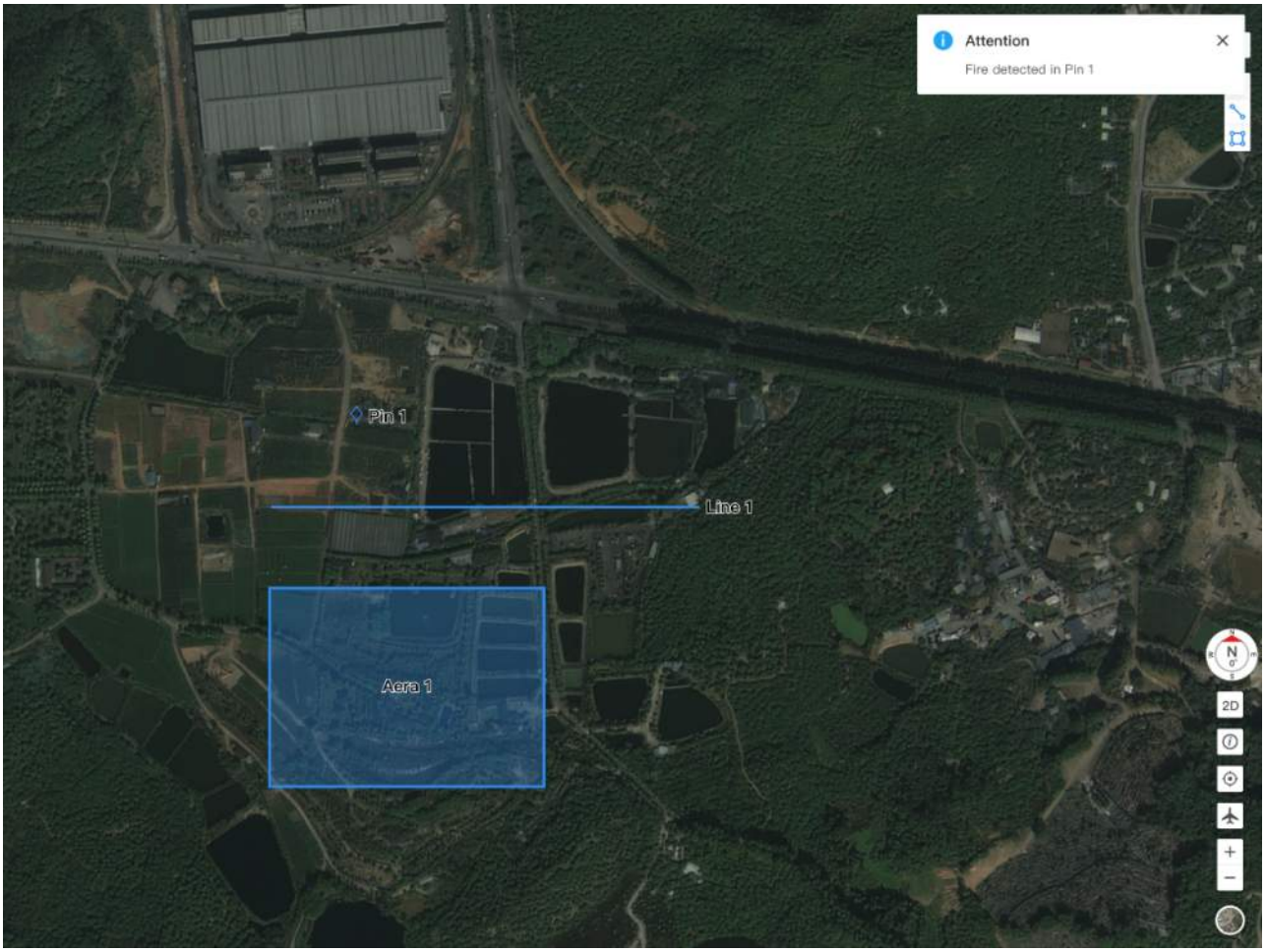
Transfer Files to FlightHub 2

1. Complete the FlightHub Sync Beta configuration.
2. Call the `Get Temporary Upload Token` API service and use the Alibaba or AWS SDKs to upload the files to the FlightHub 2 storage bucket.
3. Call the `Notify of Route File Upload` API service to display the notification on the FlightHub 2 page.

Push Notifications

The third-party platform can send notifications with event details such as time, location, and description to FlightHub 2.

1. Complete the FlightHub Sync Beta configuration.
2. Call the `Push Event Notification and Map Annotation` API service to customize notification messages and annotations and push the notification to FlightHub 2. The notification and annotations will be displayed on FlightHub 2.



Distribute Tasks from Third-Party Platforms

FlightHub Sync Beta supports distributing flight tasks from a third-party platform and displays the flight tasks in the Task Plan library of DJI FlightHub 2.

Usage

1. Organization or super administrators can configure basic information in Organization Settings > FlightHub Sync (Beta).

2. The following actions are supported after calling the API services:
    - Task distribution:
        - Supports single- and multi-dock plans.
        - Supports immediate tasks. Timed, recurring, and continuous tasks are currently not supported.
        - Supports media files transfer. Users can transfer media files to FlightHub 2 or third-party platforms.
    - Supports obtaining task progress, status, and flight trajectory.
    - Supports pausing or resuming tasks.
    - Supports RTH and obtaining RTH trajectory. Supports canceling RTH and obtaining RTH exit status.

Refer to FlightHub Sync Beta APIs for more details.

Flight Safety

The following safety checks are supported, and if the safety checks are failed, the flight tasks will not be performed.

- Safety checks for the docks and aircraft
- Whether the device supports the multi-dock plans
- Whether the task parameters are all set
- Whether the flight route is valid

Safety checks below are not supported:

Checklist	Result
The device supports resuming tasks from the breakpoint.	If not, the task will fail.
The device supports setting the minimum altitude for RTH.	If not, the task will fail.
The device supports Optimal Route Planning.	If not, the aircraft will return home based on the set RTH altitude.
The device supports different positioning accuracy modes.	If GNSS is not supported, the task will be performed after the RTK data is converged.
The device supports Media File Direct Transfer.	If not, the media files will be uploaded to DJI FlightHub 2 directly.
The distance between the flight route start point and the dock is less than 5	The task will be performed regardless of the distance.

km.	
The dock aircraft, payload, and camera are the same as specified in the route settings.	The task will be performed even if the device models are inconsistent.
The Weather-Related Flight Restriction is set.	The settings are invalid. The task will be performed based on the data provided by the weather station.

Notes on On-premises Version

DJI FlightHub 2 on-premises version supports livestream forwarding configuration.

Configure Livestream Forwarding

In the on-premises version, super administrators and organization administrators can configure livestream forwarding channels. After configuration, the livestream can be forwarded to third-party cloud platforms. **Both RTMP and GB28181 stream formats are supported. You can configure up to 20 streams in total, combining both formats.** Configuration can be done either through the API or through the user interface. Detailed step-by-step instructions are provided below.

API Configuration

Refer to the **Livestream Forwarding** for details.

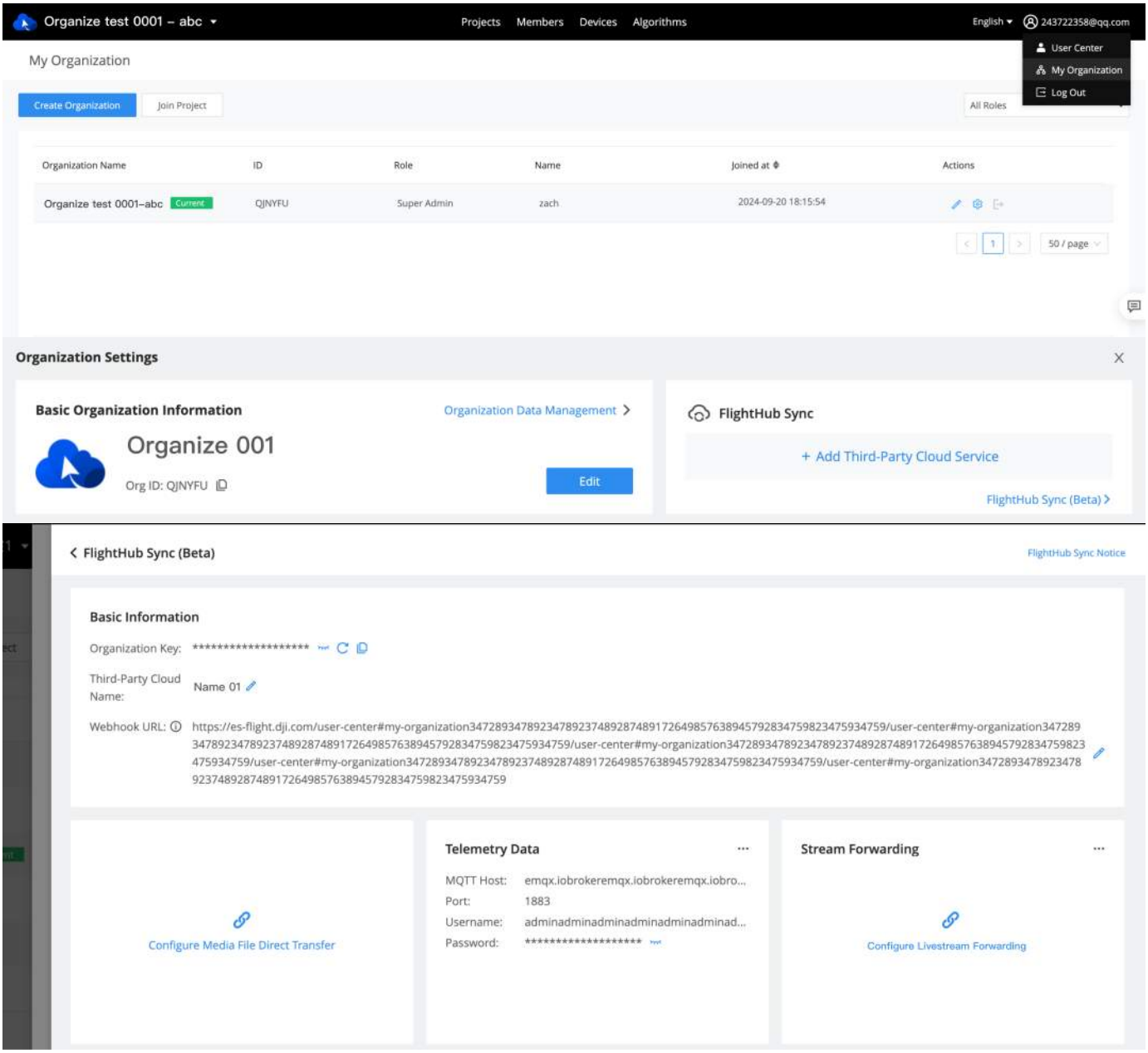
Complete API call instructions: `${DOMAIN_PROTOCOL}://${BACKEND_DOMAIN}/${API}`

> Note: `${DOMAIN_PROTOCOL}` and `${BACKEND_DOMAIN}` are environment variables in the ENV file within the deployment installation package of the FlightHub 2 on-premises version.

Interface Configuration

Forwarding Channel Configuration Process

1. Go to My Organization > Organization Settings > FlightHub Sync Beta > Details > Configure Livestream Forwarding to configure livestream forwarding.



2. Click New and complete the following parameter configuration.

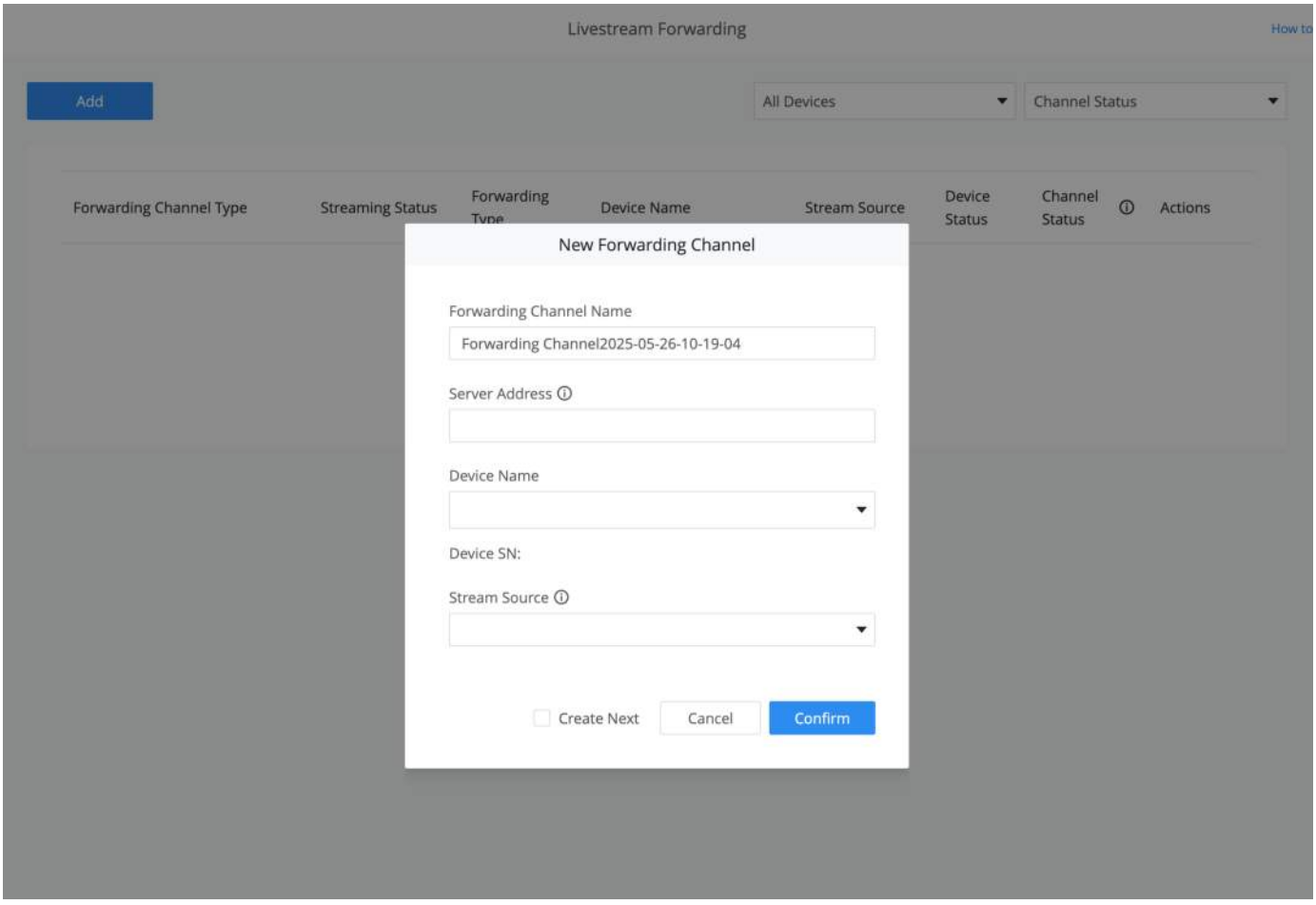
(1) Introduction to parameters in the RTMP stream configuration interface:

- Forwarding Channel Name
- Forwarding Channel Type: Select RTMP
- Server Address: Please start with **RTMP://** start
- Device Name:
  - A dropdown will display all bound device names, including docks and aircraft.
  - Supports device search.
  - After selection, the **device SN** will be displayed for confirmation.
- Stream Source:
  - If dock is selected as the device name, only dock cameras will be available as options.

- If aircraft is selected as the device name, the available camera types for that aircraft will be displayed, such as infrared, wide-angle, and zoom cameras.

> **Notes:**
>
> - Selected stream source will become default stream for forwarding after the livestream starts.
> - A single aircraft can be configured with up to two stream sources: the first is the FPV Camera, and the second can be either an infrared, wide-angle, and zoom cameras. If the configurations of multiple forwarding channels differ, the latest configuration will prevail.

- Create Next: If checked, this window will not disappear after the previous configuration is successfully created, allowing you to continue creating the next one.



(2) Introduction to parameters in the GB28181 format stream configuration interface:

- Forwarding Channel Name
- Forwarding Channel Type: Select GB28181
- SIP Server IP: IP format xxx.xxx.xxx.xxx, 0-255
- SIP Server Port: The usage range is usually within [0, 65535].

- Server Number: Globally unique
- Device Number: Globally unique to ensure unique identification among different devices.
- Registration Password
- SIP Local Port: Globally unique, ranging from 10000 to 65535.
- Local Channel: Refers to the video channel number.

> **Note**: Once a GB28181 configuration is created and the device comes online, it will automatically be available for on-demand streaming (meaning the device's SIP session is active). Third-party platforms can then initiate a stream with a single click. This behavior does not apply to RTMP streams.



Forwarding Channel List Management

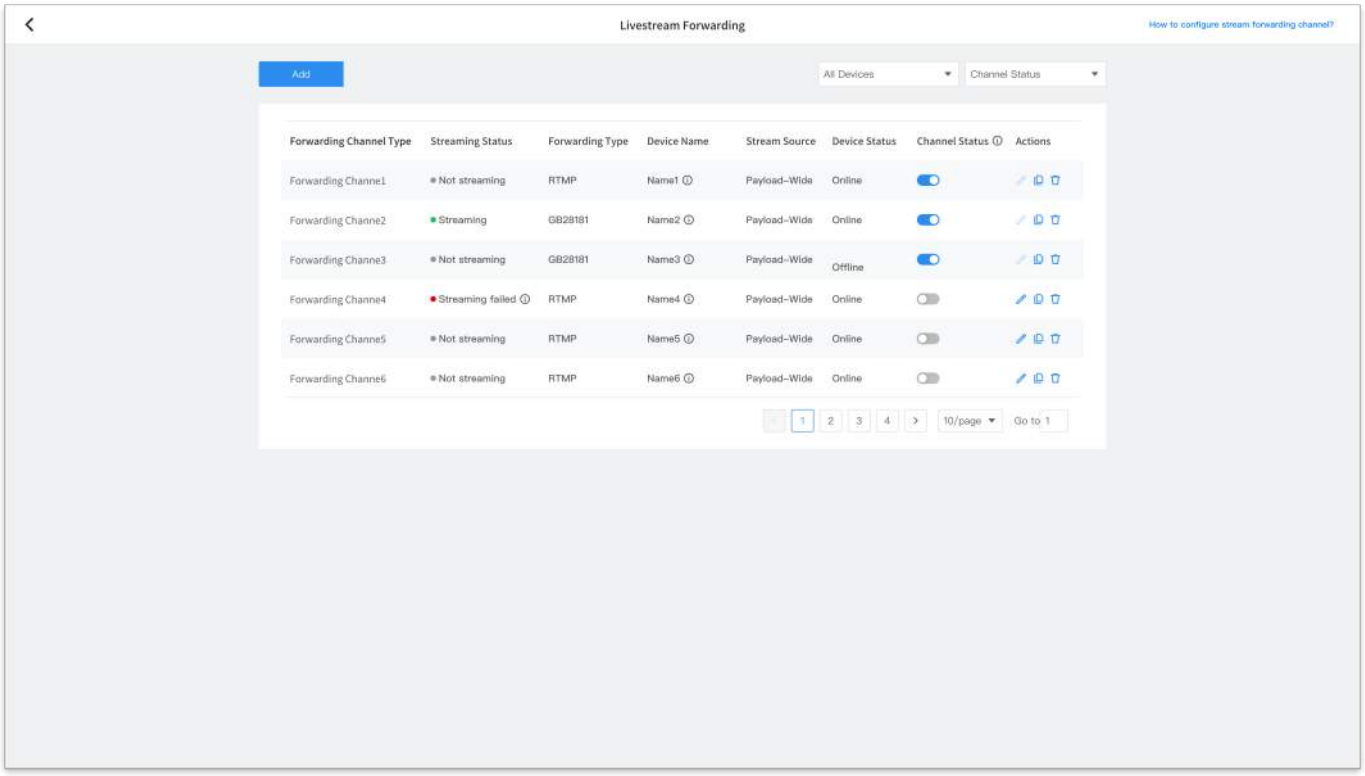
After a livestream forwarding channel is successfully configured, it will appear in the configuration list. Each channel in the list supports editing, copying, and deleting.

The configuration list displays the following information for each channel:

- Auto Forwarding Switch:
  - For RTMP streams: You can enable the auto forwarding switch. When enabled, the device will automatically start streaming when it comes online and stop streaming when it goes offline. By default, this switch is turned off when a new channel is created.

    - For GB28181 streams: You can enable the auto session establishment switch. When enabled, the device will automatically establish a session upon startup, but streaming still requires a request from the playback side.
- Forwarding Status:
    - Forwarding
    - Not Forwarded
    - Forwarding Error. If there is an error, you can click the red exclamation mark next to it to view detailed error information.

> **Note**: Livestream forwarding channels configured via API will also be synchronized in the list.



API Services

- FlightHub Sync Beta Webhook
- FlightHub Sync Beta APIs

With FlightHub Sync Beta, communication and data exchange between FlightHub 2 and third-party platforms can be realized. Note the following when calling the FlightHub Sync Beta APIs:

- Users need to add a field name "X-Organization-Key" and fill in the organization key as its value.
- Users can call `Get Organization Project List`, `Get Project Device List`, and `Get Task Details` to access related information.
- After entering the project list of an organization, users can locate the organization ID in the webpage link: https://fh.dji.com/organization/**organization-ID**/project-list#/.

FlightHub Sync Beta Webhook

When a file is ready, a notification will be sent to the third-party platform through the Webhook URL.

`Notify of File Completion` API service:

```json
{
    "notify_type": "file_uploaded",
    "notify_time": "2023-11-07T12:00:00.582627+00:00",
    "data": {
        "organization_id": "Organization ID",
        "workspace_id": "Project ID",
        "file": {
            "id": "File ID",
            "name": "File Name",
            "object_key": "Object Storage Key",
            "type": 5 // 5-Flight route files, 7-3D mapping files
        }
    }
}
```

FlightHub Sync Beta APIs

Refer to FlightHub Sync Beta APIs for more details.

> Note: FlightHub Sync is currently in beta testing phase. Features except stream forwarding are free. If stream forwarding is enabled, livestream minutes will be consumed. The calculation of consumed minutes starts from the creation of a transcoder (Start Pushing Livestream) and ends when the transcoder is deleted (Stop Pushing Livestream). The consumption of each transcoder is calculated separately and added up together.

Introduction

- API Introduction
- Product Architecture
- Quick Start
- Interface Tutorial

API Introduction

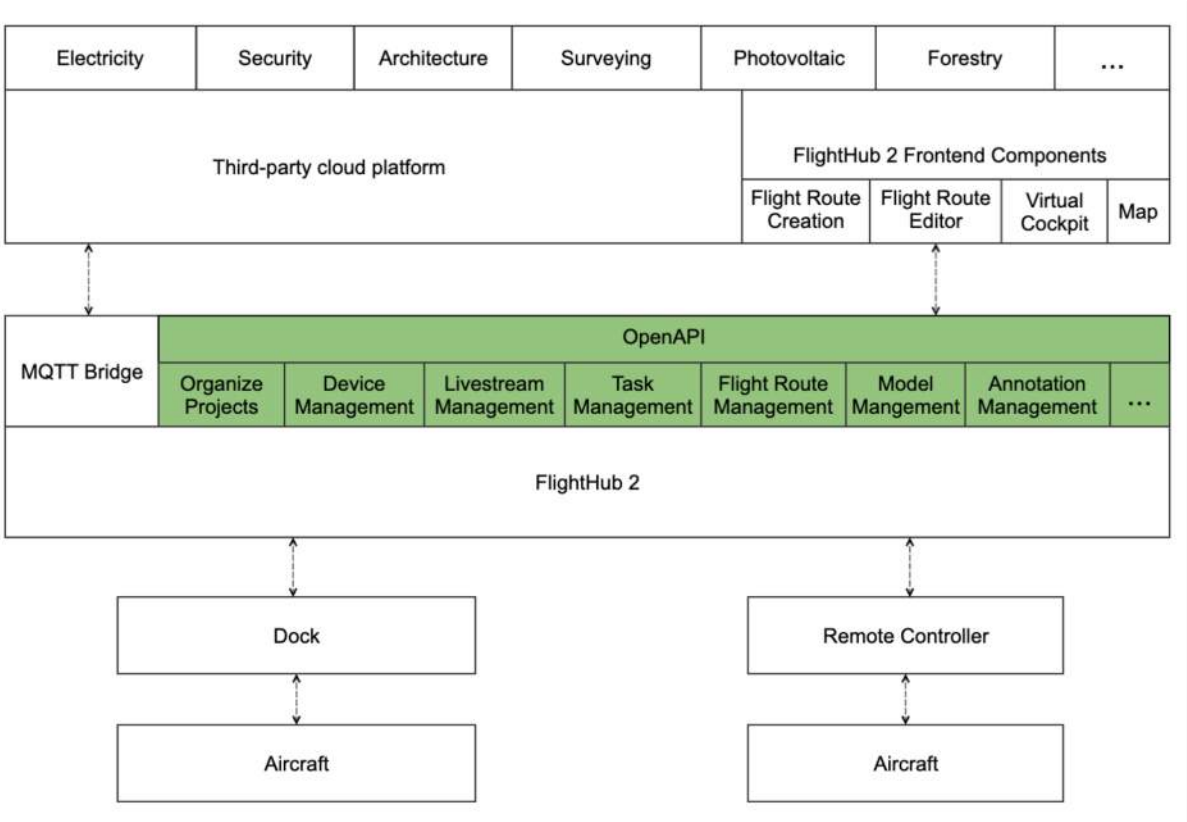
DJI FlightHub 2 OpenAPI is an open platform based on RESTful specifications, designed to provide developers with the ability to interact with third-party cloud platforms and DJI FlightHub 2.

Here are some key features of OpenAPI:

- RESTful Design: Adopts RESTful specifications, making the use of the API more intuitive and compliant with web standards. Developers can interact with FlightHub 2 using standard HTTP methods such as GET, POST, PUT, and DELETE.
- Authentication and Authorization: Implements secure authentication and authorization mechanisms to protect API resources and manage access permissions effectively.
- FlightHub 2 Interaction: Offers features such as DJI FlightHub 2 organization and project management, device management, livestream management, flight route management, task management, model management, and annotation management.
- Developer Support and Documentation: Offers detailed API documentation, code examples, and developer support, enabling rapid integration and effective utilization of platform features.

Developers can quickly integrate the core features of FlightHub 2 by calling OpenAPI, significantly reducing development costs and meeting various business needs and innovative application scenes.

Product Architecture



Quick Start

Environment Setup

Refer to the DJI FlightHub 2 On-Premises Version Deployment Manual to deploy the FlightHub 2 on-premises version.

Authentication and Authorization

Refer to the **Authentication and Authorization** tutorial to understand the principles of OpenAPI authentication and authorization, obtain the values of `X-User-Token` and `X-Project-Uuid`, and enter these two values in the header field to ensure the security of OpenAPI and achieve access control to FlightHub 2.

Sample Code

1. Query FlightHub 2 System Status

After the FlightHub 2 on-premises version is successfully deployed, call the Query FlightHub 2 System Status method to check the system status.

```
GET /openapi/v0.1/system_status HTTP/1.1
Host: 127.0.0.1:30812
X-Language: zh
X-User-Token: xxxxxxxx
```

A return value of 0 indicates that the FlightHub 2 system is operating normally.

```
{
  "code": 0,
  "message": ""
}
```

2. Get the List of Projects Under the Organization

Create an organization, set up a project, and bind devices in FlightHub 2. Refer to the DJI FlightHub 2 User Manual > Organization Management section on creating organizations and projects in FlightHub 2, then call the Get the List of Projects under the Organization method to obtain the list of created projects.

```
GET /openapi/v0.1/project HTTP/1.1
Host: 127.0.0.1:30812
X-Language: zh
X-User-Token: xxxxxxxx
```

The list of created projects will be returned.

```
{
  "code": 0,
  "message": "OK",
  "data": {
    "list": [
      {
        "name": "c2c_test",
        "introduction": "a",
        "uuid": "93df839d-ae74-4f04-842e-2f1f81c89a66",
        "org_uuid": "105ddd05-34ce-46b6-a872-cb32b8c98f64",
        "created_at": 1702498686,
        "updated_at": 1702498686,
```

```
        "project_work_center_point": {
          "latitude": 22.906899500237845,
          "longitude": 113.69995967214662
        }
      }
    ]
  }
}
```

3. Start Livestream

Refer to the DJI FlightHub 2 User Manual > Device Management section on binding devices in FlightHub 2, then refer to the **Livestream Management** tutorial, and call the **Enable Livestream** method to start streaming.

```
POST /openapi/v0.1/live-stream/start HTTP/1.1
Host: 127.0.0.1:30812
X-Project-Uuid: xxxxxxxxxx
X-Language: zh
Content-Type: application/json
X-User-Token:  xxxxxxxx
Content-Length: 120

{
    "sn": "7CTDM3Dxxxxxx",
    "camera_index": "165-0-7",
    "video_expire": 7200,
    "video_quality": "adaptive"
}
```

The livestream link will be available at `data.url`, where you can visit to view the livestream.

```
{
  "code": 0,
  "message": "",
  "data": {
    "expire_ts": 1764751629,
    "url": "http://127.0.0.1:30806/rtc/v1/whep/?app=live&stream=7CTDM3Dxxxx
    "url_type": "srs"

```

```
9       }
    }
```

Interface Tutorial

- The interface tutorial includes the OpenAPI feature list, tutorials, method list, and descriptions. Refer to the **OpenAPI Interface Tutorial** for more details.

Introduction

- Basic Introduction
- Tutorial
- Interface Tutorial
- FAQs

Basic Introduction

Introduction to Frontend Components

The DJI FlightHub 2 frontend components include: flight route creation, flight route editor, virtual cockpit, and project/map. These components support custom themes and styles. This manual will introduce how to integrate these components into your own system from scratch.

Preparation Before Starting

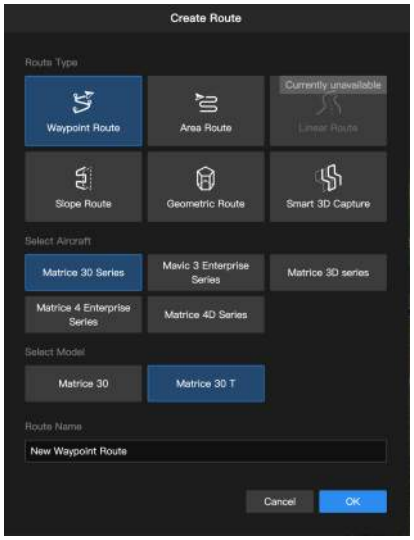
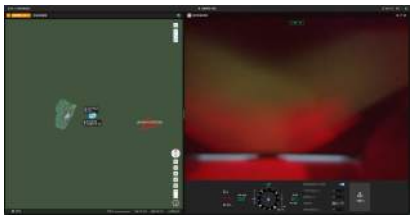
- Technology Stack: React, Vue, and HTML + CSS are all supported.
- Hardware Requirements: Refer to the DJI FlightHub 2 On-Premises Version Deployment Manual to deploy the FlightHub 2 On-Premises Version.

Quick Start

The current version mainly offers the following components and corresponding feature collections. You can download the **Demo** and refer to this manual for configuration and debugging.

The components released are as follows:

Component	Feature Collection	Feature Screenshot

Component	Feature Collection	Feature Screenshot
Flight Route Creation	Flight route types: - Waypoint route - Area route - Slope route - Geometric route - Smart 3D Capture route Style customization	
Flight Route Editor	Flight route types: - Waypoint route - Area route - Slope route - Geometric route - Smart 3D Capture route Flight route functions: - Flight route editing and saving - Map annotations - Cesium open - Point, line, area annotations - Model loading Style customization	
Virtual Cockpit	Remote control functions: - One-click takeoff - Livestream - Manual flight and trajectory display by pressing WASD keys - One-click RTH Style customization	
Project/Map	Project map data: - Point, line, area annotations - Flight route and trajectory planning - Custom task area, custom Restricted Zone - Project device list - Dock aircraft - Manual flight aircraft	

Tutorial

Add Required Styles and Dependencies

After completing the FlightHub 2 on-premises version deployment, you will receive a private IP. Enter this private IP or domain name and port into the `HEAD` section of the code block.

```html
<!DOCTYPE html>
<html>
  <head>
    <script type="text/javascript" src="http://Private IP or domain name/pac
    <title>Demo</title>
  </head>
  <body>
  </body>
</html>
```

Frontend Component Compliance Information

The frontend components depend on capabilities provided by the FlightHub 2 on-premises version, so it is necessary to obtain the `projectToken` and `prjId` of the FlightHub 2 on-premises version. The methods to obtain the information are as follows:

- `projectToken` : Access the FlightHub 2 on-premises version, Go to My Organization (deployed FlightHub 2 domain name/user-center#/my-organization) > Organization Settings > FlightHub Sync to obtain the organization key. This organization key value is `projectToken` .
- `prjId` : Access the FlightHub 2 on-premises version, click on the project list, select a project, and find the project ID in the URL. For example: https://deployed FlightHub 2 domain name/organization/4bf0039f-6434-44a8-b891-8d7b6b7ff132/project/aa9c7a78-4e97-4ced-8953-2cea96c07c00, where `4bf0039f-6434-44a8-b891-8d7b6b7ff132` is the `orgId` , and `aa9c7a78-4e97-4ced-8953-2cea96c07c00` is the `prjId` .

Example:

```js
window.FH2.initConfig({
    serverUrl: 'http://Enter the domain name and backend service port here.
    wssUrl: 'ws://Enter the domain name and backend service port here. Defau
    hostUrl: 'http://Enter the IP or domain name of the web page and the por
```

```
    // Copy prjId value and paste here
    prjId: 'cdca2736-8096-4729-9bc7-497ad5b60d5e',
    // Copy projectToken value and paste here
    projectToken: 'MTczMDg4NDI1NHx1NUR3RWxNajc5VnF4QWJuY1BvZmxUenlwYzdnRnBUc
})
```

Note

Make sure that the calling of `window.FH2` is executed after the page has fully loaded (`load`). For example, you can use `addEventListener('load', cb)` to define a callback function `cb` and call the `window.FH2` method within this callback.

Add a Container for the Component

For example, to add a route editor, insert the following code in the section of your code where you want the route editor to be displayed:

```html
<div class="fh2-container">
    <div id="wayline-header"></div>
    <div class="project-details">
        <div id="project-app-container"></div>
        <div id="project-middle-container"></div>
        <div id="project-right-micro-app" class="right-micro-app">
            <div class="maps-micro-app">
                <div id="project-map-app-placeholder" class="map-app-placeho
                    <div id="map-app-global" class="map-app-container"></div
                </div>
            </div>
            <div id="wayline-app-container"></div>
        </div>
    </div>
</div>
```

Add the Component Container Style

Below are the recommended container styles, which can be directly used in the target code area. If there are other custom requirements, you can modify the style code yourself.

```html
<!DOCTYPE html>
<html>
  <head>
    <!-- start -->
    <style>
        .fh2-container {
            display: flex;
            flex-direction: column;
            /* Set the width and height of the container where you want to l
            height: 100vh;
            width: 100vw;
        }

        #project-app-container>div, .map-app-container>div {
            width: 100%;
            height: 100%;
        }

        .project-details {
            position: relative;
            width: 100%;
            display: flex;
            flex: 1;
            overflow: auto;
        }

        .project-details .right-micro-app {
            position: relative;
            display: flex;
            flex: 1;
        }

        .project-details .right-micro-app .maps-micro-app {
            display: flex;
            flex: 1;
        }

        .project-details .right-micro-app .map-app-placeholder {
            flex: 1;
            position: relative;
            display: flex;
            flex-direction: column;
        }

```

```
        .project-details .right-micro-app .map-app-container {
            height: 100%;
        }

        .project-details .right-micro-app #wayline-app-container {
            position: absolute;
            top: 0;
            left: 0;
            width: 100%;
            height: 100%;
            pointer-events: none;
        }
    </style>
    <title>Demo</title>
  </head>
  <body>
  </body>
</html>
```

Load Frontend Components

Using the flight route editor as an example, you can load the component by passing the `id` and the corresponding `wayline_id` to the method. Refer to the `Interface Tutorial` of the manual for more details.

```js
window.FH2.loadWayline("wayline-app-container", {
      wayline_id: 'bded3cf1-c924-4cd0-95d0-4bd642ddda09',
})
```

Customize Map Elements (Optional)

Using custom map text as an example, you can click `Customize Map` at the top of `wayline.html` and zoom out the map to see the effect.

```html
<!DOCTYPE html>
<html>
  <head>
    <link href="./custom-style.css" rel="stylesheet">
  </head>
  <body>
```

```
    <div class="btn-bar">
        <button id="CesiumMapBtn" onclick="addCustomCesiumData()">Customize
    </div>
    <script>
        const CesiumMapBtn = document.getElementById('CesiumMapBtn')
        CesiumMapBtn.style.display = 'none'
        window.addEventListener('load', function () {
            // Wait until the map instance is ready, and then display the mo
            window.FH2.subscribe('cesium-viewer-change', (key) => {
                if (window.FH2.cesiumViewer.global) {
                    CesiumMapBtn.style.display = 'inline-block'
                }
            })
        })

        // Example: Customize the map, adding custom text to the map
        function addCustomCesiumData () {
            for (const key in window.FH2.cesiumViewer) {
                if (Object.prototype.hasOwnProperty.call(window.FH2.cesiumVi
                    const ins = window.FH2.cesiumViewer[key].entities.add({
                        position: window.Cesium.Cartesian3.fromDegrees(113.9
                        label: {
                            text: "User custom text",
                        },
                    })
                }
            }
        }
    </script>
  </body>
</html>
```

Customize Theme (Optional)

The demo file showcases the capability to customize styles. You can modify corresponding theme styles in `custom-style.css` and immediately see the effects across the four HTML files, including `wayline.html` . `custom-style.css` is written using CSS, so if your project also employs CSS, you can directly adjust the style variables `custom-style` within your project.

```html
<!DOCTYPE html>
<html>
  <head>
```

```
    <link href="./custom-style.css" rel="stylesheet">
  </head>
  <body>
    <div class="btn-bar">
        <button onclick="changeTheme()">Customize Style</button>
    </div>
    <script>
        function changeTheme () {
            document.body.className = document.body.className ? '' : 'set-ch
        }
    </script>
  </body>
</html>
```

Add Event Listener (Optional)

Using the flight route editor as an example, you can subscribe to the save button and receive corresponding prompts when saving or canceling the flight route.

```
window.FH2.subscribe('wayline-cancel', () => {
    console.log('Canceled saving flight route')
})
window.FH2.subscribe('wayline-save', () => {
    console.log('Flight route saved')
})
```

Interface Tutorial

Instance: window.FH2

Method: validateToken

Parameter	Type	Required	Description
token	string	true	Returns token validation result: true/false

Method: initConfig

Parameter	Type	Required	Description

Parameter	Type	Required	Description
serverUrl	string	true	Backend HTTP service address
wssUrl	string	true	Backend Duplex service address
hostUrl	string	true	Frontend web entry address
prjId	string	true	Project ID
projectToken	string	true	OpenAPI authentication token

Method: loadWaylineCreation

Parameter	Type	Required	Description
domId	string	true	Third-party frontend provides DOM node ID
props	Object<WaylineCreationConfig>	false	For detailed parameter description, see the table below: WaylineCreationConfig

WaylineCreationConfig parameter description:

Parameter	Type	Required	Description
folder_id	string	false	The folder where the created flight route is stored. The value is the folder ID. If not provided, it will be the default folder.

Method: destroyWaylineCreation

Parameter	Type	Required	Description
-	-	-	Destroy the flight route creation component instance

Method: loadWayline

Parameter	Type	Required	Description
domId	string	true	Third-party frontend provides DOM node ID

Parameter	Type	Required	Description
props	Object<WaylineConfig>	true	For detailed parameter descriptions, see the table below: WaylineConfig.

WaylineConfig parameter description:

Parameter	Type	Required	Description
wayline_id	string	true	Wayline ID

Method: destroyWayline

Parameter	Type	Required	Description
isEffect	boolean	false	Destroy the flight route editor instance. If there are multiple components on the current page, passing true to destroy the instance will not affect other loaded components. If no parameter is passed, it defaults to false.

Method: loadCockpit

Parameter	Type	Required	Description
domId	string	true	Third-party frontend provides DOM node ID
props	Object<CockpitConfig>	true	For detailed parameter description, see the table below: CockpitConfig

CockpitConfig parameter description:

Parameter	Type	Required	Description
gatewaySn	string	true	Gateway SN
droneSn	string	true	Aircraft SN
map	boolean	false	Whether to load the map. Default value is true. Setting the method parameter to false prevents the map from loading.

Method: destroyCockpit

Parameter	Type	Required	Description
isEffect	boolean	false	Destroy the virtual cockpit instance. If there are multiple components on the current page, passing true to destroy the instance will not affect other loaded components. If no parameter is passed, it defaults to false.

Method: loadProject

Parameter	Type	Required	Description
domId	boolean	true	Load project map

Method: destroyProject

Parameter	Type	Required	Description
-	-	-	Destroy project map

Method: subscribe

Parameter	Type	Required	Description
eventName	string	true	Subscribe to events: - wayline-save: Triggered when saving a flight route, and the callback parameter is the ID of the successfully saved flight route - wayline-cancel: Triggered when canceling the save of a flight route, and the callback parameter is the ID of the flight route - wayline-back: Triggered when clicking the back button on the flight route editor component, and the callback parameter is the ID of the flight route - wayline-creation-saved: Triggered when saving a flight route creation component, and the callback parameter is the ID of the successfully saved flight route - wayline-creation-cancel: Triggered when canceling the save of a flight route creation component - cesium-viewer-change: Triggered when changes in the loading of each Cesium map are detected
callback	string	false	Pass in the current flight route ID

Method: cesiumViewer

Type	Explanation
{ [key: string]: CesiumViewer }	This method provides access to all Cesium Viewer instances on the current page. The key values currently include: - global: Main map - wayline_editor_support: Auxiliary map in the flight route editor component.

Instance: window.Cesium

Native Cesium objects can be accessed directly through the window object, so users don't need to import `cesium.js` themselves.

FAQs

- Why does calling FH2 result in a 'property undefined' error?

Make sure you call the method `window.FH2` after the page is loaded (`load`). You can also use to define a callback function and call `window.FH2` within this callback.

- Why does the web page's body background color turn white after loading the FlightHub 2 component?

Currently, loading the FlightHub 2 component applies a global style to the body background color, which may override the original website style. In this case, you need to set a higher priority style for the website's background color, such as using the !important style.

- Why does using the FlightHub 2 component cause some interface elements to have inaccurate positioning?

For example, when adding waypoints, annotations, and message prompts in the flight route editor, some element positioning is inaccurate. Solution: Make sure that the component container and its parent containers do not have the following style properties: 1. transform or perspective is not none; 2. filter is not none; 3. will-change is transform or perspective; 4. contain is paint

- How to perform TypeScript inference?

Refer to the following code:

```js
export type eventName = 'wayline-save' | 'wayline-cancel' | 'cesium-viewer-c
export interface IWaylineParams {
```

```
  wayline_id: string;
}

export interface ICockpitParams {
  gateway_sn: string;
  drone_sn: string;
}

export interface IFH2Config {
  userId: string;
  orgId: string;
  prjId: string;
  serverUrl: string;
  wssUrl: string;
  hostUrl: string;
  token?: string;
}
export interface FH2 extends Record<string, any> {
  validateToken: (token: string) => boolean;
  initConfig: (config: IFH2Config) => void;
  subscribe: (eventName: eventName, callback: (...args: any[]) => void) => v
  unsubscribe: (eventName: eventName) => void;
  destroyWayline: () => void;
  loadWayline: (domId: string, routerName: string, params?: IWaylineParams)
  updateWayline: (routerName: string, params?: IWaylineParams) => void;
}
```

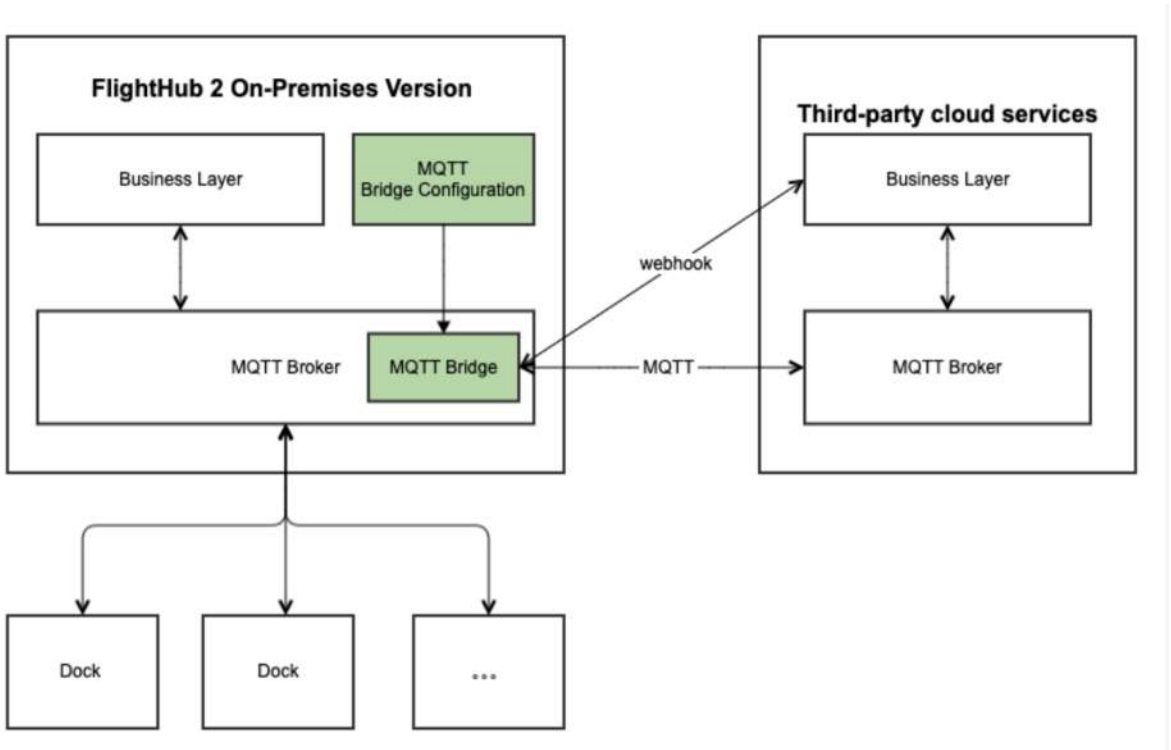
Introduction

- Basic Introduction
- System Topology
- Preparation Before Starting
- Configuration Steps
- Notes

Basic Introduction

The MQTT Bridge provides MQTT bridging and forwarding functionality, supporting the forwarding of dock's MQTT information to third-party systems through FlightHub 2 on-premises version, offering a collaborative task solution for third-party systems and FlightHub 2 on-premises version in industry scenarios.

System Topology



Preparation Before Starting

1. Refer to the DJI FlightHub 2 On-Premises Version Deployment Manual to deploy the FlightHub 2 on-premises version.
2. The network that hosts the third-party system's MQTT Broker must be connected to the network that hosts the on-premises version of FlightHub 2. The MQTT Broker supports the EMQX type. If an MQTT Broker other than EMQX is used, users need to conduct their own testing to ensure compatibility and functionality.
3. The third-party system must ensure that the ports for both the MQTT server and the webhook URL are open. Refer to the `Configuring Bridge` section for more details.

Configuration Steps

Configuring Bridge

Enter the curl command in your terminal to set up the MQTT bridge address and configure webhooks for monitoring device online and offline status.

Example:

```json
curl -X POST "http://10.94.98.15:38080/bridges/v1/resources" -H "Content-Typ
    "mqtt": {
        "id": "mqttbridge2",
        "config": {
            "username": "admin",
            "proto_ver": "mqttv4",
            "password": "",
            "address": "10.94.98.17:1883",
            "clientid": "fh2-bridge2"
        }
    },
    "webhook": {
        "config": {
            "url": "http://10.94.98.17:8080",
            "method": "POST",
            "path": "/",
            "body_template": "{ \"username\": \"${username}\", \"timestamp\"
        },
        "id": "webhook1"
    }
}'
```

Parameter description:

mqtt：

- "http://10.94.98.15:38080": Needs to be replaced with the address and port where the FlightHub 2 on-premises version is running.
- id: Unique identifier of the bridge. Can be customized and must be letters and numbers only.
- username: Username allowed to connect to third-party MQTT.
- password: Password for connecting to third-party MQTT. Cannot be empty.
- proto_ver: Protocol version number of MQTT. Currently only supports mqttv4. Default is mqttv4.
- address: Access address of third-party MQTT.
- clientid: MQTT client identifier. Can be customized and must be letters and numbers only.

webhook：

- url: URL for the interface that tracks third-party device online and offline events.
- method: Method for the interface that tracks third-party device online and offline events.
- path: Path for the interface that tracks third-party device online and offline events.
- body_template: A string template for the content sent to the third-party interface for device online and offline events. You can modify the keys to fit the specific requirements of your interface.

Configuration verification: The following information indicates successful configuration. If it returns a failure, please check whether the address and port are configured correctly and whether the network is connected.

```json
{"result":{"code":0,"message":"success"},"data":null}
```

Querying Bridge

Enter the curl command in your terminal to query the status of the MQTT Bridge.

Example:

```json
curl -X GET "http://10.94.98.15:38080/bridges/v1/resources"
```

Modifying Bridge

Enter the curl command in your terminal to query the status of the MQTT Bridge. When modifying, please ensure that the ID of MQTT and the ID of the webhook cannot be changed. For other parameter descriptions, please refer to the parameter description of the configuration bridge command.

Example:

```json
curl -X PUT "http://10.94.98.15:38080/bridges/v1/resources" -H "Content-Type
{
    "mqtt": {
        "id": "mqttbridge2",
        "config": {
            "username": "admin",
            "proto_ver": "mqttv4",
            "password": "",
            "address": "10.94.98.17:1883",
            "clientid": "fh2-bridge2"
        }
    },
    "webhook": {
        "config": {
            "url": "http://10.94.98.17:8080",
            "method": "POST",
            "path": "/",
            "body_template": "{ \"username\": \"${username}\", \"timestamp\"
        },
        "id": "webhook1"
    }
}
'

```

Enabling or Disabling Bridge

Enter the curl command in your terminal to enable or disable the bridge function. When disabled, MQTT messages will not be able to be forwarded to the third-party platform's MQTT Broker.

Example:

```json
curl -X PUT "http://10.94.98.15:38080/bridges/v1/resources/switch" -H "Conte
    "enabled": true

```

```
4   }
    '
```

Binding Dock to Third-Party System

Refer to the **Access to the Cloud Server** tutorial to bind the dock a third-party system.

Binding Dock to FlightHub 2

Refer to the FlightHub 2 user manual > Organization Management > Device Management > Dock Management section to bind the dock to an organization in FlightHub.

Verifying Bridge

Mosquitto verification:

1. Open two terminals and subscribe to 'thing/product/+/osd' on both FlightHub 2 and the third-party MQTT Broker.

```json
1   mosquitto_sub -h <FlightHub 2 Broker IP> -p <FlightHub 2 Broker Port> -t "th
2   mosquitto_sub -h <Third-Party Broker IP> -p <Third-Party Broker Port> -t "th
```

2. In a third terminal, publish the message 'test' to the topic. If 'test' appears in both subscribing terminals, the bridge setup is successful.

```json
1   mosquitto_pub -h <FlightHub 2 Broker IP> -p <FlightHub 2 Broker Port> -t "th
```

FlightHub 2 verification: If the MQTT data received by the third-party broker matches the FlightHub 2 on-premises interface data, the bridge is successful.

Notes

1. Strategy for using the livestream function with the third-party system and FlightHub 2

The third-party system has higher priority. It can take over the livestream from FlightHub 2 after it starts. When the third-party system starts streaming, FlightHub 2 cannot start a livestream. To

enable the livestream on FlightHub 2, use the following command to disable the third-party system's livestream.

```json
curl -X POST http://10.94.98.15:38081/thing-access-service/inner/tas/bridges
    "sn": "6QCDL870020196"
}'
```

Note: sn refers to the dock's serial number.

2. After enabling the MQTT Bridge function, the dock will automatically forward media files from the aircraft directly to the third-party system.

Refer to the **Media Management** tutorial to configure the third-party system's bucket address.

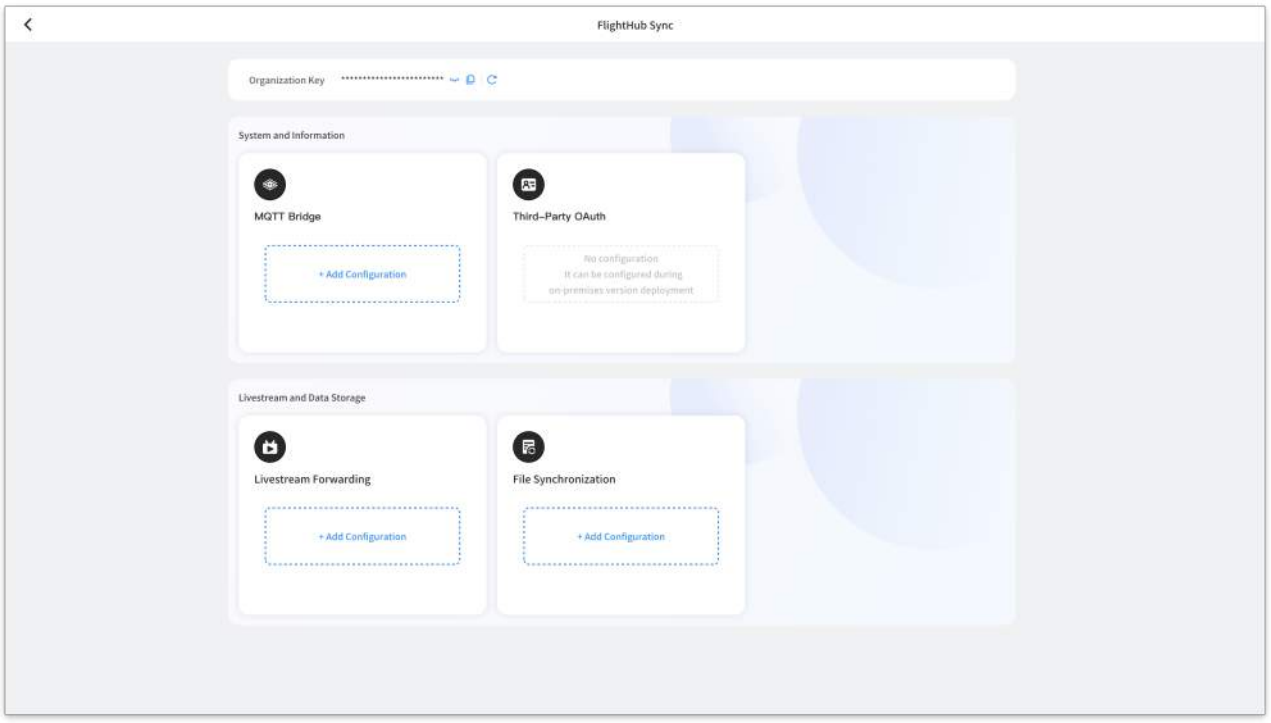
Introduction

- FlightHub Sync Introduction
- Device Information Sync (MQTT Bridge)
- Third-party OAuth
- Livestream Forwarding
- File Synchronization

FlightHub Sync Introduction

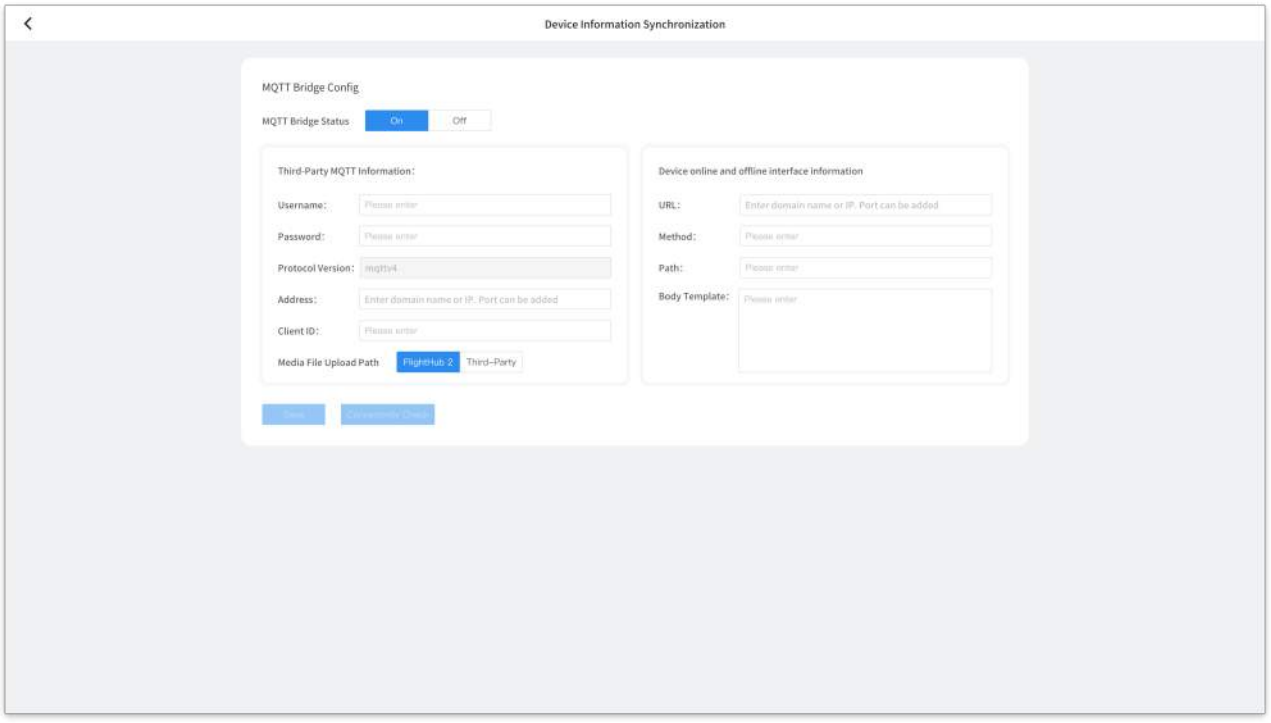
FlightHub Sync enables integration between public or on-premises versions of FlightHub and third-party cloud platforms, allowing synchronization of files, livestreams, device telemetry, and other data. The main features are as follows:

Feature	FlightHub Public Version	FlightHub On-Premises Version
Livestream Forwarding	Supported	Supported
File Synchronization	Supported	Supported
Device Information Synchronization	Via telemetry data	Via MQTT Bridge
Third-party OAuth	Not Supported	Supported
Integration Settings	Coming soon	Coming soon



Device Information Sync (MQTT Bridge)

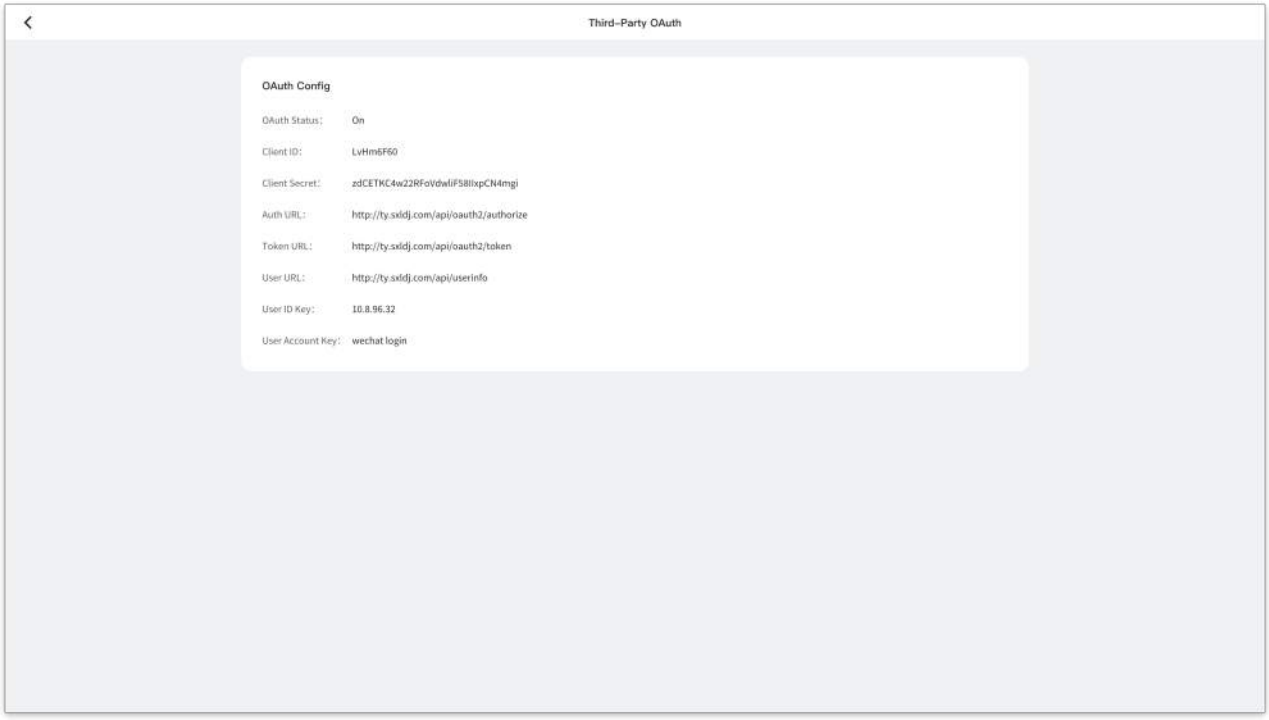
Device information sync enables the synchronization of relevant data from the dock and aircraft to a third-party cloud platform during task operation. Currently, only the on-premises version of FlightHub 2 supports this feature. The public version can achieve the same functionality through FlightHub Sync Beta > Telemetry Data. The specific configuration items are shown in the figure below:



For detailed instructions, see: MQTT Bridge Overview

Third-party OAuth

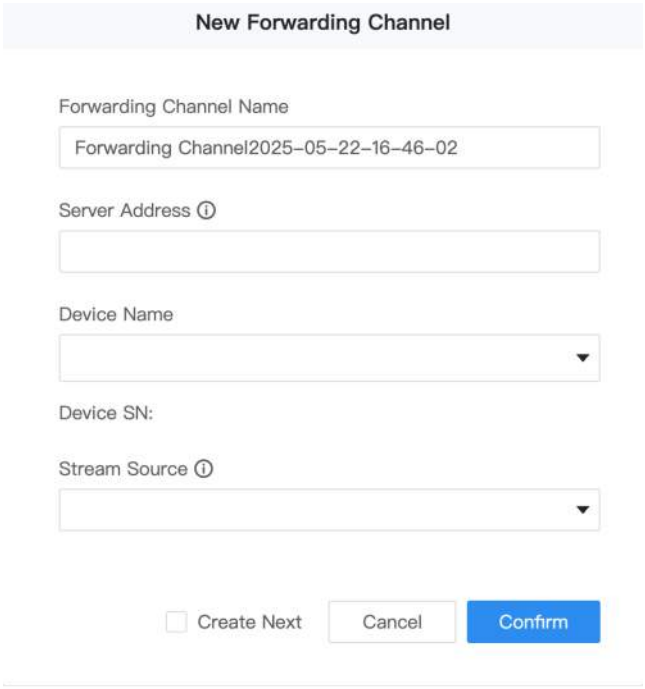
Third-party OAuth allows users to access FlightHub using temporary authorization tokens (Access Tokens) from external systems, enhancing both security and integration efficiency. Currently, only the on-premises version of FlightHub 2 supports this feature. When deploying the on-premises version of FlightHub 2, relevant fields should be configured. For details, refer to the FlightHub On-Premises Version Deployment Manual.



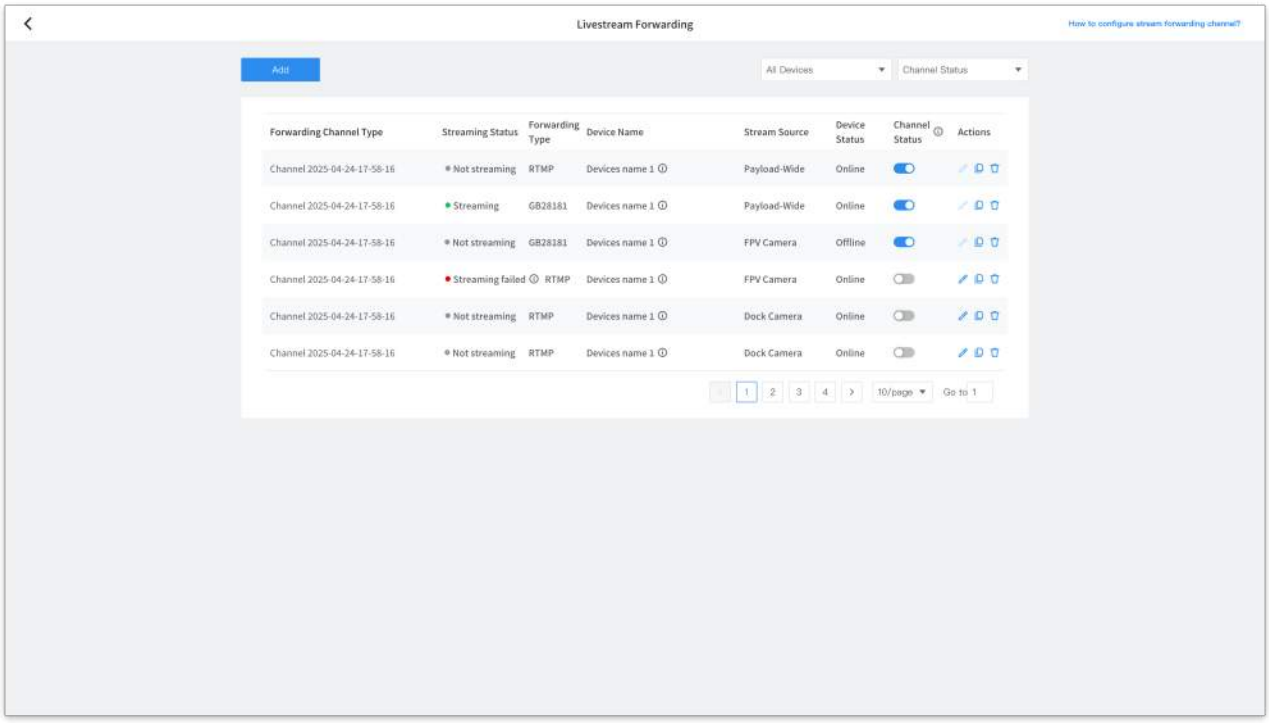
Livestream Forwarding

Livestream forwarding enables the streaming of any project within the current organization to third-party livestream platforms via RTMP (supported by both public and on-premises versions) and GB28181 (supported only by the on-premises version). Forwarded livestream data will consume the livestream minutes in the organization's package. Pay attention to the corresponding consumption. Configuration Process:

1. Create a forwarding channel and complete the relevant configuration.



2. After configuration, use the Channel Status to enable or disable the corresponding forwarding channel.



File Synchronization

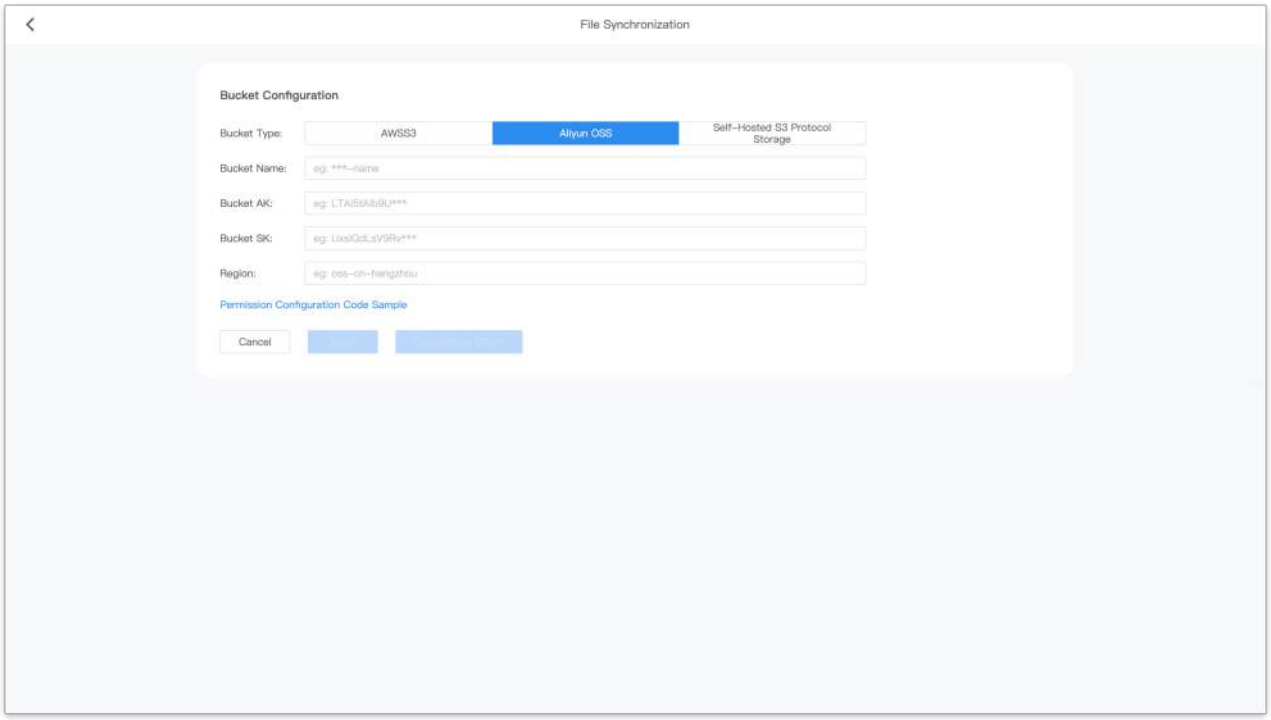
The file synchronization feature allows file data within FlightHub to be synchronized with third-party platforms.

File Type	From FlightHub 2 to Third Party	From Third Party to FlightHub 2
Media Files	Supported	Not Supported
Flight Routes	Supported	Supported
Models	Supported	Supported
Flight Records	Supported	Not Supported

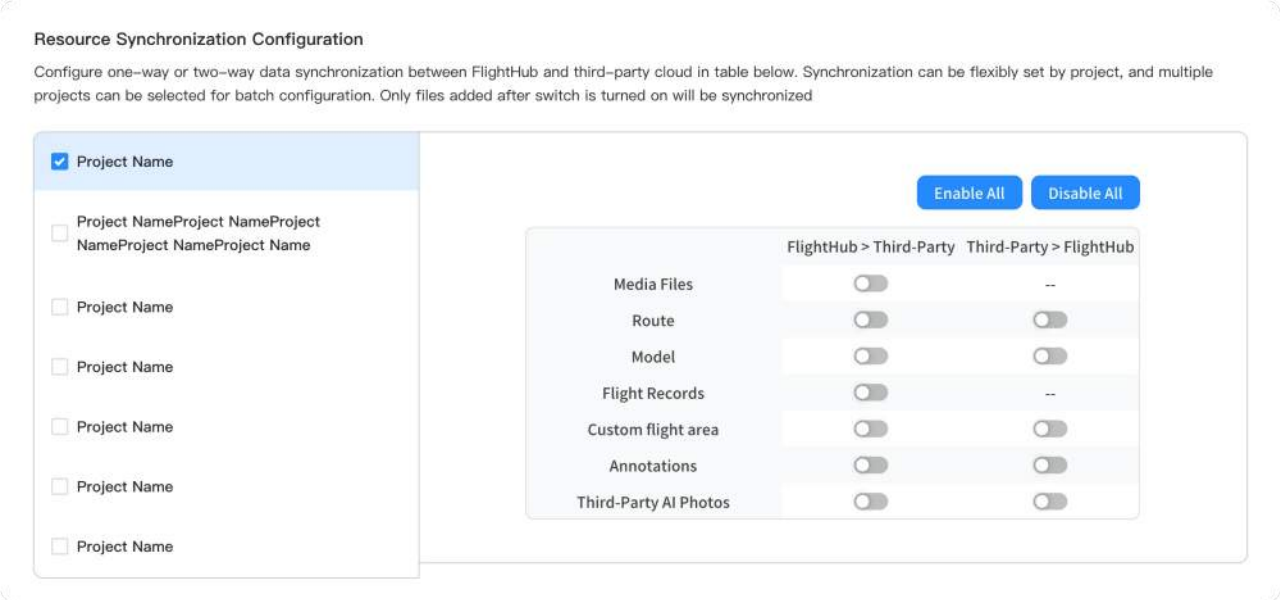
Synchronization Strategy: From FlightHub to Third Party: Synchronization is triggered in real time when a new file is added in FlightHub. From Third Party to FlightHub 2: The system scans every 20 seconds and triggers synchronization if a new file is detected.

Configuration Process:

1. Configure bucket parameters: Currently, AWS, Alibaba Cloud, and self-hosted S3 protocol storage are supported. Configure the corresponding bucket permissions for read and write operations.



2. Configure synchronization parameters: Compared to FlightHub Sync Beta, the bucket in FlightHub Sync supports project-based synchronization settings. Note that flight records require your consent to the relevant terms before activation. This setting applies to flight data across the entire organization.



3. View synchronization status and errors: Once file synchronization begins, you can view the current file synchronization status at the bottom of the page. Failed files will be listed, and you can download logs to view the complete synchronization history for the past 30 days.

