***Textron Innovations Inc. v. SZ DJI Technology Co., Ltd et al.*, No. 2:22-cv-00351-RWS-RSP (E.D. Tex.)**
Infringement Chart for U.S. Patent No. 11,288,972

This claim chart shows on an element-by-element basis how DJI directly infringes Claims 1-20 under 35 U.S.C. § 271(a) by making, using, selling, offering to sell or importing into the United States of the DJI FlightHub 2 software and/or DJI drones in combination with the corresponding mobile applications or controllers (e.g., the DJI GO app, DJI Smart Controller, DJI Dock, N3 Flight Controller, and DJI RC Pro), including but not limited to the Matrice 30, Matrice 30 T, Matrice 300 RTK, DJI Mavic 3, and all similar models that are supported by the DJI FlightHub 2 software (collectively, the "Accused DJI Drones").

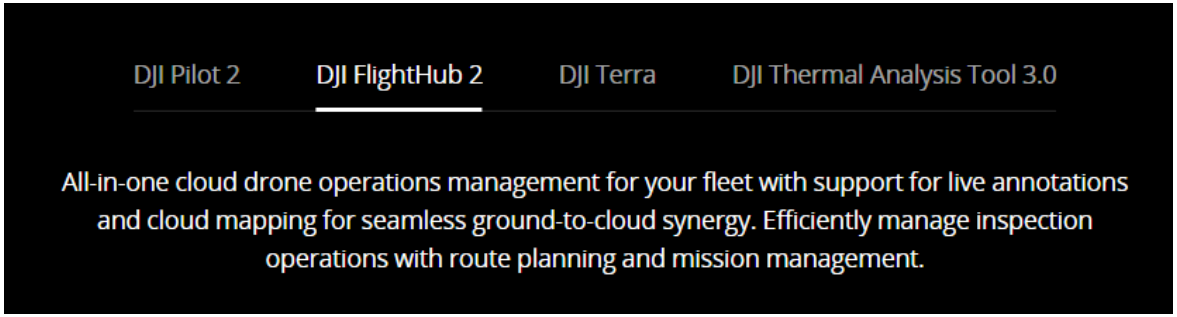
TII contends that DJI also indirectly infringes Claims 1-20 under 35 U.S.C. § 271(b) by actively and knowingly encouraging, inducing, instructing, and/or advertising direct infringement by others, including but not limited to OEMs, subsidiaries, affiliates, resellers, customers, and/or end-users. DJI's acts of induced infringement include, but are not limited to, the continued marketing and selling of the FlightHub 2 software and the Accused DJI Drones, encouragement to use FlightHub 2 in a system that comprises DJI Drones, continued provision of updates to DJI's FlightHub 2 and DJI drone software, and the provision of marketing and promotional materials, instruction manuals, product manuals, instructional videos, and technical information that is intended to induce, and does induce, DJI's end users to use the FlightHub 2 software in an infringing manner as described below. *See* TII_0000001-TII_0001943. For example, DJI is currently offering its end users to use a free beta version of the FlightHub 2 software that is intended to induce its customers to purchase a paid version of FlightHub 2 set for release on May 31, 2023. DJI intends to release the paid version of FlightHub 2 even despite its actual knowledge that FlightHub 2 infringes the claims as set forth below.

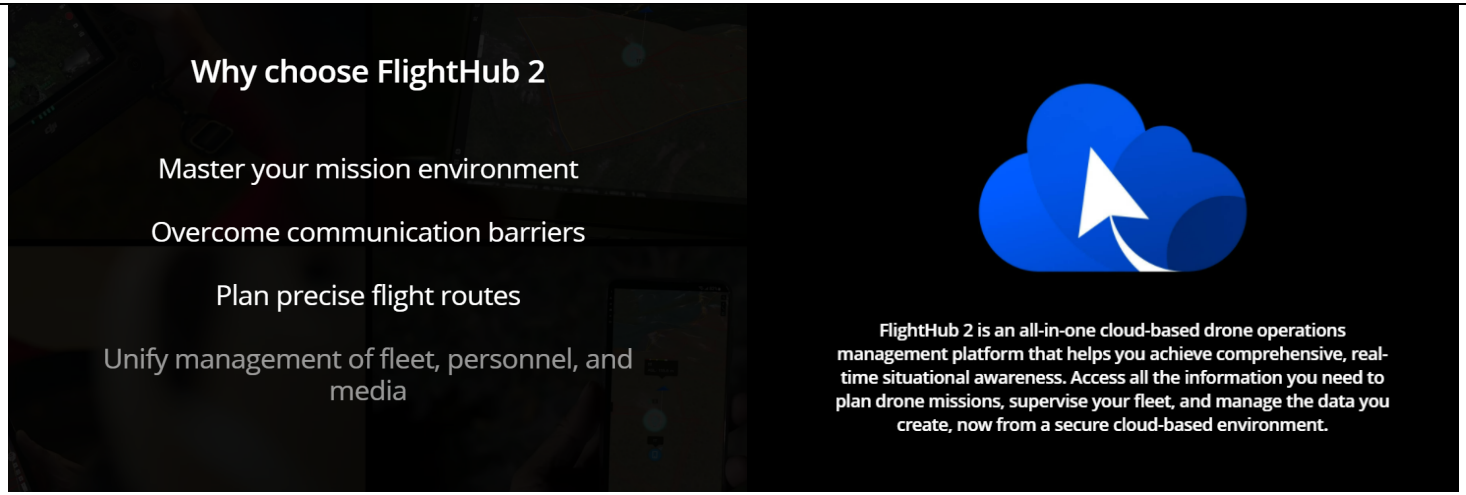
TII further contends that DJI indirectly infringes Claims 1-20 under 35 U.S.C. § 271(c) by selling or importing the FlightHub 2 software and/or the Accused DJI Drones into the United States which constitute a material part of the invention, knowing the FlightHub 2 software in use with the Accused DJI Drones to be especially made to operate in the manner set forth below. For example, DJI actively contributes to the infringement of the claims through the promotion and/or sales of the infringing drones, by training its customers how to use the software in an infringing manner, and through the provision of associated flight software from smartphone app stores. *See* TII_0000001-TII_0001943. DJI knows the FlightHub 2 software to have no substantial non-infringing uses and conducts its activities with full knowledge that those features are intended to be used, and are used, by DJI's end users to infringe the claims in the manner set forth in the chart below.

The claim chart against FlightHub 2 and the Accused DJI Drones is provided as a non-limiting, representative example of DJI's infringement and is based on publicly available information currently available to TII. TII notes that discovery has not yet commenced, and the Court has not construed any claim terms. Accordingly, TII expressly reserves the right to modify, supplement, or amend these contentions as additional evidence and information becomes available through discovery. Throughout this chart, TII cites to exemplary evidence supporting TII's infringement allegations. These citations are provided as illustrations to identify the accused functionality and should not be construed to limit the evidence TII may rely upon.

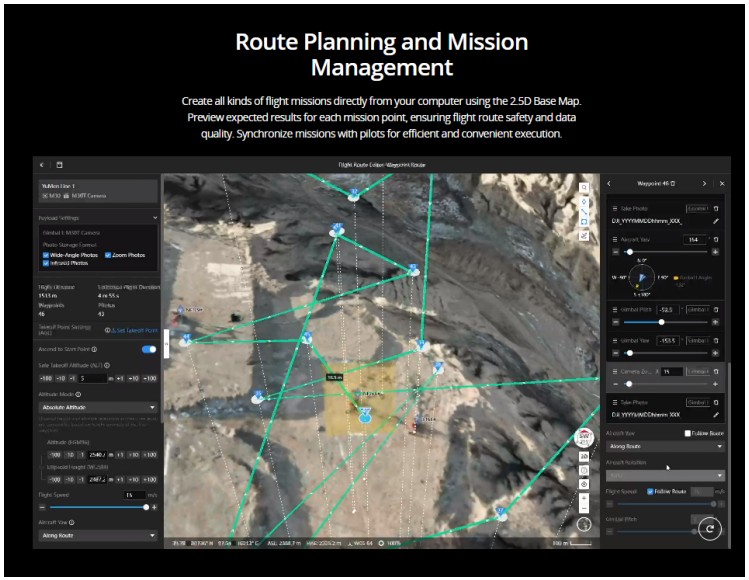
DJI-1013
IPR2023-01227

The claim charts below show that the Accused DJI Drones literally infringe each element of each asserted claims. To the extent any element is argued to not literally be present in the Accused DJI Drones, the chart below demonstrates that each element is also infringed under the Doctrine of Equivalents because the accused functionality does substantially the same thing, in substantially the same way, and to achieve substantially the same result, as the manner required by the asserted claims.

Claim Limitation	**Evidence of the Accused DJI's FlightHub 2 Software**
[1pre] An autonomous vehicle fleet control method, comprising:	If the preamble is limiting, the accused DJI FlightHub 2 software includes a method for autonomous fleet control. DJI's FlightHub2 is used by DJI and/or its customers to control a fleet comprising the Accused DJI Drones. For example, the DJI FlightHub 2 functionality includes methods for fleet control including route planning, mission management, and fleet supervision as shown by the evidence below.  https://www.dji.com/mavic-3-enterprise?site=brandsite&from=nav



https://www.dji.com/flighthub-2



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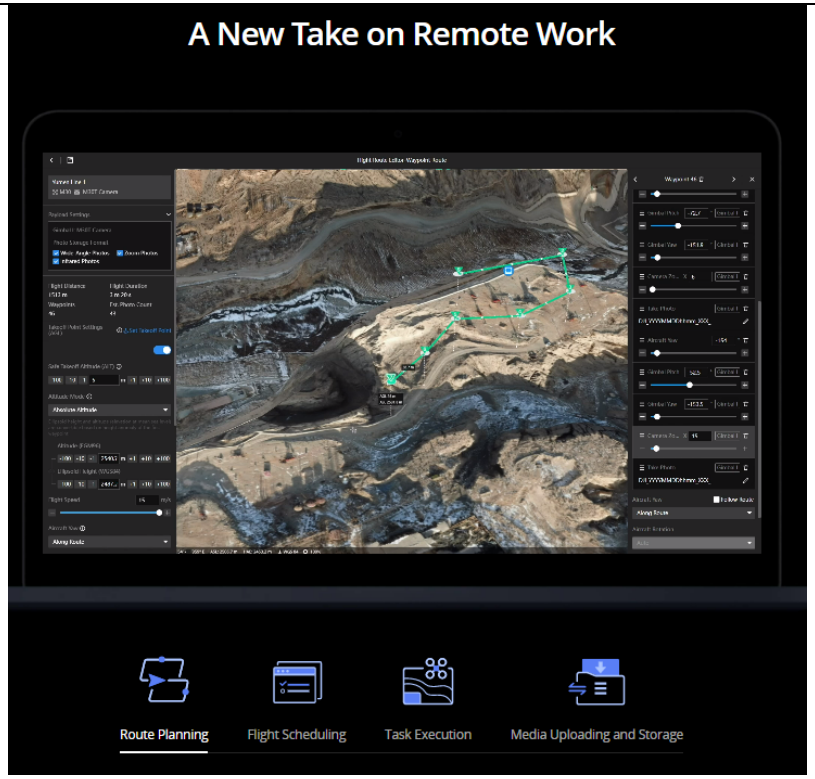


https://www.dji.com/flighthub-2

FlightHub 2 is DJI's complete ground-to-cloud drone operations management software, and it's packed with tools to help you plan missions, stream data, and collaborate with your team in real-time. From fast mapping to DJI Dock management, here are the top five features of FlightHub 2.

Full control of DJI Dock operations

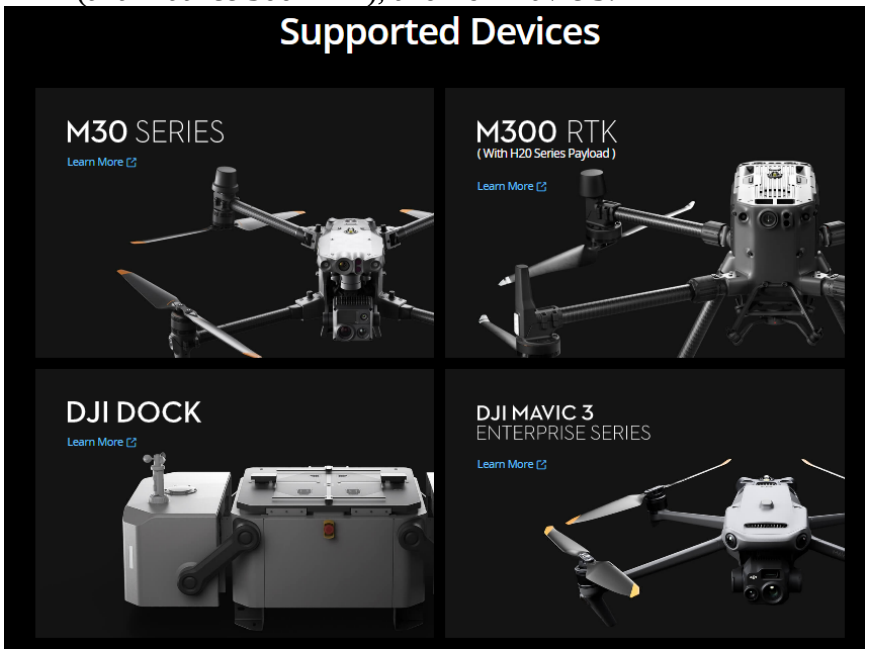
FlightHub 2 is also your hub for all DJI Dock operations. Within the app, you can monitor the status of your M30, plan and schedule missions, and coordinate everything required for round-the-clock, automated operations.

Cloud-based mission planning & collaboration

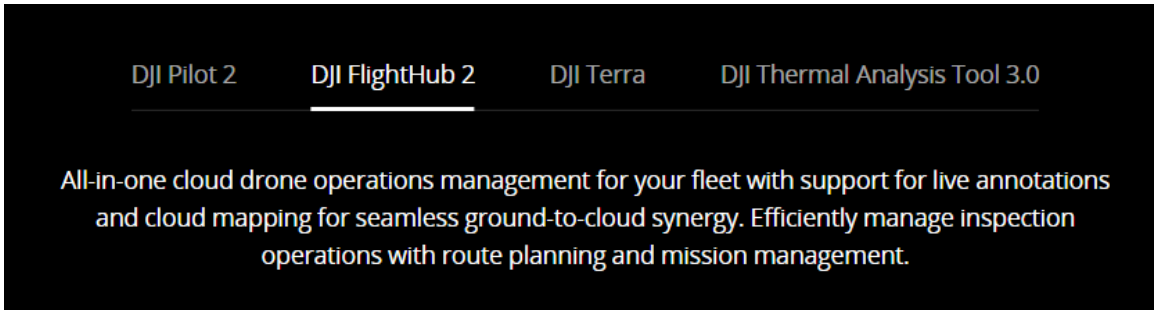
FlightHub 2 combines data storage and fleet management with intuitive tools that support public safety and inspection operations in real-time. It's packed with collaborative solutions that improve situational awareness for all team members. We've built an empowering application that enables better data sharing communication, giving mission commanders everything they need to make smarter decisions and deploy resources more effectively.

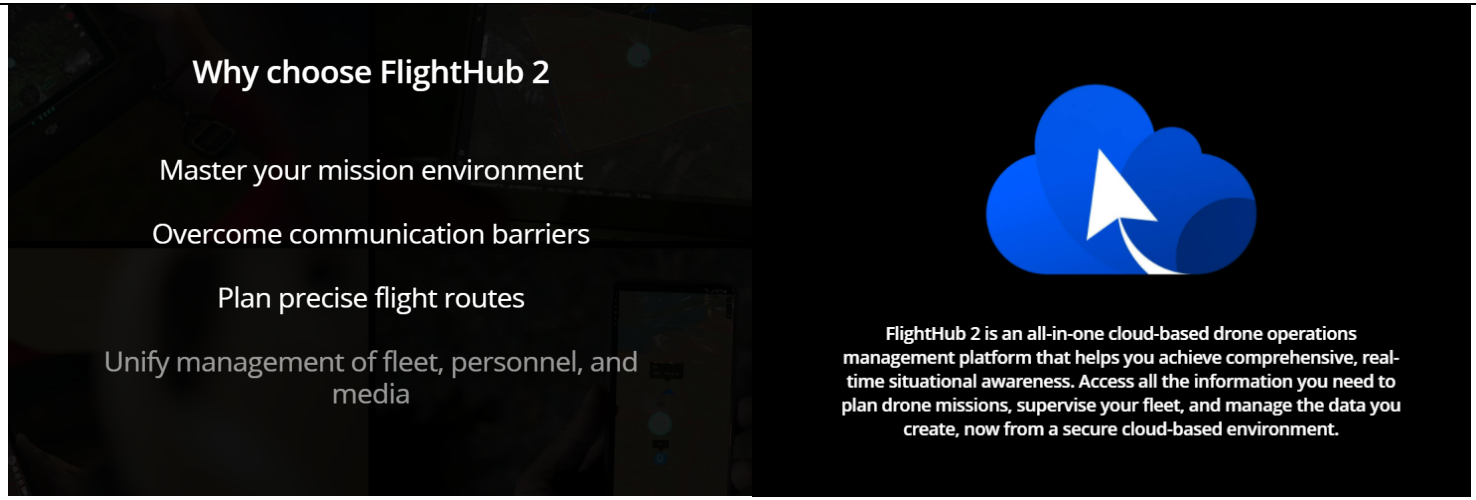
https://enterprise-insights.dji.com/blog/flighthub-2-top-features

The fleet of vehicles controlled via FlightHub 2 include at least the M30 Series (Matrice 30, Matrice 30 T), M300 RTK (aka Matrice 300 RTK), and DJI Mavic 3:

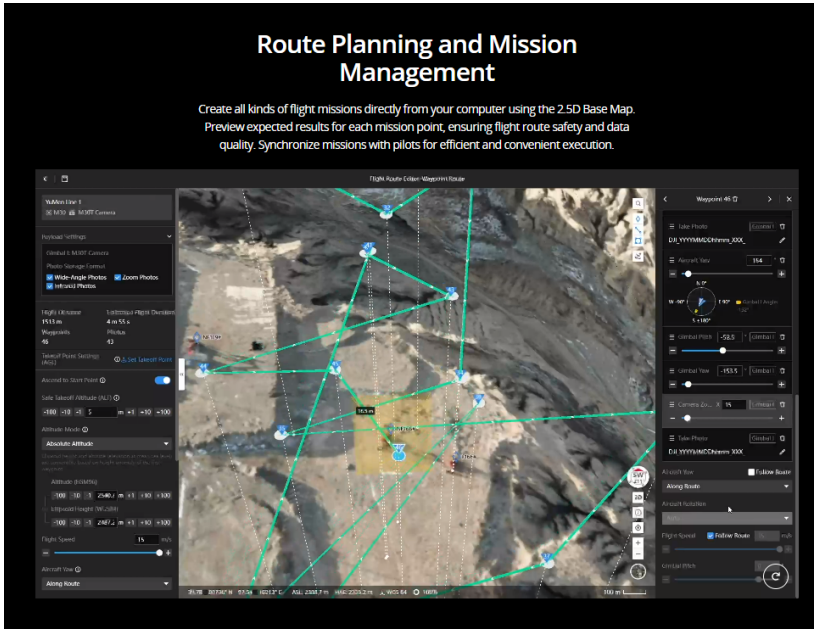


https://www.dji.com/flighthub-2

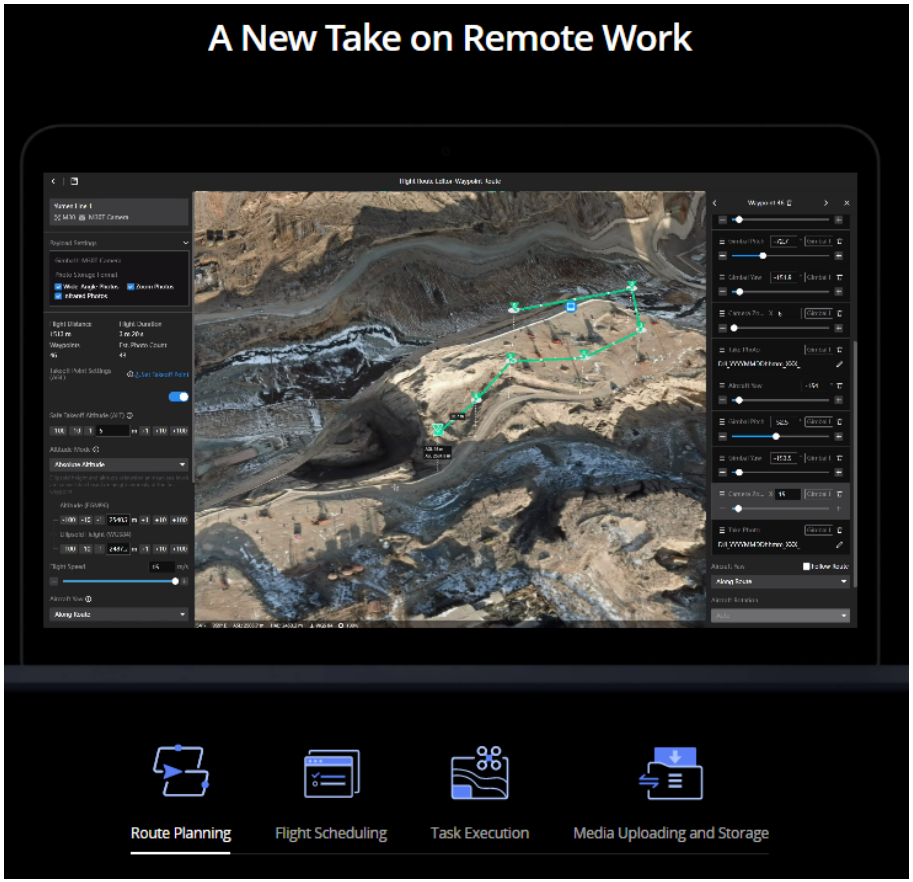
	 https://www.dji.com/mavic-3-enterprise?site=brandsite&from=nav
[1a] obtaining, by a fleet controller, from a master schedule, a mission for a vehicle of a fleet of autonomous vehicles, wherein the mission is associated with a mission entry of the master schedule;	The accused DJI FlightHub 2 software includes a fleet controller that obtains, from a master schedule, a mission for a vehicle of a fleet of autonomous vehicles, wherein the mission is associated with a mission entry of the master schedule. For example, DJI describes that FlightHub 2 provides for planning, creating, managing, scheduling, and synchronizing missions and flight routes. FlightHub 2 includes, for example, a task plan library and/or flight route library comprising a master schedule, from which a task can be obtained, where each task is associated with a mission entry of the master schedule. Missions of the flight route library can be obtained, for example, via the creation and editing of flight routes from the master schedule.  https://www.dji.com/mavic-3-enterprise?site=brandsite&from=nav



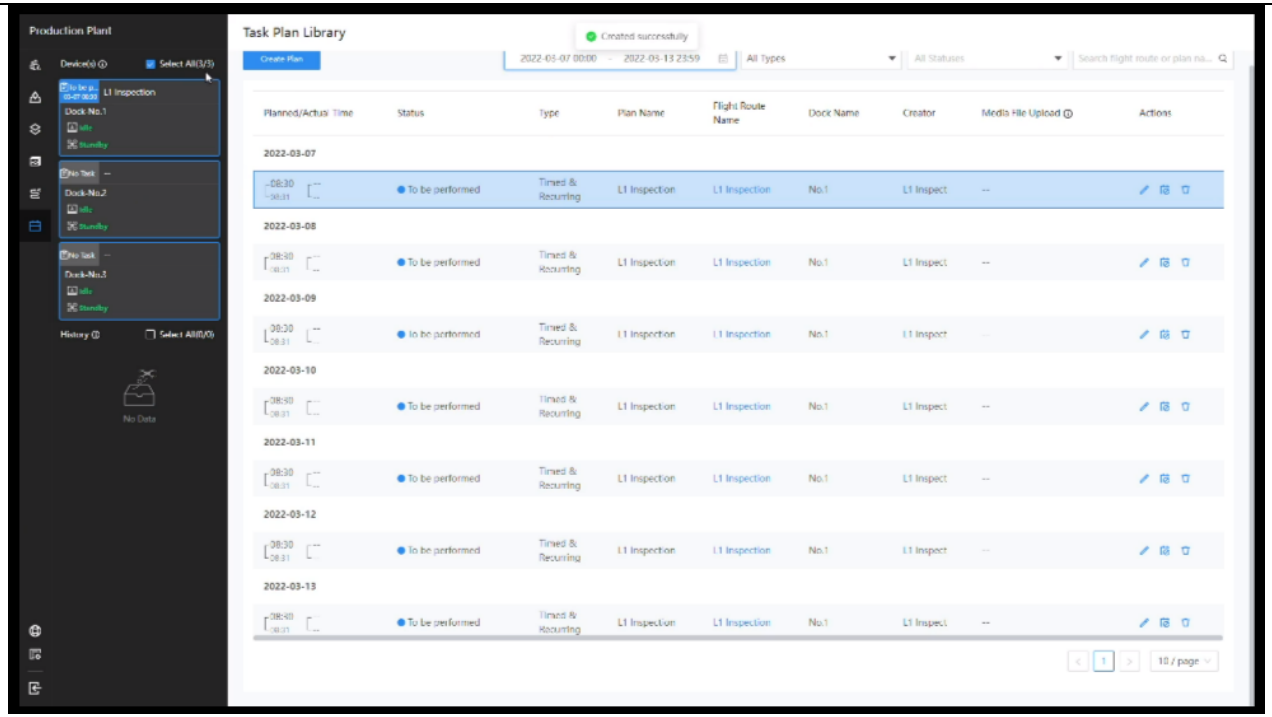
https://www.dji.com/flighthub-2



https://www.dji.com/flighthub-2



https://www.dji.com/flighthub-2



https://www.dji.com/flighthub-2

Flight Route Library

Project members can click to enter the flight route library to import, create, and edit flight routes.

Import Flight Routes

Click > Import KMZ File to select and import KMZ flight routes. The upload progress and status will be displayed during the flight route upload. Users can stop uploading files when the files are being or waiting to be uploaded.

• The KMZ file must include wpmz/template.kml and wpmz/waylines.wpml.

https://dl.djicdn.com/downloads/DJI_FlightHub_2/20221123/DJI_FlightHub_2_User_Guide_v2.0.pdf, 30.

FlightHub 2 is DJI's complete ground-to-cloud drone operations management software, and it's packed with tools to help you plan missions, stream data, and collaborate with your team in real-time. From fast mapping to DJI Dock management, here are the top five features of FlightHub 2.

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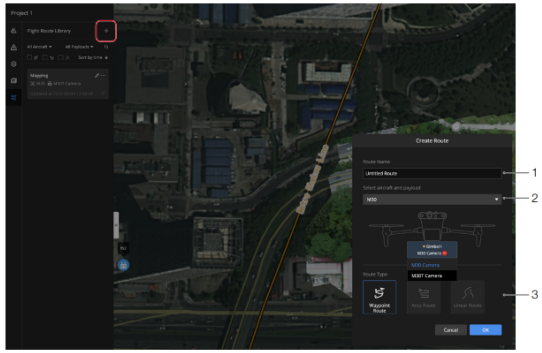
https://enterprise-insights.dji.com/blog/flighthub-2-top-features

Create Flight Routes

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



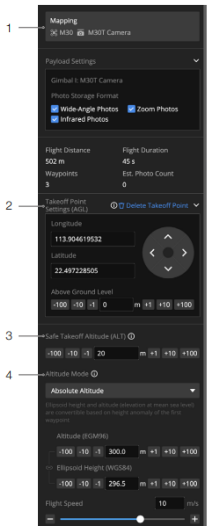
1. Route Name
   The route name is required and should be within 60 characters.
2. Select aircraft and payload
   Only Matrice 30 series are supported.
3. Route Type
   Only Waypoint routes are supported.

Click OK to create the flight route.

Edit Waypoint Routes

Edit Flight Routes

Enter the flight route editor and set flight route details.



Move the mouse over ⓘ to view setting descriptions.

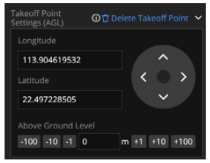
Pay attention to the settings below.

1. Basic Information
   Click to edit the flight route name and change the aircraft and payload.

   ⚠ Changing the payload will affect flight route settings.

2. Takeoff Point Settings (AGL)
   Click Set Takeoff Point and set the location where the aircraft will take off.

   A. Edit the longitude, latitude, and altitude above the ground level on the coordinate panel.

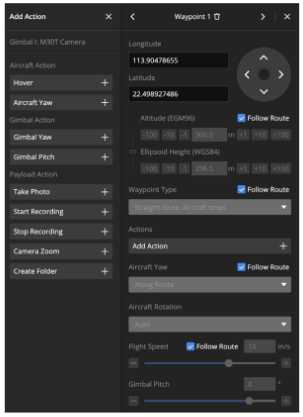


   B. Select and drag the takeoff point icon to move the takeoff point. Press and hold the Alt key and drag the icon up and down to adjust the altitude.

3. **Safe Takeoff Altitude (ALT)**
   Safe Takeoff Altitude is the altitude relative to the takeoff point altitude. Aircraft will ascend to the safe takeoff altitude after takeoff and fly to the flight route start point.
4. **Altitude Mode**
   The Altitude mode is set to Absolute Altitude by default. Project members can also change it to Altitude Relative to Takeoff Point (ALT) or Above Ground Level.
5. **Return-to-Home Altitude (ALT)**
   The return-to-home altitude should be set based on the actual flight condition, surrounding environment, and GEO information. It is recommended that the altitude be set higher than the highest geographical point in the flight area.

Edit Waypoints

Select and click on the map to add waypoints. Select a waypoint and set waypoint details.



1. **Longitude and Latitude**
   The longitude and latitude of an aircraft are obtained from its geographical location on the map.
2. **Altitude, Ellipsoid Height (WGS84), Waypoint Type, Aircraft Yaw, and Flight Speed**
   These parameters are consistent with the corresponding flight route settings by default. If the flight route settings are changed, the above parameters will also be updated.
3. **Actions**
   Click "+" to add actions for the aircraft, gimbal, and payload.
4. Click on the upper left corner to save the flight route settings.

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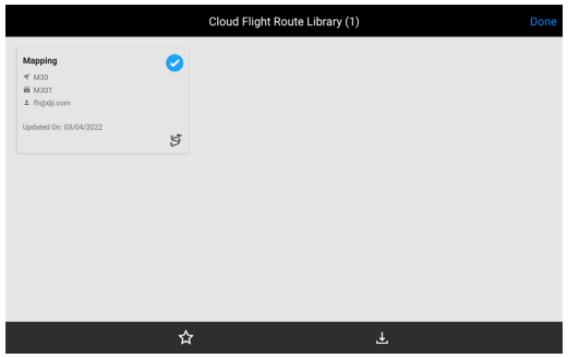
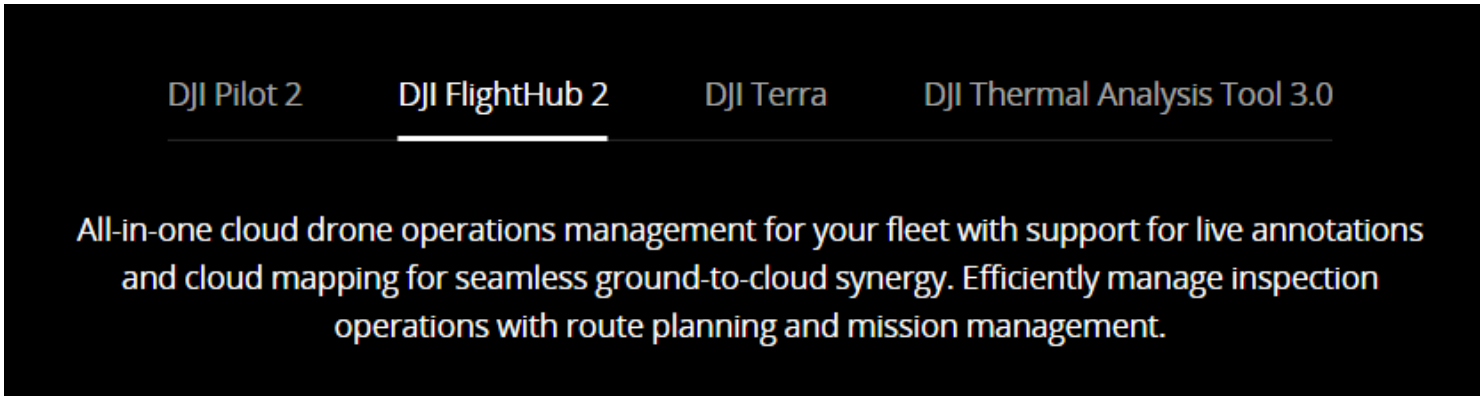
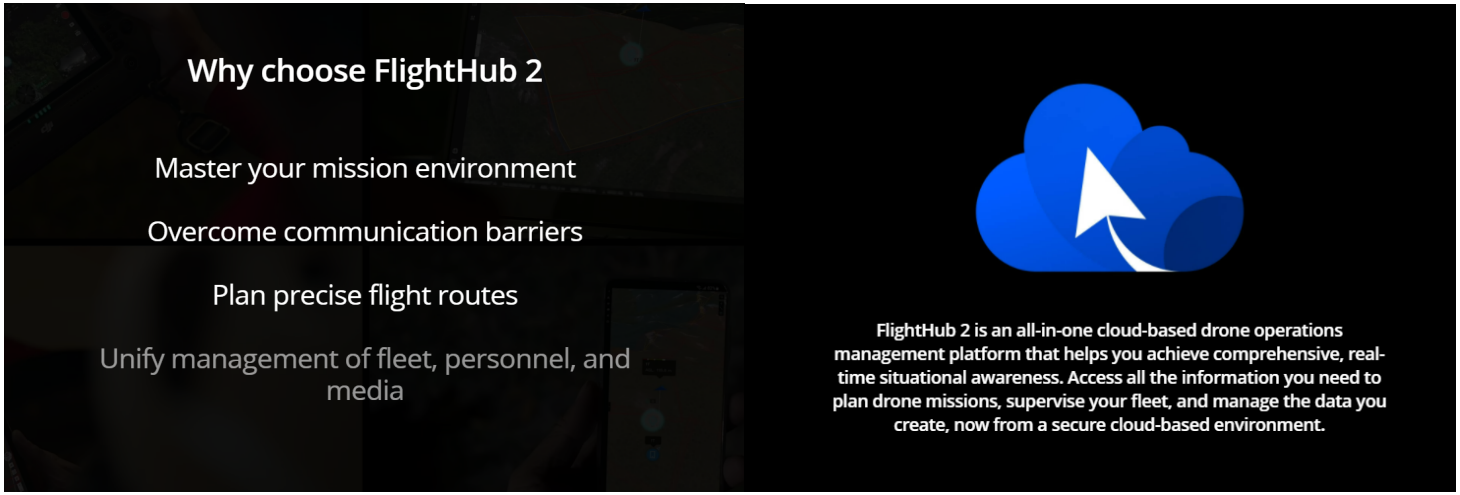
Perform Flight Tasks

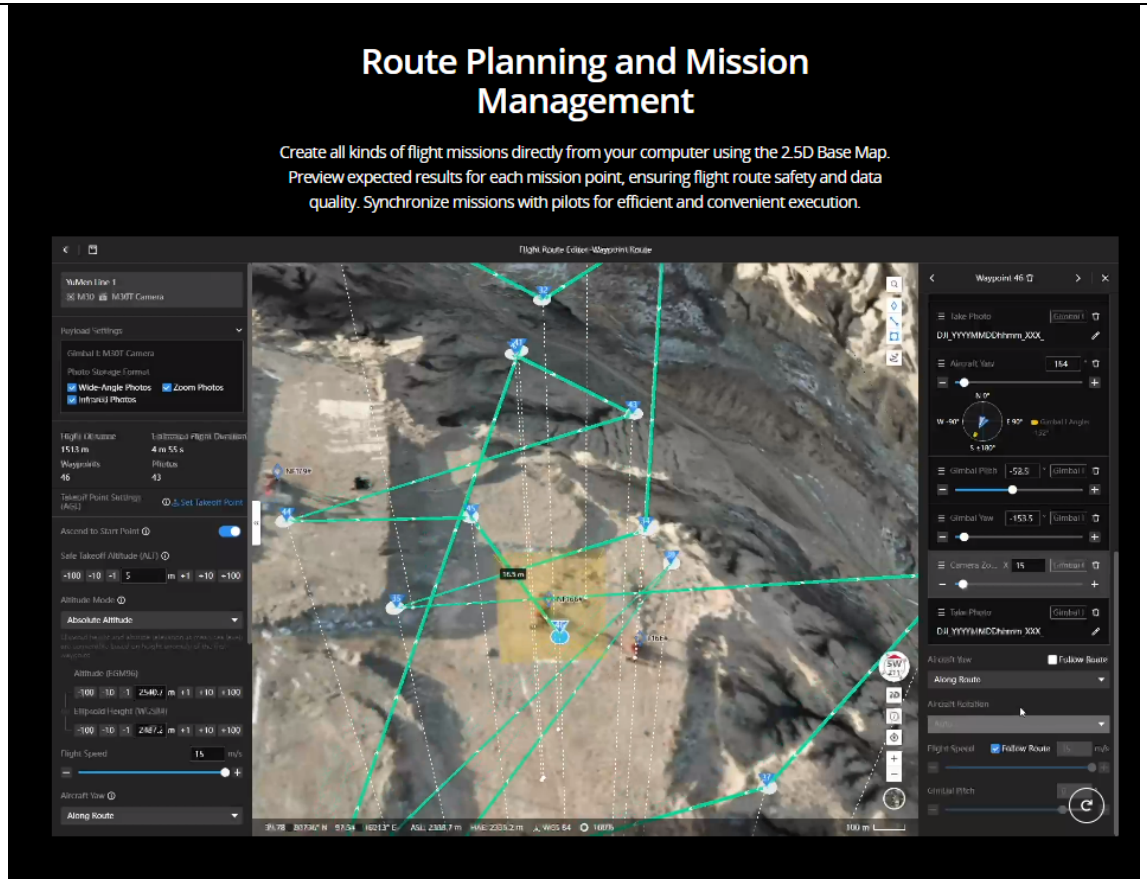
DJI Pilot users can log in to the DJI FlightHub 2 cloud service and perform cloud flight tasks.

1. Enter the home screen of DJI Pilot, tap Flight Route, select Cloud to view flight routes created on DJI FlightHub 2.
2. Select the flight route and tap , the flight route will be downloaded to Flight Route Library.



3. Select and enter flight route settings. Tap to perform the flight task.

	https://dl.djicdn.com/downloads/DJI_FlightHub_2/DJI_FlightHub_2_User_Guide.pdf
[1b] identifying a flight path associated with the mission;	The accused DJI FlightHub 2 software includes functions to identify a flight path associated with the mission. For example, the DJI FlightHub 2 functionality provides functions to create, plan, and edit flight paths associated with each mission.  https://www.dji.com/mavic-3-enterprise?site=brandsite&from=nav  https://www.dji.com/flighthub-2



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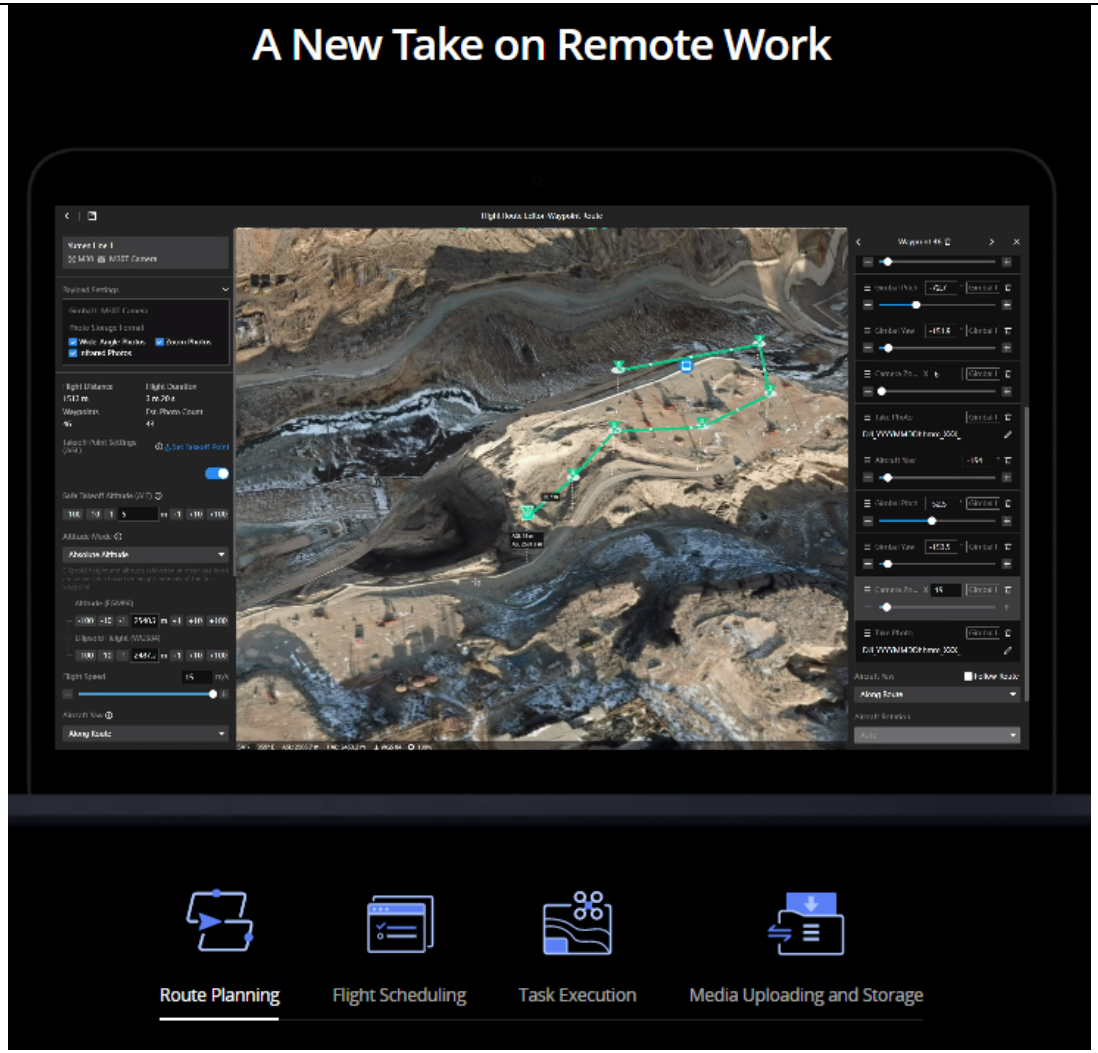

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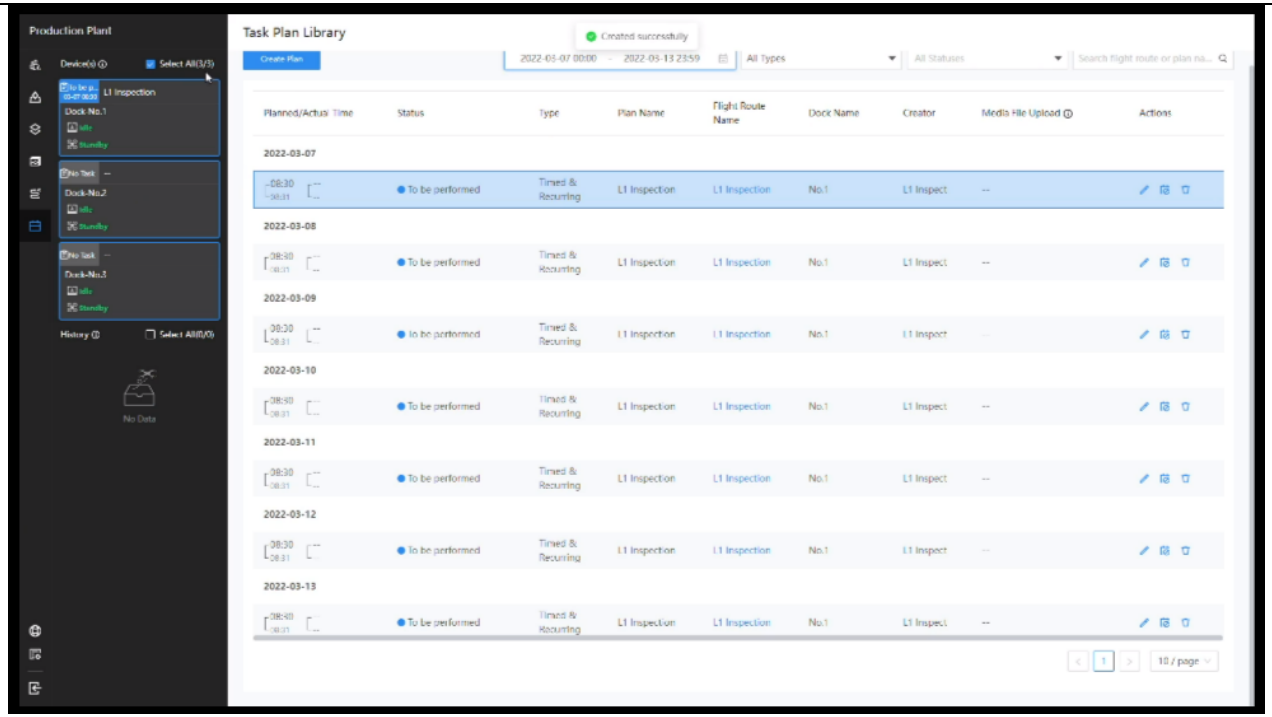

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https://dl.djicdn.com/downloads/DJI_FlightHub_2/20221123/DJI_FlightHub_2_User_Guide_v2.0.pdf, 30.

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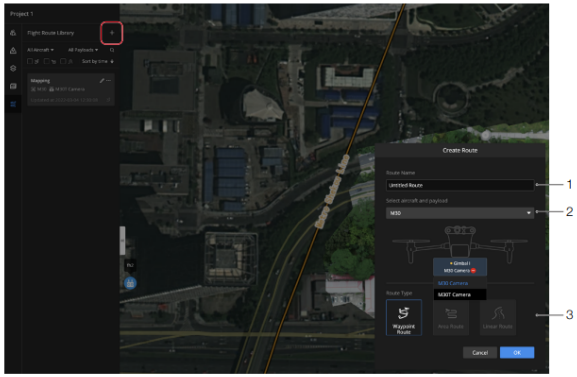

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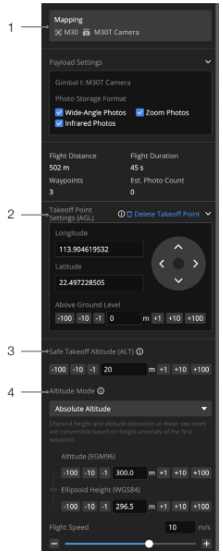

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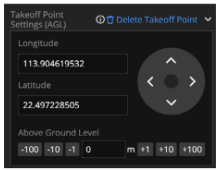

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DJI FlightHub 2 User Guide

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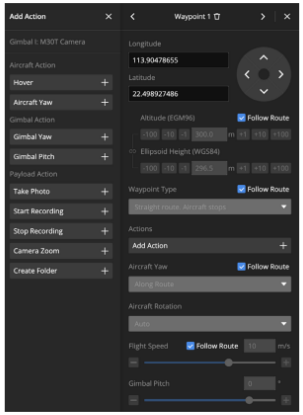
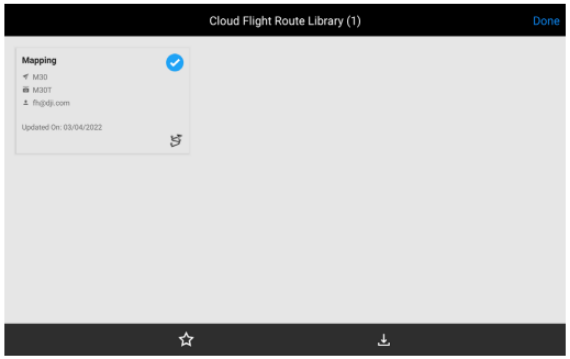
	Edit Waypoints Select and click on the map to add waypoints. Select a waypoint and set waypoint details.  1. Longitude and Latitude The longitude and latitude of an aircraft are obtained from its geographical location on the map. 2. Altitude, Ellipsoid Height (WGS84), Waypoint Type, Aircraft Yaw, and Flight Speed These parameters are consistent with the corresponding flight route settings by default. If the flight route settings are changed, the above parameters will also be updated. 3. Actions Click "+" to add actions for the aircraft, gimbal, and payload. 4. Click on the upper left corner to save the flight route settings. 22 © 2022 DJI All Rights Reserved. **DJI FlightHub 2** User Guide **Perform Flight Tasks** DJI Pilot users can log in to the DJI FlightHub 2 cloud service and perform cloud flight tasks. 1. Enter the home screen of DJI Pilot, tap Flight Route, select Cloud to view flight routes created on DJI FlightHub 2. 2. Select the flight route and tap , the flight route will be downloaded to Flight Route Library.  3. Select and enter flight route settings. Tap to perform the flight task. https://dl.djicdn.com/downloads/DJI_FlightHub_2/DJI_FlightHub_2_User_Guide.pdf
[1c] verifying a usability of the flight path with a unmanned aircraft system (UAS) traffic management (UTM), wherein the UTM performs checking on the flight path for traffic in the flight path, availability of the flight path due to flight restrictions and	The accused DJI FlightHub 2 software includes functions to verify a usability of the flight path with a unmanned aircraft system (UAS) traffic management (UTM), wherein the UTM performs checking on the flight path for traffic in the flight path, availability of the flight path due to flight restrictions and requirements for use of the flight path. For example, the FlightHub 2 software's flight route creation and editing software includes functions to ensure the flight route is compliant with flight safety and restriction updates set by the GEO system and prevents drones from flying routes into restricted airspace (e.g., implements restricted zones and altitude restrictions). The FlightHub 2 software also "synchronizes" routes and checks the planned route for traffic in the flight path (e.g., prevents drone route collisions).

requirements for use of the flight path;

Flight Restrictions

GEO (Geospatial Environment Online) System

DJI's Geospatial Environment Online (GEO) system is a global information system that provides real-time information on flight safety and restriction updates and prevents UAVs from flying in restricted airspace. Under exceptional circumstances, restricted areas can be unlocked to allow flight. Prior to that, the user must submit an unlocking request based on the current restriction level in the intended flight area. The GEO system may not fully comply with local laws and regulations. Users shall be responsible for their own flight safety and must consult with the local authorities on the relevant legal and regulatory requirements before requesting to unlock a flight in a restricted area.

https://dl.djicdn.com/downloads/DJI_Mavic_3_Enterprise/20221212/DJI_Mavic_3E_3T_User_Manual_EN.pdf

Flight Restrictions in GEO Zones

The following section describes in detail the flight restrictions for the above mentioned GEO Zones.

GEO Zone	Flight Restriction	Scenario
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Authorization Zones (Blue)	The aircraft will not be able to take off in an Authorization Zone unless it obtains a permission to fly in the area.	Takeoff: the aircraft motors cannot be started in Authorization Zones. To fly in an Authorization Zone, the user is required to submit an unlocking request registered with a DJI-verified phone number.
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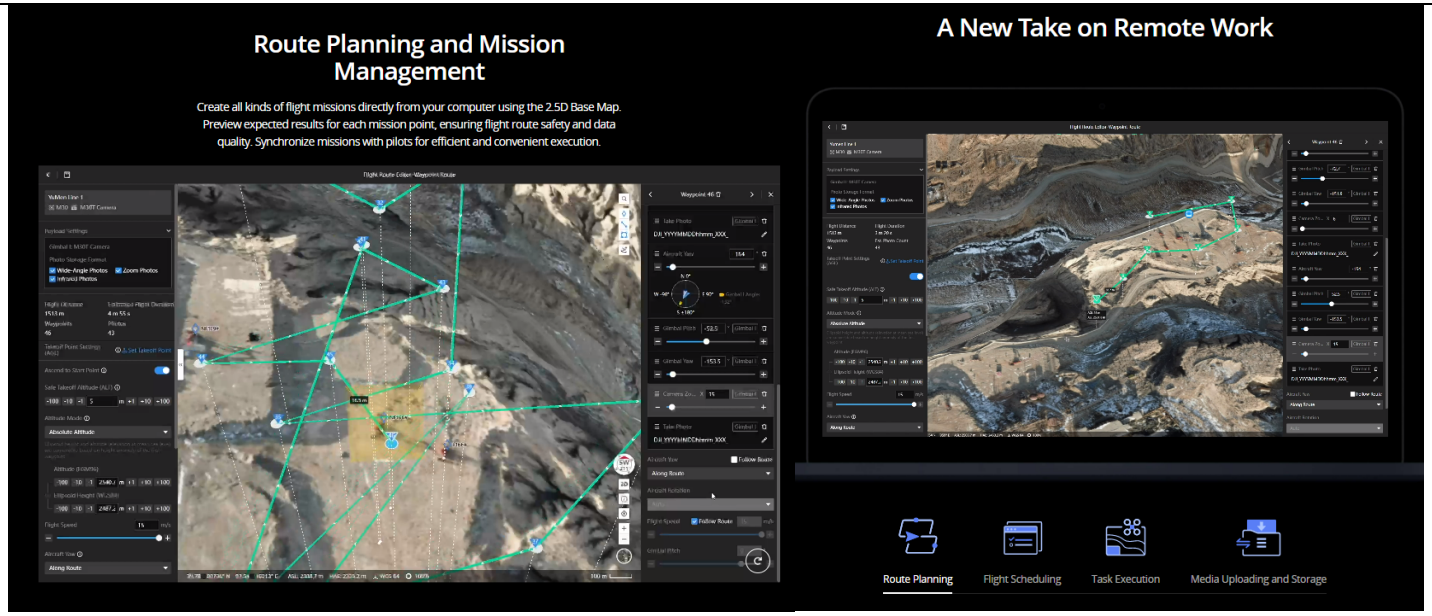
Enhanced Warning Zones (Orange)	When the aircraft flies in an Enhanced Warning Zone, a warning will be displayed prompting the user to confirm the flight path.	The aircraft can continue to fly once the warning is confirmed.
Altitude Zones (Gray)	The aircraft altitude is limited when flying inside an Altitude Zone.	When the GNSS signal is strong, the aircraft cannot fly above the altitude limit. In Flight: when the GNSS signal changes from weak to strong, a 100-second countdown will commence in DJI Pilot 2 if the aircraft exceeds the altitude limit. When the countdown is finished, the aircraft will descend below the altitude limit and hover.
		When the aircraft approaches the boundary of an Altitude Zone and the GNSS signal is strong, the aircraft will decelerate automatically and hover if the aircraft is above the altitude limit.

https://dl.djicdn.com/downloads/DJI_Mavic_3_Enterprise/20221212/DJI_Mavic_3E_3T_User_Manual_EN.pdf



https://www.dji.com/flighthub-2

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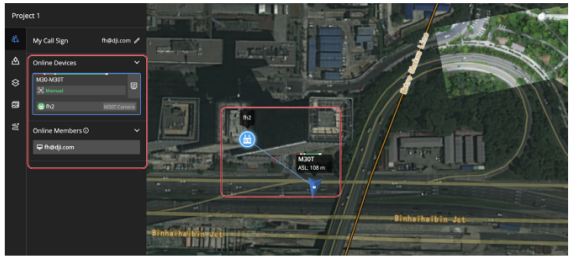

Project members can also perform the following actions on the map.

1. Click Q to search geographic locations. The location will be displayed in the middle of the web page.
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 and the project point of interest will be displayed in the middle of the web page.

DJI FlightHub 2 User Guide

3. **Safe Takeoff Altitude (ALT)**
   Safe Takeoff Altitude is the altitude relative to the takeoff point altitude. Aircraft will ascend to the safe takeoff altitude after takeoff and fly to the flight route start point.
4. **Altitude Mode**
   The Altitude mode is set to Absolute Altitude by default. Project members can also change it to Altitude Relative to Takeoff Point (ALT) or Above Ground Level.
5. **Return-to-Home Altitude (ALT)**
   The return-to-home altitude should be set based on the actual flight condition, surrounding environment, and GEO information. It is recommended that the altitude be set higher than the highest geographical point in the flight area.

https://dl.djicdn.com/downloads/DJI_FlightHub_2/DJI_FlightHub_2_User_Guide.pdf

DJI Improves Geofencing To Enhance Protection of European Airports and Facilities

Updated System Refines Airspace Data To Better Reflect Safety Risks

DJI, the world's leader in civilian drones and aerial imaging technology, is improving its geofencing technology with the launch of its Geospatial Environment Online (GEO) 2.0 system across Europe, bringing state-of-the-art geofencing to a total of 32 European countries.

GEO 2.0 creates detailed three-dimensional "bow tie" safety zones surrounding runway flight paths and uses complex polygon shapes around other sensitive facilities, rather than just simple circles used in earlier geofencing versions. This applies in the 13 countries covered by DJI's original GEO system, as well as 19 new countries that did not previously have advanced geofencing. The new system better reflects the actual safety risk posed in those areas and is more flexbile in lower-risk areas, for example by permitting authorized users to conduct drone activities in locations parallel to runways.

The revamp of DJI's GEO system will also include Temporary Flight Restrictions (TFRs) imposed during major events or natural disasters. The TFRs will be based on authoritative data from Eurocontrol.

DJI has chosen Altitude Angel as its new partner to deliver accurate, real-time and relevant geospatial data for airports, TFRs and other sensitive areas in 32 European countries. In Europe, Altitude Angel replaces DJI's previous geospatial data provider AirMap. DJI worked together with Altitude Angel last year in Operation Zenith, a full-scale test at Manchester Airport of its GuardianUTM O/S platform for unmanned traffic management in controlled airspace.

About DJI Geofencing

DJI first created No-Fly Zones for its drones in 2013 and introduced the more refined GEO system three years later, adding live updates and new zones for prisons and nuclear power plants, while providing flexible self-unlocking for professionals. Both systems recognized that the overwhelming majority of drone pilots want to fly safely and responsibly, and want an easy-to-use guide to help them understand the airspace so they can do so.

DJI geofencing uses GPS and other navigational satellite signals to automatically help prevent drones from flying near sensitive locations such as airports, prisons, nuclear power plants and high-profile events. In certain locations, a DJI drone cannot take off within, or fly into, a geofenced area without special authorisation. Drone pilots with verified DJI accounts can unlock some areas if they have legitimate reasons and necessary approvals, but the most critical areas require extra steps from DJI to unlock them. DJI has streamlined the approval process so professional drone pilots with authorisation to fly in sensitive locations can receive unlocking codes within 30 minutes by submitting a request online.

The expansion of European coverage means that DJI's most advanced geofencing system, GEO 2.0, will now be available in 19 more countries than the original GEO system launched in 2016. The new countries are: Bulgaria, Croatia, Cyprus, Czech Republic, Estonia, Finland, Greece, Hungary, Iceland, Latvia, Liechtenstein, Lithuania, Malta, Norway, Poland, Romania, Slovakia, Slovenia and Sweden. These are added to the existing 13 GEO countries which will also be upgraded to GEO 2.0: Austria, Belgium, Denmark, France, Germany, Ireland, Italy, Luxembourg, the Netherlands, Portugal, Spain, Switzerland and the United Kingdom.

GEO 2.0 applies the strictest geofencing restrictions to a 1.2 kilometer (3/4 mile) wide rectangle around each runway and the three-dimensional flight paths at either end, where airplanes ascend and descend. More flexible geofencing restrictions apply to an oval area within 6 kilometers (3.7 miles) of each runway. This bow tie shape opens more areas on the sides of runways to beneficial drone uses, as well as low-altitude areas more than 3 kilometers (1.9 miles) from the end of a runway, while increasing protection in the locations where traditional aircraft actually fly.

https://www.dji.com/newsroom/news/dji-improves-geofencing-to-enhance-protection-of-european-airports-and-facilities

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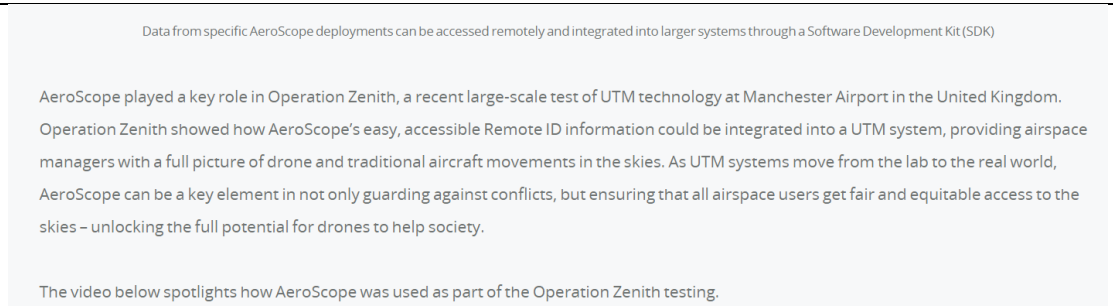
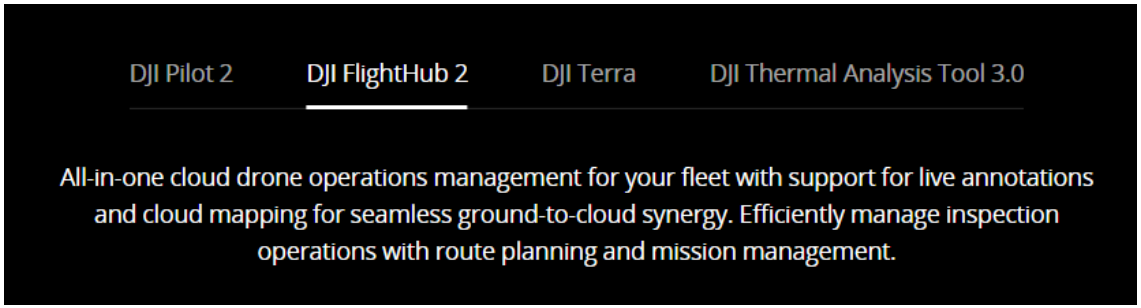
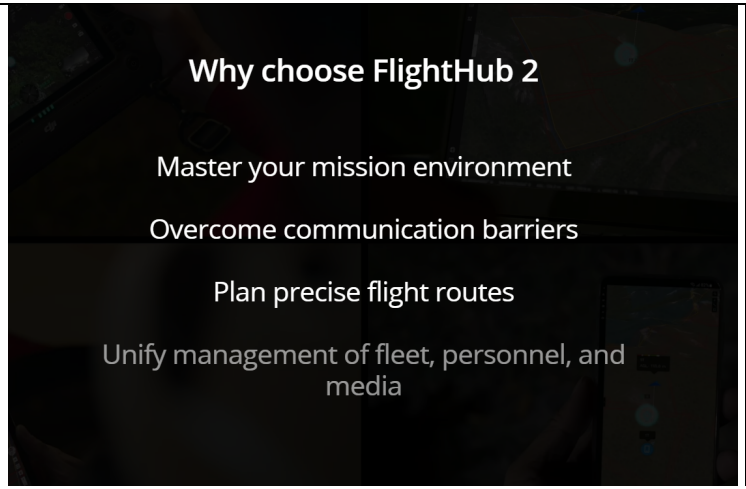
Operation Zenith Shows Value of AeroScope in an Integrated UTM System

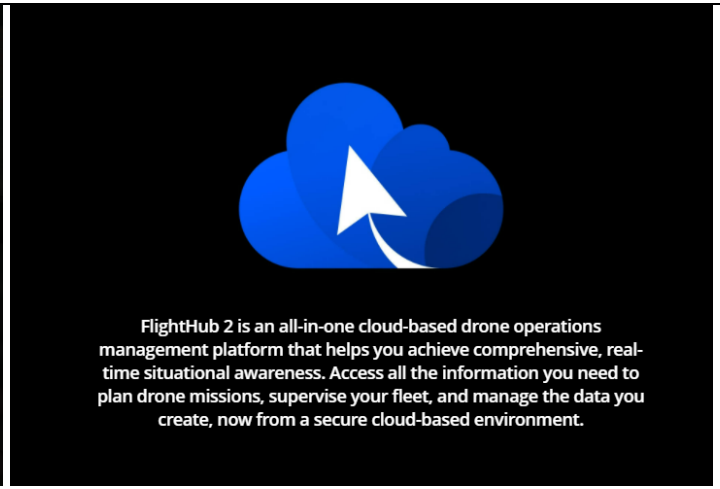
DJI AeroScope transmits basic telemetry and identification about airborne drones to authorities, providing critical information to help secure our skies

DJI's AeroScope is a Remote ID system that provides authorized users with the location, altitude, speed and direction of every DJI drone within radio range, as well as the location of the drone pilot and the serial number of the drone. Authorized users such as airports and police departments can see this information displayed on a computer map for every drone within the multi-mile range of AeroScope's antennae. This telemetry information is broadcast directly from the drone to the AeroScope receiver, allowing authorities to identify and track those drones, and take action if any of them raise concerns.

National aviation regulators understand that Remote ID will be a key component of future Unmanned Traffic Management (UTM) systems, which will simultaneously track drones and traditional aircraft in crowded airspace. Government agencies, academic centers and private companies are developing UTM prototypes to prevent conflicts and collisions, watch for unauthorized aircraft in restricted areas, and protect controlled airspace from unexpected intrusions.

	 https://enterprise.dji.com/news/detail/aeroscope-enables-remote-id-in-utm-system
[1d] modifying the flight path according to data from the UTM in response to the UTM indicating that the usability of the flight path is not verified;	The accused DJI FlightHub 2 software includes functions to modify the flight path according to data from the UTM in response to the UTM indicating that the usability of the flight path is not verified. For example, the FlightHub 2 software's flight route creation and editing software includes functions to modify the flight route according to flight safety and restriction updates set by the GEO system in response to the UTM indicating that the usability of the flight is not verified (e.g., the path traverses one or more Restricted/Warning Zones).  https://www.dji.com/mavic-3-enterprise?site=brandsite&from=nav





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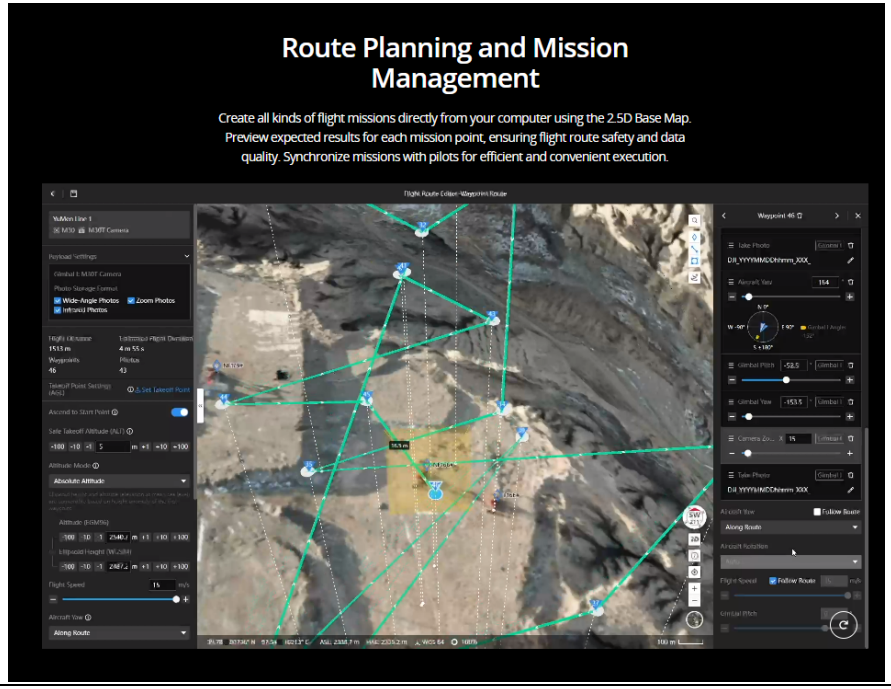
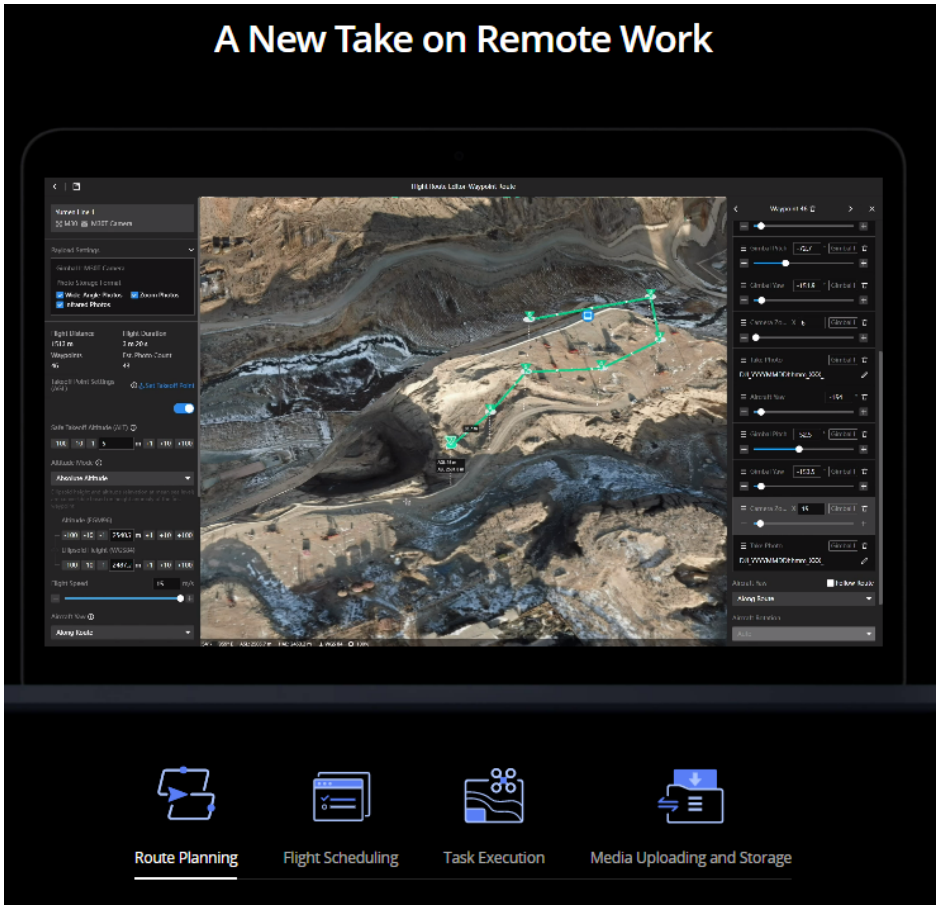
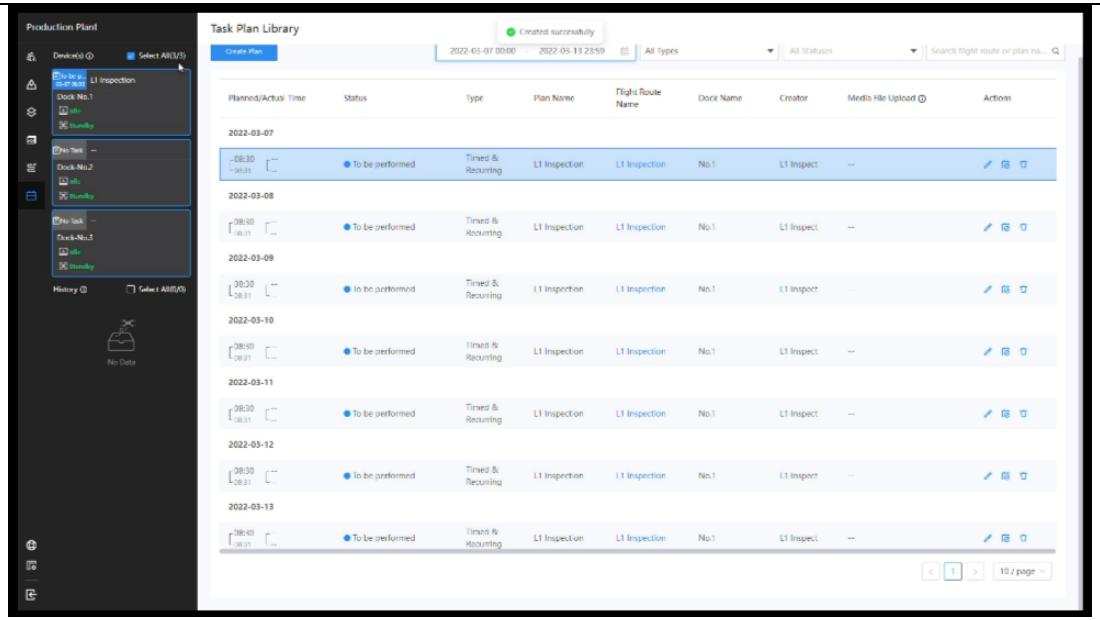


	https://www.dji.com/flighthub-2  https://www.dji.com/flighthub-2



https://www.dji.com/flighthub-2

Flight Route Library

Project members can click to enter the flight route library to import, create, and edit flight routes.

Import Flight Routes

Click > Import KMZ File to select and import KMZ flight routes. The upload progress and status will be displayed during the flight route upload. Users can stop uploading files when the files are being or waiting to be uploaded.

• The KMZ file must include wpmz/template.kml and wpmz/waylines.wpml.

https://dl.djicdn.com/downloads/DJI_FlightHub_2/20221123/DJI_FlightHub_2_User_Guide_v2.0.pdf, 30.

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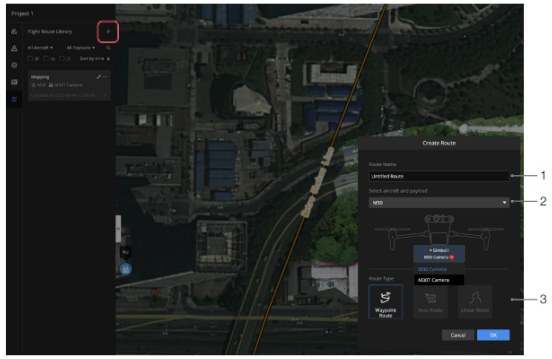
https://enterprise-insights.dji.com/blog/flighthub-2-top-features

Create Flight Routes

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



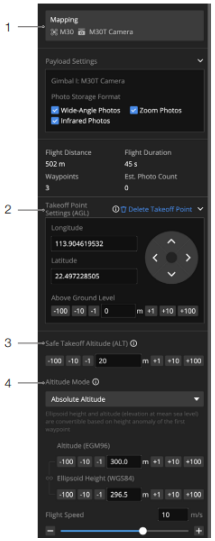
1. **Route Name**
   The route name is required and should be within 60 characters.
2. **Select aircraft and payload**
   Only Matrice 30 series are supported.
3. **Route Type**
   Only Waypoint routes are supported.

Click OK to create the flight route.

Edit Waypoint Routes

Edit Flight Routes

Enter the flight route editor and set flight route details.



Move the mouse over ⓘ to view setting descriptions.

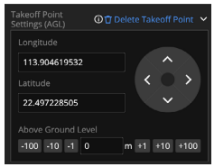
Pay attention to the settings below.

1. **Basic Information**
   Click to edit the flight route name and change the aircraft and payload.

   ⚠ Changing the payload will affect flight route settings.

2. **Takeoff Point Settings (AGL)**
   Click Set Takeoff Point and set the location where the aircraft will take off.

   A. Edit the longitude, latitude, and altitude above the ground level on the coordinate panel.



   B. Select and drag the takeoff point icon to move the takeoff point. Press and hold the Alt key and drag the icon up and down to adjust the altitude.

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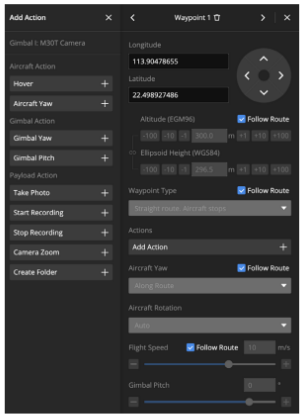
   The return-to-home altitude should be set based on the actual flight condition, surrounding environment, and GEO information. It is recommended that the altitude be set higher than the highest geographical point in the flight area.

Edit Waypoints

Select and click on the map to add waypoints. Select a waypoint and set waypoint details.



1. **Longitude and Latitude**
   The longitude and latitude of an aircraft are obtained from its geographical location on the map.
2. **Altitude, Ellipsoid Height (WGS84), Waypoint Type, Aircraft Yaw, and Flight Speed**
   These parameters are consistent with the corresponding flight route settings by default. If the flight route settings are changed, the above parameters will also be updated.
3. **Actions**
   Click "+" to add actions for the aircraft, gimbal, and payload.
4. Click on the upper left corner to save the flight route settings.

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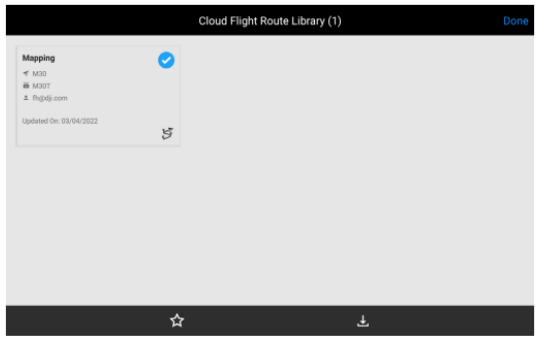
Perform Flight Tasks

DJI Pilot users can log in to the DJI FlightHub 2 cloud service and perform cloud flight tasks.

1. Enter the home screen of DJI Pilot, tap Flight Route, select Cloud to view flight routes created on DJI FlightHub 2.
2. Select the flight route and tap , the flight route will be downloaded to Flight Route Library.



3. Select and enter flight route settings. Tap to perform the flight task.

https://dl.djicdn.com/downloads/DJI_FlightHub_2/DJI_FlightHub_2_User_Guide.pdf.

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Flight Restrictions

GEO (Geospatial Environment Online) System

DJI's Geospatial Environment Online (GEO) system is a global information system that provides real-time information on flight safety and restriction updates and prevents UAVs from flying in restricted airspace. Under exceptional circumstances, restricted areas can be unlocked to allow flight. Prior to that, the user must submit an unlocking request based on the current restriction level in the intended flight area. The GEO system may not fully comply with local laws and regulations. Users shall be responsible for their own flight safety and must consult with the local authorities on the relevant legal and regulatory requirements before requesting to unlock a flight in a restricted area.

https://dl.djicdn.com/downloads/DJI_Mavic_3_Enterprise/20221212/DJI_Mavic_3E_3T_User_Manual_EN.pdf

Flight Restrictions in GEO Zones

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https://dl.djicdn.com/downloads/DJI_Mavic_3_Enterprise/20221212/DJI_Mavic_3E_3T_User_Manual_EN.pdf

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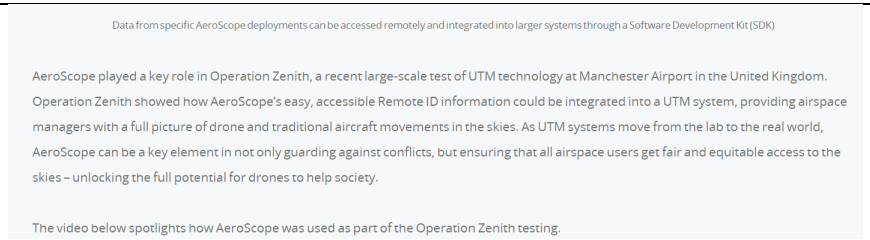
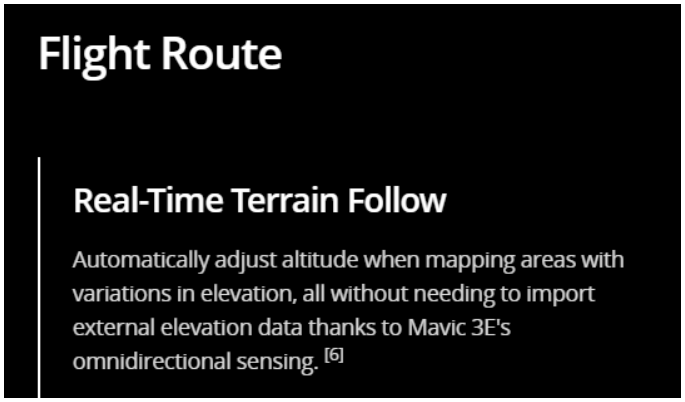
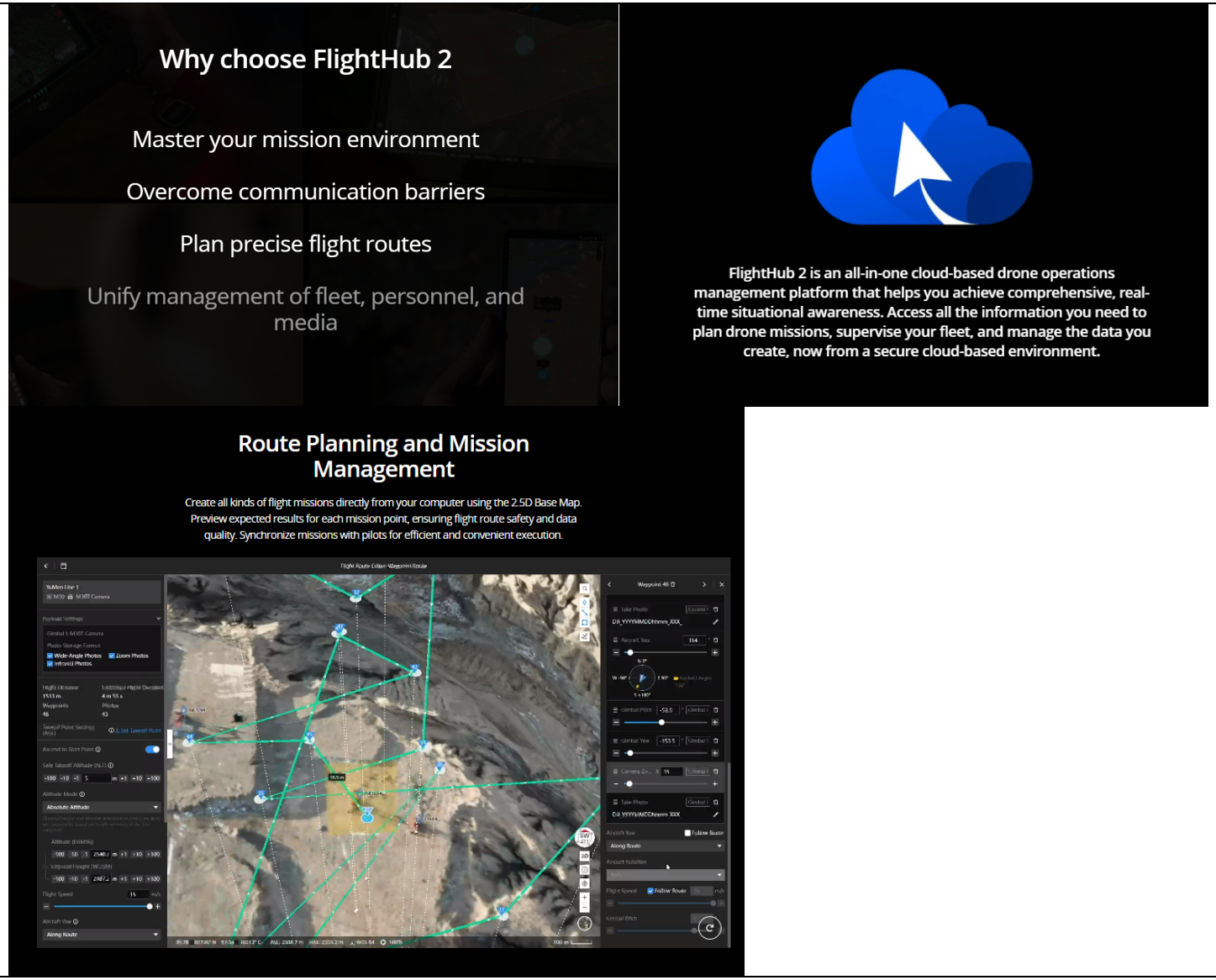
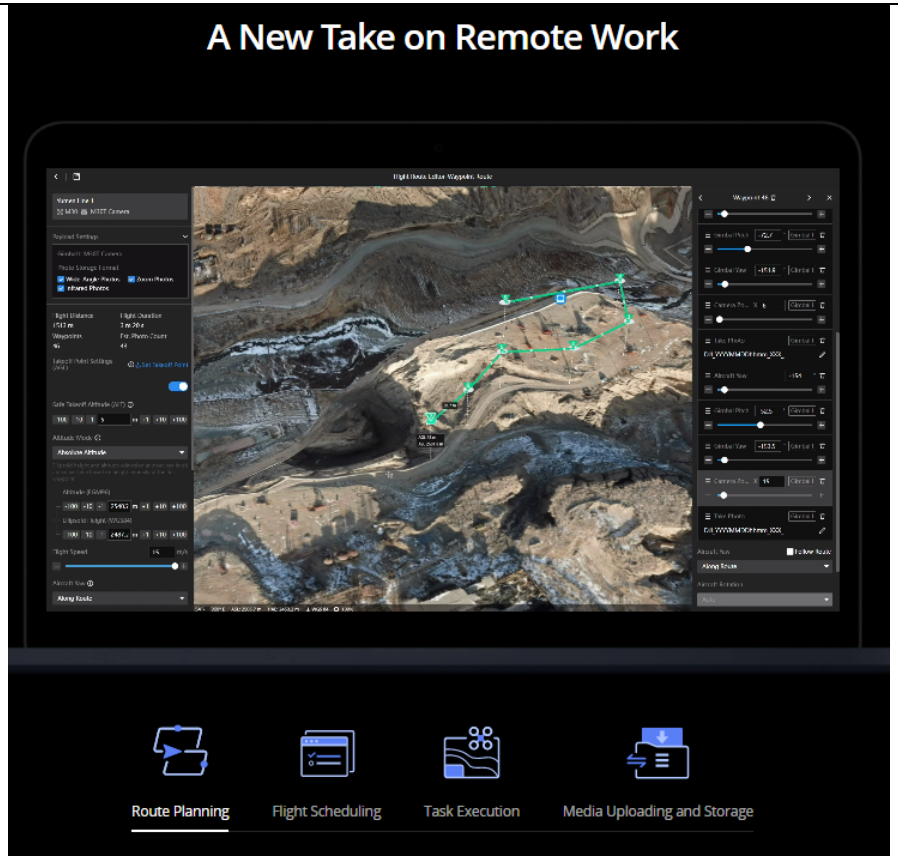
	 https://enterprise.dji.com/news/detail/aeroscope-enables-remote-id-in-utm-system  https://www.dji.com/mavic-3-enterprise?site=brandsite&from=nav.
[1e] generating vehicle commands according to mission parameters associated with the mission based on the flight path;	The accused DJI FlightHub 2 software includes functions to generate vehicle commands according to mission parameters associated with the mission based on the flight path. For example, FlightHub 2 generates vehicle commands to cause the Accused DJI Drones to operate according to the mission parameters stored by the flight route library and/or task plan library. The Accused DJI Drones follow the parameters set according to the flight route, including traveling along the flight path according to the waypoints set for the route, using the altitude, speed, camera settings, schedule, time, and other mission parameters set by FlightHub 2 flight path.


Why choose FlightHub 2
Master your mission environment
Overcome communication barriers
Plan precise flight routes
Unify management of fleet, personnel, and media
FlightHub 2 is an all-in-one cloud-based drone operations management platform that helps you achieve comprehensive, real-time situational awareness. Access all the information you need to plan drone missions, supervise your fleet, and manage the data you create, now from a secure cloud-based environment.
Route Planning and Mission Management
Create all kinds of flight missions directly from your computer using the 2.5D Base Map. Preview expected results for each mission point, ensuring flight route safety and data quality. Synchronize missions with pilots for efficient and convenient execution.



https://www.dji.com/flighthub-2

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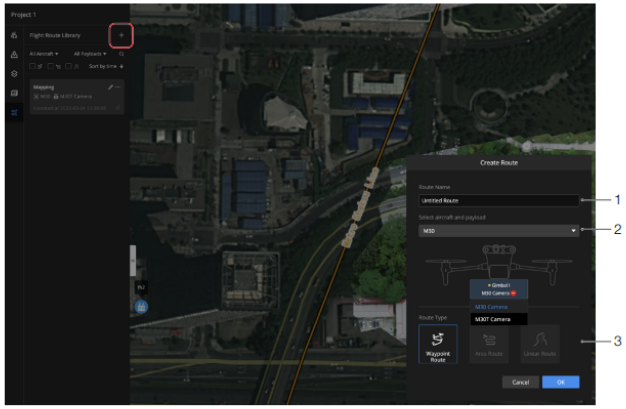
https://enterprise-insights.dji.com/blog/flighthub-2-top-features

Create Flight Routes

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



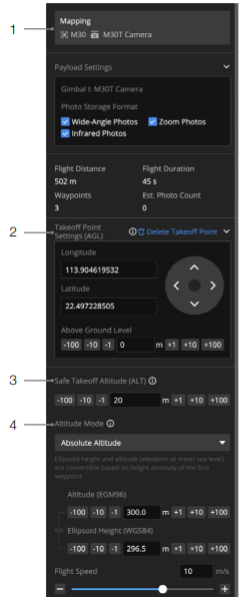
1. **Route Name**
   The route name is required and should be within 60 characters.
2. **Select aircraft and payload**
   Only Matrice 30 series are supported.
3. **Route Type**
   Only Waypoint routes are supported.

Click OK to create the flight route.

Edit Waypoint Routes

Edit Flight Routes

Enter the flight route editor and set flight route details.



Move the mouse over ⓘ to view setting descriptions.

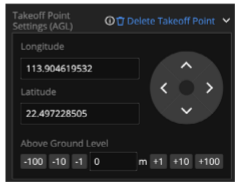
Pay attention to the settings below.

1. **Basic Information**
   Click to edit the flight route name and change the aircraft and payload.

   ⚠ Changing the payload will affect flight route settings.

2. **Takeoff Point Settings (AGL)**
   Click Set Takeoff Point and set the location where the aircraft will take off.

   A. Edit the longitude, latitude, and altitude above the ground level on the coordinate panel.



   B. Select and drag the takeoff point icon to move the takeoff point. Press and hold the Alt key and drag the icon up and down to adjust the altitude.

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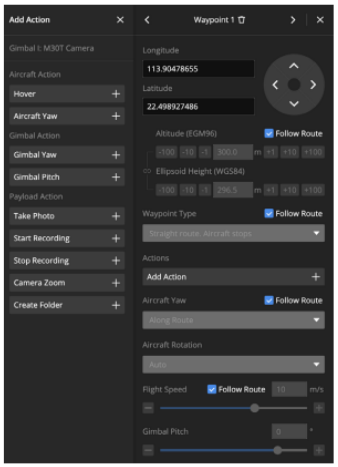
Edit Waypoints

Select and click on the map to add waypoints. Select a waypoint and set waypoint details.



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2. Altitude, Ellipsoid Height (WGS84), Waypoint Type, Aircraft Yaw, and Flight Speed
   These parameters are consistent with the corresponding flight route settings by default. If the flight route settings are changed, the above parameters will also be updated.
3. Actions
   Click "+" to add actions for the aircraft, gimbal, and payload.
4. Click on the upper left corner to save the flight route settings.

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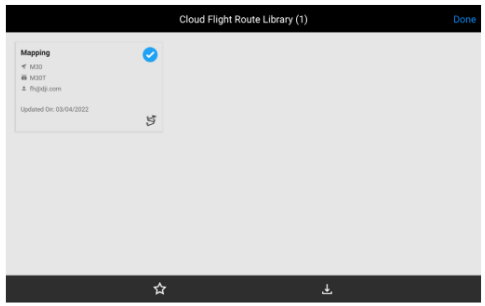
Perform Flight Tasks

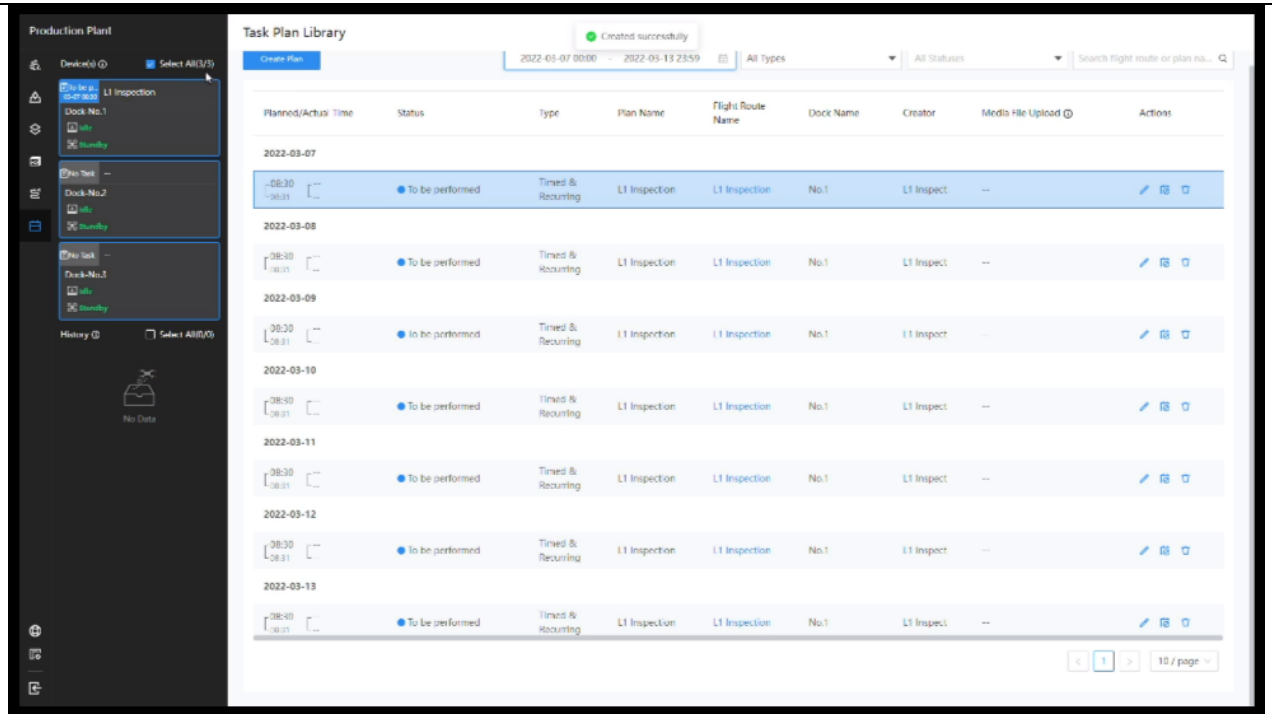
DJI Pilot users can log in to the DJI FlightHub 2 cloud service and perform cloud flight tasks.

1. Enter the home screen of DJI Pilot, tap Flight Route, select Cloud to view flight routes created on DJI FlightHub 2.
2. Select the flight route and tap , the flight route will be downloaded to Flight Route Library.



3. Select and enter flight route settings. Tap to perform the flight task.

https://dl.djicdn.com/downloads/DJI_FlightHub_2/DJI_FlightHub_2_User_Guide.pdf



https://www.dji.com/flighthub-2

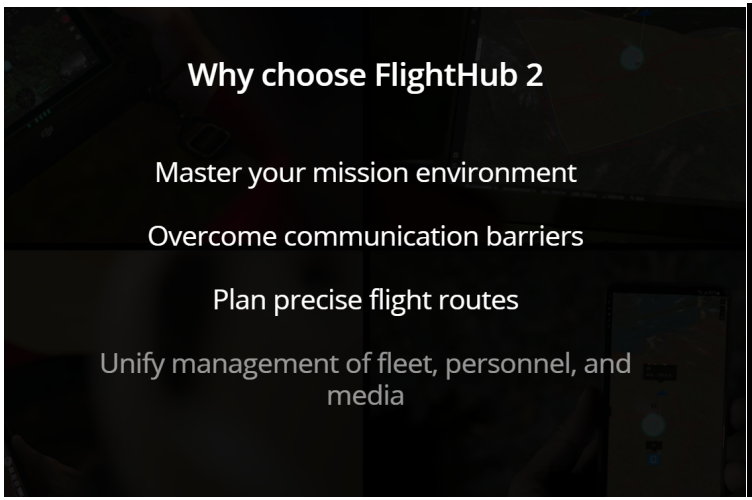
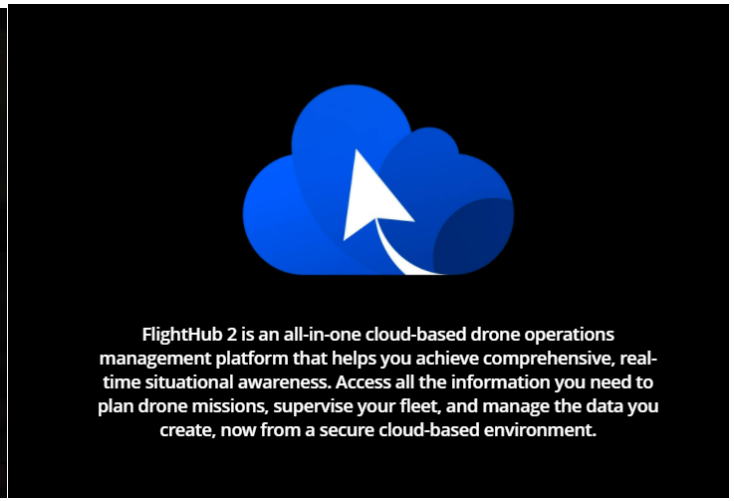
class FlightController

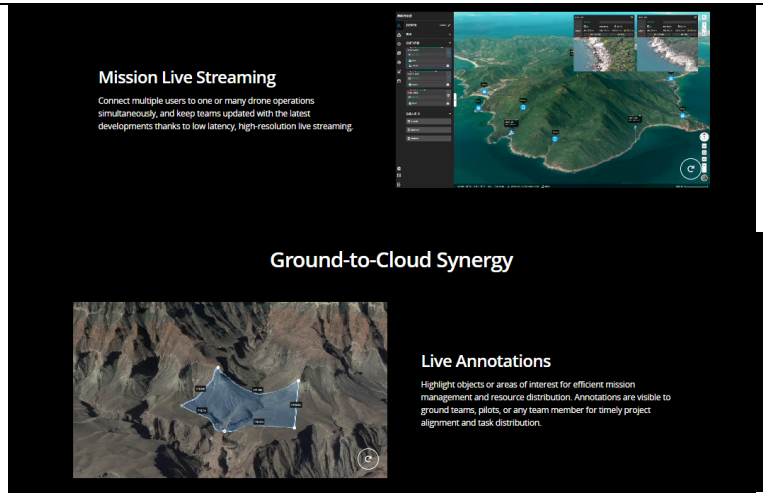
```
class FlightController extends BaseComponent
```

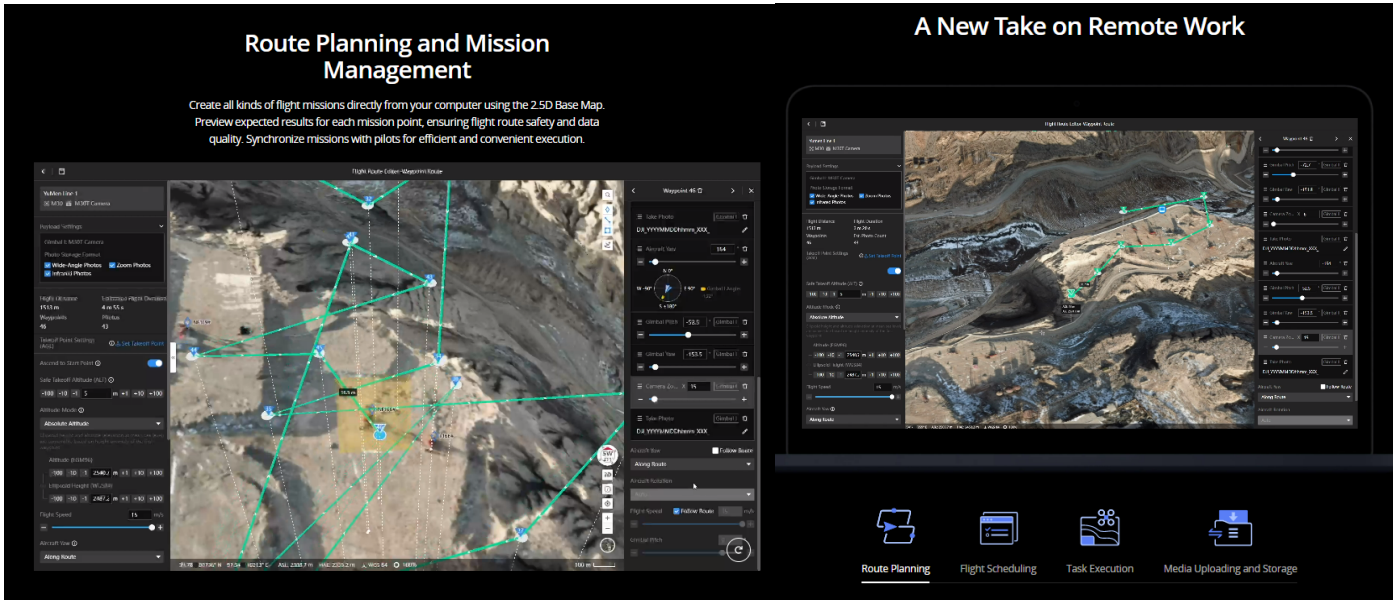
Package: dji.sdk.flightcontroller
Inherits From: `BaseComponent`

Description:

This class contains components of the flight controller and provides methods to send different commands to the flight controller. This object is available from the `Aircraft` object which is a subclass of `BaseProduct`.

	https://developer.dji.com/api-reference/android-api/Components/FlightController/DJIFlightController.html?search=commands&i=0&
[1f] maintaining a persistent connection with the vehicle;	The accused DJI FlightHub 2 software includes functions to maintain a persistent connection with the vehicle. For example, the DJI FlightHub 2 software provides for "real-time situational awareness," mission live streaming, synchronization of mission details, live annotations. all of which utilize a persistent connection with the vehicle. As another example, the DJI FlightHub 2 software permits the pilot of the drone to access FlightHub 2 software from the drone's RC controller thus providing a persistent connection with the vehicle.  





https://www.dji.com/flighthub-2

March 21, 2022

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FlightHub 2 is entirely cloud-based, which means it's accessible, not only to pilots with remote controllers but also to everyone else on the team who has a device with a web browser.

This includes laptops and computers, tablets, and cell phones. All you have to do is log in to your team's FlightHub 2 mission, or "Project," and you will have access to the same intelligence gathered by the drones.

Every team member that's logged in can see and add updates as the mission unfolds. The command center computer, the drone pilots' RC, the cell phones of the team on the ground - everyone shares a single interactive map that enables active collaboration.

Advanced media management

FlightHub 2 was built for more than just search and rescue teams and emergency first responders, but also any job, like surveying and inspection, that uses drones and needs to keep organized.

FlightHub 2 has powerful mission planning functions, so flight routes or tasks can be created, saved, and shared to other pilots. It also has everything you need to effectively store and manage your aerial data. On top of embedding information in real-time onto 2.5D cloud maps, all of your photos and videos can be automatically uploaded to the cloud for later analysis.

Crew members can be assigned varying levels of access and tasks can be assigned in the cloud.

Full control of DJI Dock operations

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Real-Time Project Information

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

Online Project Information

After joining a project, project members can view team information, such as device statuses and online members on the left panel. Device statuses include:

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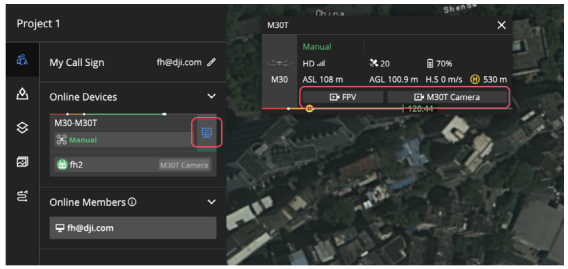
Aircraft and remote controller locations will be displayed on the map. Click the aircraft or the remote controller icon and a line connecting the aircraft to its linked remote controller will be displayed. A window above the aircraft shows the aircraft call sign and its altitude above the sea level. Click the window to open the Device Details and Livestreams panel.

DJI FlightHub 2 User Guide

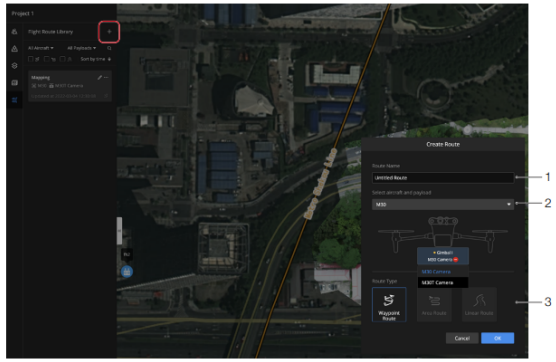
Device Details and Livestreams

When a device is online, project members can click to view device details, such as the transmission signal strength, satellite connection status, and aircraft altitude. Click camera buttons to view livestreams from the aircraft camera or payload. During a livestream, click to start recording, and the recorded video will be stored to Media Files automatically.



Create Flight Routes

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



1. Route Name
   The route name is required and should be within 60 characters.
2. Select aircraft and payload
   Only Matrice 30 series are supported.
3. Route Type
   Only Waypoint routes are supported.

Click OK to create the flight route.

3. Safe Takeoff Altitude (ALT)
   Safe Takeoff Altitude is the altitude relative to the takeoff point altitude. Aircraft will ascend to the safe takeoff altitude after takeoff and fly to the flight route start point.
4. Altitude Mode
   The Altitude mode is set to Absolute Altitude by default. Project members can also change it to Altitude Relative to Takeoff Point (ALT) or Above Ground Level.
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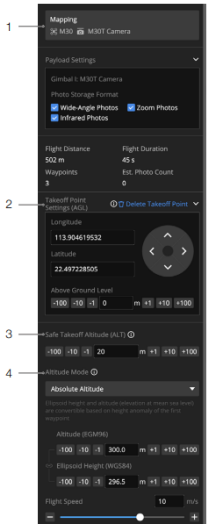
Edit Waypoint Routes

Edit Flight Routes

Enter the flight route editor and set flight route details.



Move the mouse over ⓘ to view setting descriptions.

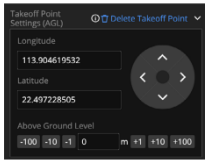
Pay attention to the settings below.

1. Basic Information
   Click to edit the flight route name and change the aircraft and payload.

   ⚠ Changing the payload will affect flight route settings.

2. Takeoff Point Settings (AGL)
   Click Set Takeoff Point and set the location where the aircraft will take off.

   A. Edit the longitude, latitude, and altitude above the ground level on the coordinate panel.



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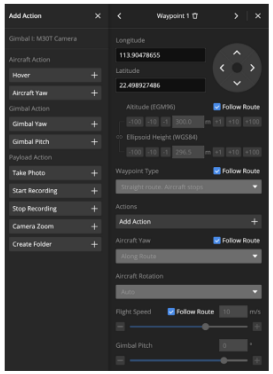
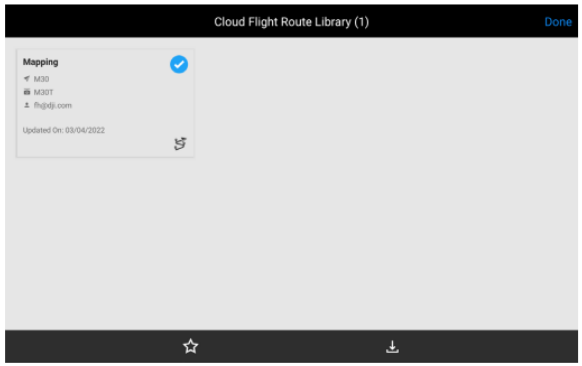
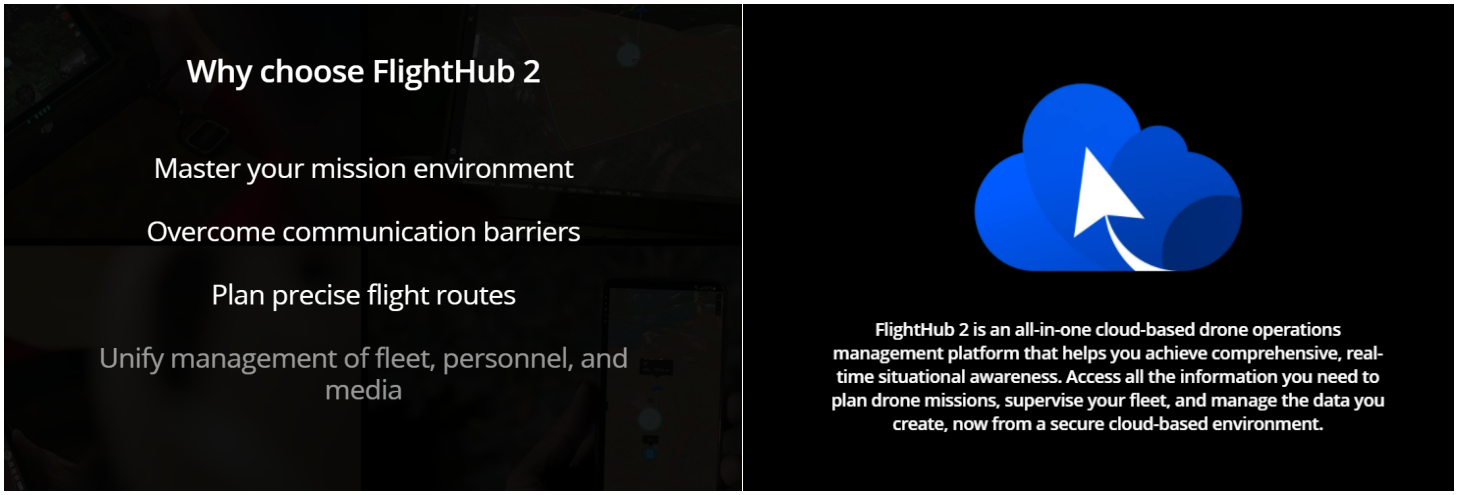
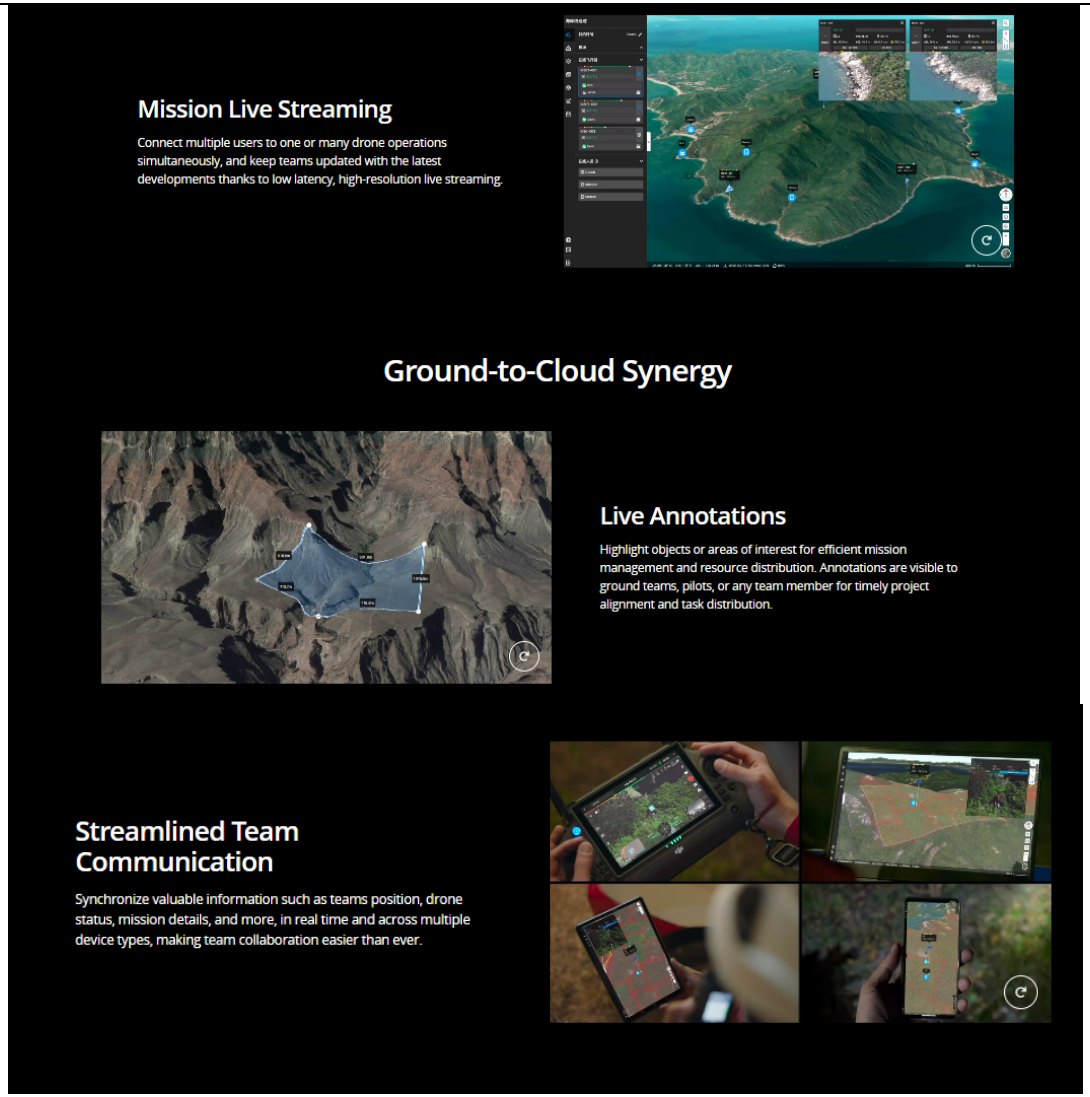
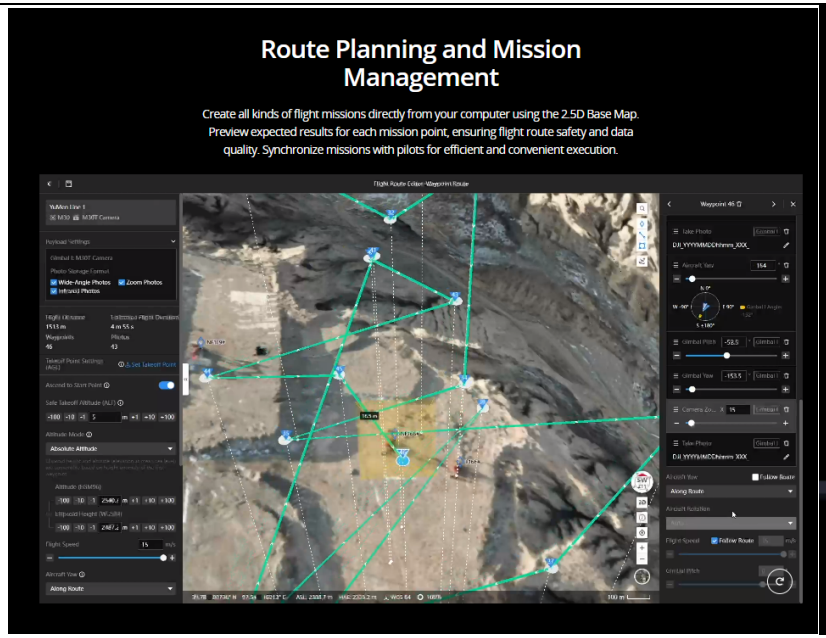
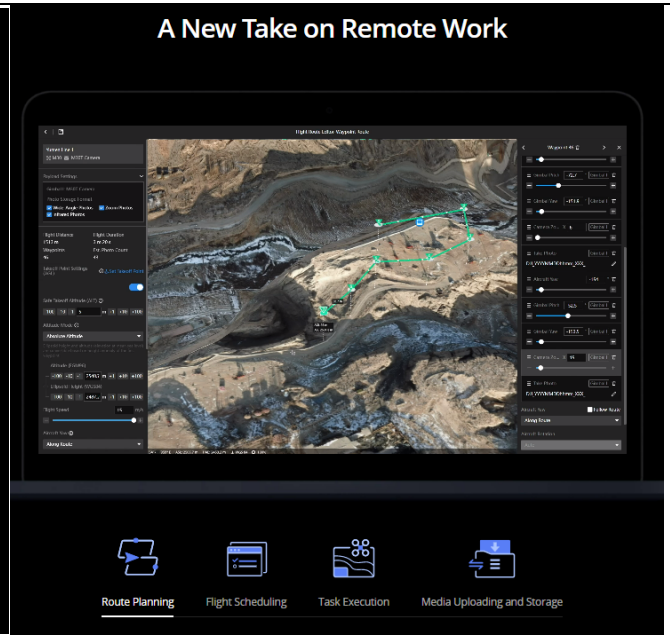
	Edit Waypoints Select and click on the map to add waypoints. Select a waypoint and set waypoint details.  1. **Longitude and Latitude** The longitude and latitude of an aircraft are obtained from its geographical location on the map. 2. **Altitude, Ellipsoid Height (WGS84), Waypoint Type, Aircraft Yaw, and Flight Speed** These parameters are consistent with the corresponding flight route settings by default. If the flight route settings are changed, the above parameters will also be updated. 3. **Actions** Click "+" to add actions for the aircraft, gimbal, and payload. 4. Click on the upper left corner to save the flight route settings. 22 © 2022 DJI All Rights Reserved. **DJI FlightHub 2** User Guide **Perform Flight Tasks** DJI Pilot users can log in to the DJI FlightHub 2 cloud service and perform cloud flight tasks. 1. Enter the home screen of DJI Pilot, tap Flight Route, select Cloud to view flight routes created on DJI FlightHub 2. 2. Select the flight route and tap , the flight route will be downloaded to Flight Route Library.  3. Select and enter flight route settings. Tap to perform the flight task. https://dl.djicdn.com/downloads/DJI_FlightHub_2/DJI_FlightHub_2_User_Guide.pdf **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. https://dl.djicdn.com/downloads/DJI_FlightHub_2/20221123/DJI_FlightHub_2_User_Guide_v2.0.pdf
[1g] sending the vehicle commands to the vehicle using the connection, the vehicle commands causing the	The accused DJI FlightHub 2 software includes functions to send the vehicle commands to the vehicle using the connection, the vehicle commands causing the vehicle to execute the mission under control of the fleet controller.

vehicle to execute the mission under control of the fleet controller; and	For example, the DJI FlightHub2 functionality transmits flight routes and mission parameters to one or more of the Accused DJI Drones in the fleet, which cause the drone to execute the mission under control of the DJI FlightHub 2 flight controller. 


Mission Live Streaming
Connect multiple users to one or many drone operations simultaneously, and keep teams updated with the latest developments thanks to low latency, high-resolution live streaming.
Ground-to-Cloud Synergy
Live Annotations
Highlight objects or areas of interest for efficient mission management and resource distribution. Annotations are visible to ground teams, pilots, or any team member for timely project alignment and task distribution.
Streamlined Team Communication
Synchronize valuable information such as teams position, drone status, mission details, and more, in real time and across multiple device types, making team collaboration easier than ever.





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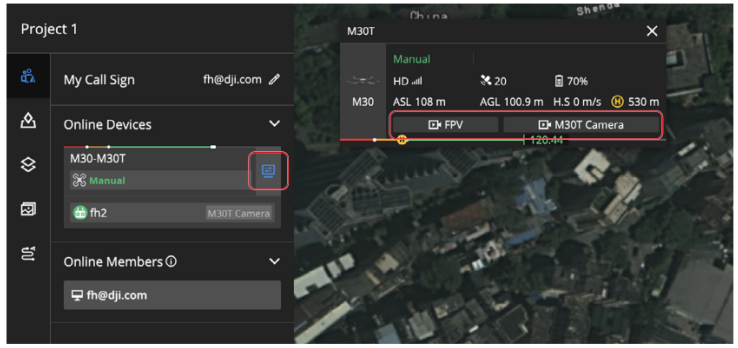
DJI FlightHub 2 User Guide

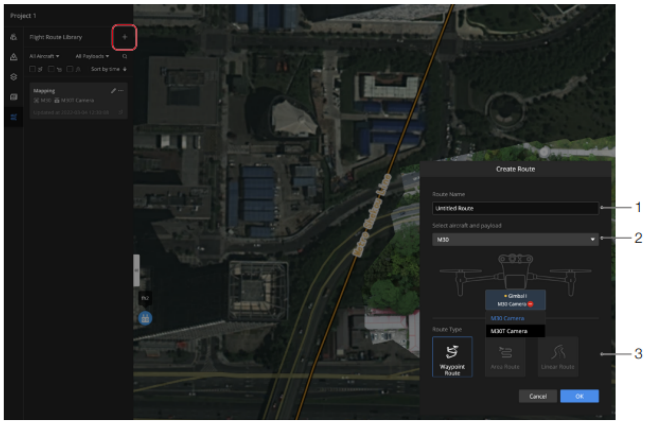
Device Details and Livestreams

When a device is online, project members can click to view device details, such as the transmission signal strength, satellite connection status, and aircraft altitude. Click camera buttons to view livestreams from the aircraft camera or payload. During a livestream, click to start recording, and the recorded video will be stored to Media Files automatically.



Create Flight Routes

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



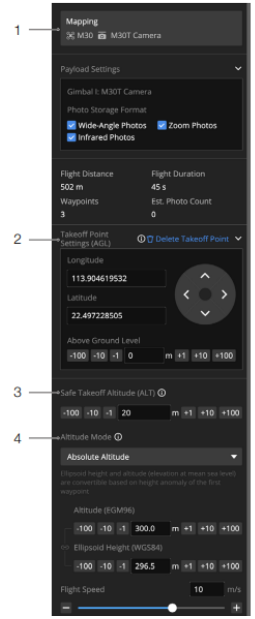
1. **Route Name**
   The route name is required and should be within 60 characters.
2. **Select aircraft and payload**
   Only Matrice 30 series are supported.
3. **Route Type**
   Only Waypoint routes are supported.

Click OK to create the flight route.

Edit Waypoint Routes

Edit Flight Routes

Enter the flight route editor and set flight route details.



Move the mouse over ⓘ to view setting descriptions.

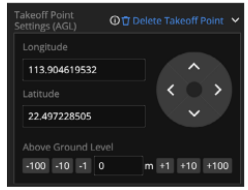
Pay attention to the settings below.

1. **Basic Information**
   Click to edit the flight route name and change the aircraft and payload.

   ⚠ Changing the payload will affect flight route settings.

2. **Takeoff Point Settings (AGL)**
   Click Set Takeoff Point and set the location where the aircraft will take off.

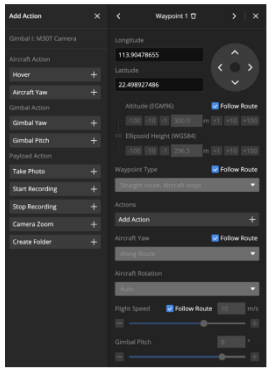
   A. Edit the longitude, latitude, and altitude above the ground level on the coordinate panel.



   B. Select and drag the takeoff point icon to move the takeoff point. Press and hold the Alt key and drag the icon up and down to adjust the altitude.

Edit Waypoints

Select and click on the map to add waypoints. Select a waypoint and set waypoint details.



1. **Longitude and Latitude**
   The longitude and latitude of an aircraft are obtained from its geographical location on the map.
2. **Altitude, Ellipsoid Height (WGS84), Waypoint Type, Aircraft Yaw, and Flight Speed**
   These parameters are consistent with the corresponding flight route settings by default. If the flight route settings are changed, the above parameters will also be updated.
3. **Actions**
   Click "+" to add actions for the aircraft, gimbal, and payload.
4. Click on the upper left corner to save the flight route settings.

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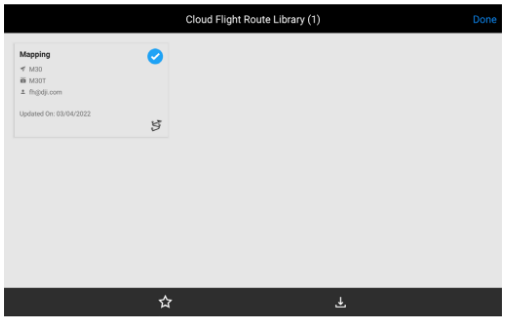
Perform Flight Tasks

DJI Pilot users can log in to the DJI FlightHub 2 cloud service and perform cloud flight tasks.

1. Enter the home screen of DJI Pilot, tap Flight Route, select Cloud to view flight routes created on DJI FlightHub 2.
2. Select the flight route and tap , the flight route will be downloaded to Flight Route Library.



3. Select and enter flight route settings. Tap to perform the flight task.

https://dl.djicdn.com/downloads/DJI_FlightHub_2/DJI_FlightHub_2_User_Guide.pdf

Description:

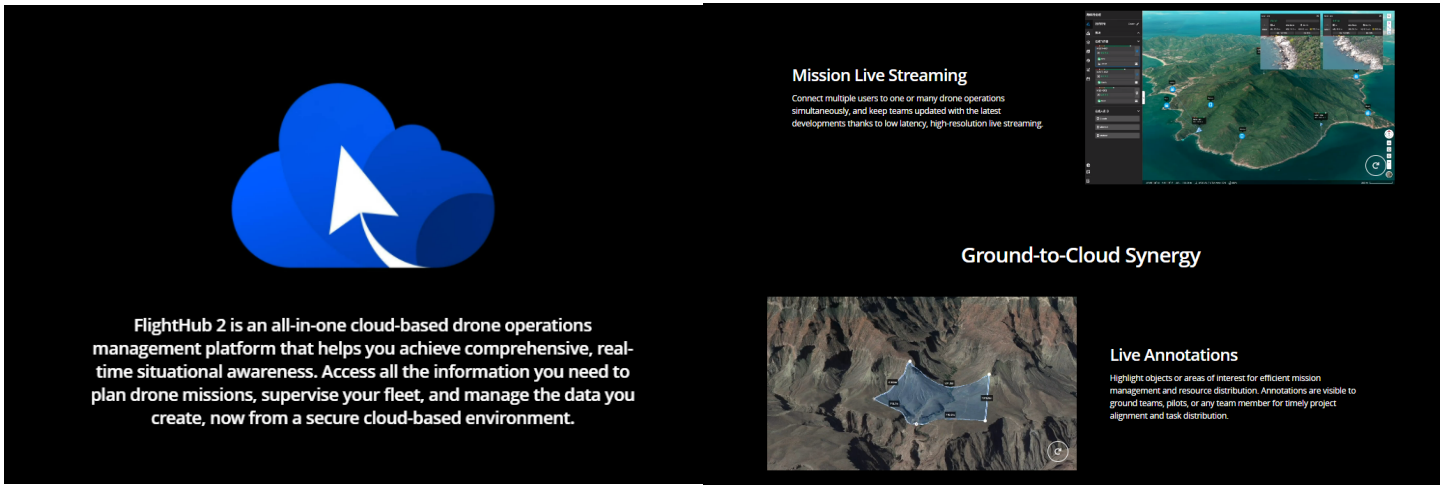
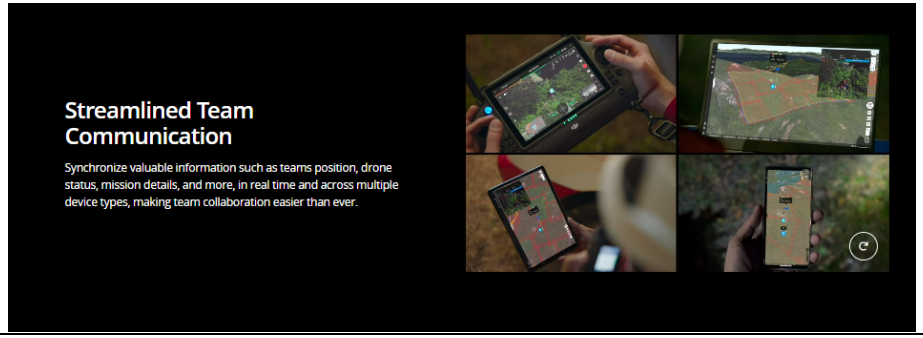
Mission Control handles execution of missions. Either single missions can be run through dedicated mission operators, or a series of missions and actions can be run serially using the Timeline.

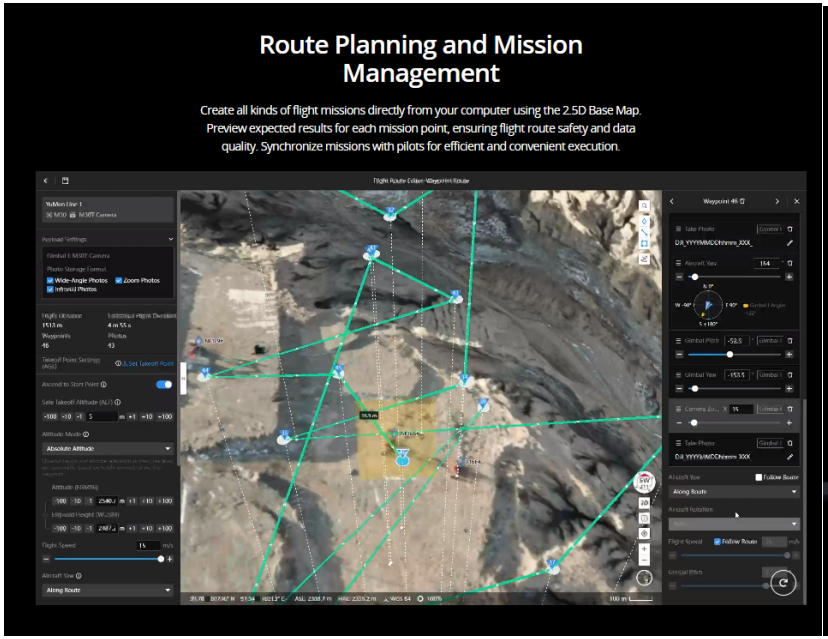
Mission operators look after execution of a single mission. A mission operator has APIs to control the mission (e.g. start, stop, pause etc.) and provides mission state through listeners.

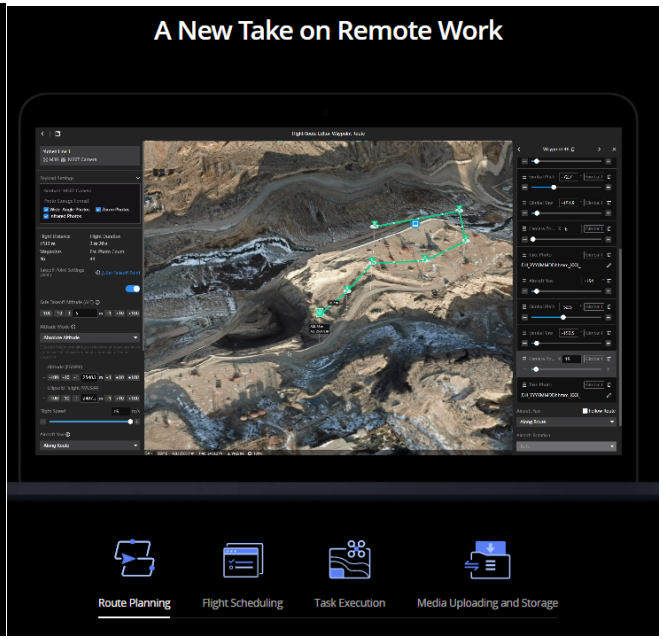
Mission Control's Timeline is made up of a series of Timeline elements which can be Waypoint missions, Hotpoint missions (through the Hotpoint action `HotpointAction`) or objects that follow the `TimelineElement` protocol. `MissionAction` is a Timeline element, with `AircraftYawAction` and `GimbalAttitudeAction` subclasses being examples of specific actions. If a mission is being executed in a Timeline, the mission operator can still be used to get state information of the mission as well as change mission execution parameters.

Timeline elements can also have triggers (`Trigger`) associated with them. Triggers are separate objects that are run in parallel with a Timeline element. The trigger object is used to initiate actions if a set of criteria are met. For example, a trigger could be used to monitor battery level, and then initiate an action once a threshold is passed. Mission Control's Timeline is only supported by aircrafts. Handheld devices (e.g. OSMO) do not support this feature.

> Mission Control is accessed from `getMissionControl` in `DJISDKManager`.

	https://developer.dji.com/api-reference/android-api/Components/Missions/DJIMissionControl.html?search=mission&i=0&
[1h] monitoring operation of the vehicle during performance of the mission.	The Accused FlightHub 2 software includes functions to monitor operation of the vehicle during performance of the mission. For example, the Accused FlightHub 2 software provides "real-time situational awareness," supervise the fleet, live stream missions, synchronize mission status, device status, and mission details.  





https://www.dji.com/flighthub-2

March 21, 2022

It's safe to say that drones have already been established as critical tools for emergency teams and inspection crews, and the insights drones deliver from above are invaluable. But as teams bring in more drones, more payloads, more pilots, and more data, the emphasis is now on how this all fits into the big picture.

To make the most of UAV technology, incident commanders and drone program managers need a software solution to help synchronize ground teams with what the drones pick up.

The situational awareness drones provide is most powerful when it's available to the right people at the right time. That's where DJI FlightHub 2 enters the scene.

FlightHub 2 is DJI's complete ground-to-cloud drone operations management software, and it's packed with tools to help you plan missions, stream data, and collaborate with your team in real-time. From fast mapping to DJI Dock management, here are the top five features of FlightHub 2.

FlightHub 2 is entirely cloud-based, which means it's accessible, not only to pilots with remote controllers but also to everyone else on the team who has a device with a web browser.

This includes laptops and computers, tablets, and cell phones. All you have to do is log in to your team's FlightHub 2 mission, or "Project," and you will have access to the same intelligence gathered by the drones.

Every team member that's logged in can see and add updates as the mission unfolds. The command center computer, the drone pilots' RC, the cell phones of the team on the ground - everyone shares a single interactive map that enables active collaboration.

Advanced media management

FlightHub 2 was built for more than just search and rescue teams and emergency first responders, but also any job, like surveying and inspection, that uses drones and needs to keep organized.

FlightHub 2 has powerful mission planning functions, so flight routes or tasks can be created, saved, and shared to other pilots. It also has everything you need to effectively store and manage your aerial data. On top of embedding information in real-time onto 2.5D cloud maps, all of your photos and videos can be automatically uploaded to the cloud for later analysis.

Crew members can be assigned varying levels of access and tasks can be assigned in the cloud.

Full control of DJI Dock operations

FlightHub 2 is also your hub for all DJI Dock operations. Within the app, you can monitor the status of your M30, plan and schedule missions, and coordinate everything required for round-the-clock, automated operations.

Cloud-based mission planning & collaboration

FlightHub 2 combines data storage and fleet management with intuitive tools that support public safety and inspection operations in real-time. It's packed with collaborative solutions that improve situational awareness for all team members. We've built an empowering application that enables better data sharing communication, giving mission commanders everything they need to make smarter decisions and deploy resources more effectively.

https://enterprise-insights.dji.com/blog/flighthub-2-top-features

Real-Time Project Information

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

Online Project Information

After joining a project, project members can view team information, such as device statuses and online members on the left panel. Device statuses include:

A. When a device is online, its information will be displayed on the left panel.

B. When a device is offline for less than five minutes, its information will be displayed in gray.

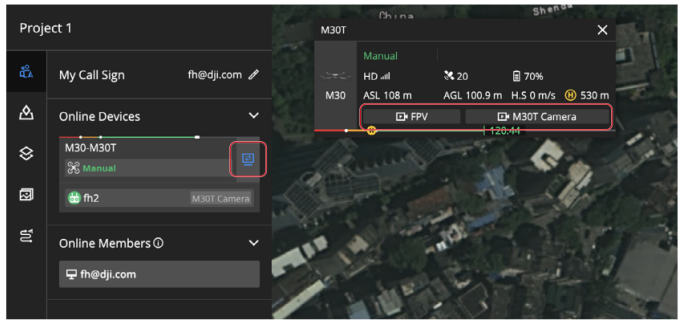
C. When a device is offline for more than five minutes, its information will not be displayed.

Aircraft and remote controller locations will be displayed on the map. Click the aircraft or the remote controller icon and a line connecting the aircraft to its linked remote controller will be displayed. A window above the aircraft shows the aircraft call sign and its altitude above the sea level. Click the window to open the Device Details and Livestreams panel.

DJI FlightHub 2 User Guide

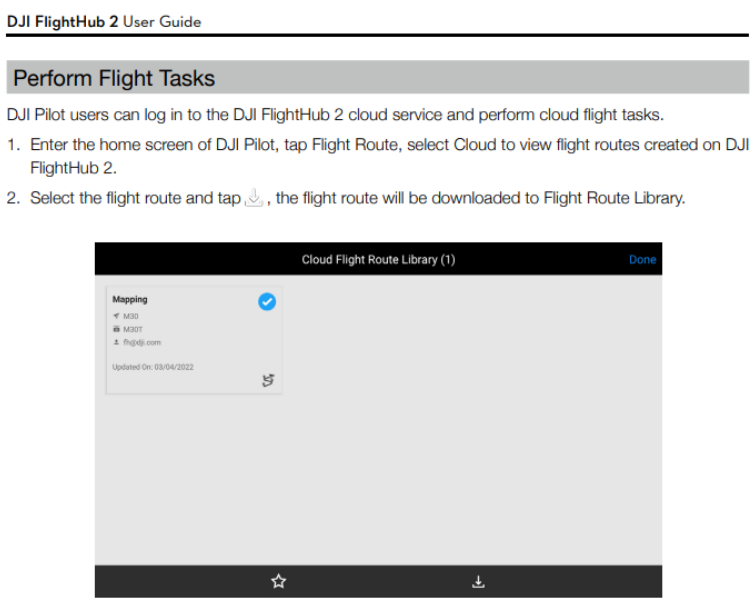
Device Details and Livestreams

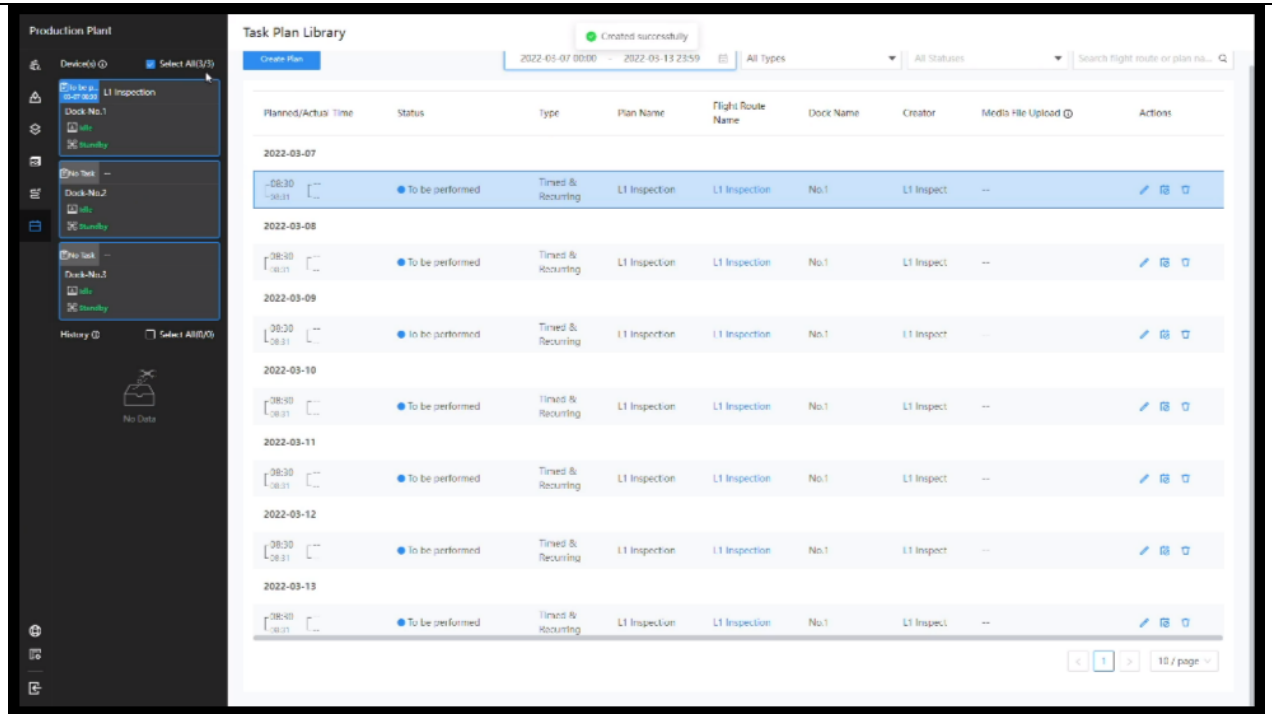
When a device is online, project members can click to view device details, such as the transmission signal strength, satellite connection status, and aircraft altitude. Click camera buttons to view livestreams from the aircraft camera or payload. During a livestream, click to start recording, and the recorded video will be stored to Media Files automatically.



DJI FlightHub 2 User Guide

3. **Safe Takeoff Altitude (ALT)**
   Safe Takeoff Altitude is the altitude relative to the takeoff point altitude. Aircraft will ascend to the safe takeoff altitude after takeoff and fly to the flight route start point.
4. **Altitude Mode**
   The Altitude mode is set to Absolute Altitude by default. Project members can also change it to Altitude Relative to Takeoff Point (ALT) or Above Ground Level.
5. **Return-to-Home Altitude (ALT)**
   The return-to-home altitude should be set based on the actual flight condition, surrounding environment, and GEO information. It is recommended that the altitude be set higher than the highest geographical point in the flight area.

	 https://dl.djicdn.com/downloads/DJI_FlightHub_2/DJI_FlightHub_2_User_Guide.pdf
[2] The method according to claim 1, wherein the obtaining the mission comprises obtaining the mission from the master schedule according to a priority of mission entries in the master schedule.	The Accused FlightHub 2 software includes functions to obtain the mission from the master schedule according to a priority of mission entries in the master schedule. For example, the Accused FlightHub 2 software includes the ability to plan and execute high priority missions. As another example, the Accused FlightHub 2 software has the ability to execute missions according to the priority set by the task plan library.



https://www.dji.com/flighthub-2

final HIGH_PRIORITY_MISSION_EXECUTING

```
static final DJIMissionError HIGH_PRIORITY_MISSION_EXECUTING =
        new DJIMissionError("A higher priority mission is executing", 0xD7)
```

Package: dji.common.error

Description:

A higher priority mission is executing.

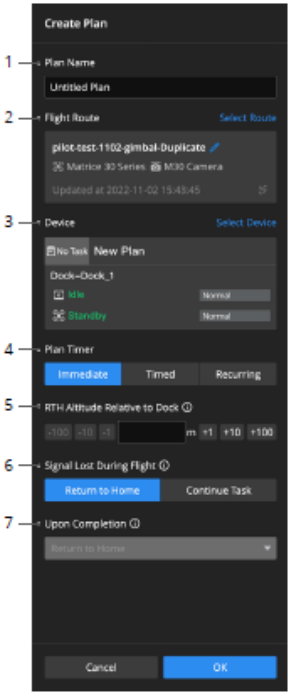
https://developer.dji.com/api-reference/android-api/Components/SDKError/DJIError_DJIMissionManagerError.html?search=priority&i=0&#djierror_djimissionmanagererror_mission_result_high_priority_mission_executing_inline

Task Plan Library

Project members can click to enter the task plan library to view task plans and the administrators can create and manage plans.

Create a Plan

Click Create Plan to create a task plan.



1. Plan Name
   The plan name is required and should be within 50 characters.
2. 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.
3. Device
   Only docks can be selected.
4. Plan Timer
   Users can select from Immediate, Timed, and Recurring.
   a. When the plan timer is set to Immediate, the aircraft will immediately perform the flight task once the plan is created.
   b. When the plan timer is set to Timed, the aircraft will perform the flight task when the set time is reached.
   c. When the plan timer is set to Recurring, the aircraft will perform repeated flight tasks when the set time is reached.
5. RTH Altitude Relative to Dock
   The aircraft altitude relative to the dock when the aircraft is returning to the dock (Altitude range: 20 m - 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.

6. Signal Lost During Flight
   The aircraft will return to home or continue the flight task when it is disconnected from the dock.
7. Upon Completion
   Only Return to Home is supported when creating a task plan.

https://dl.djicdn.com/downloads/DJI_FlightHub_2/DJI_FlightHub_2_User_Guide_v2.0.pdf

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Manage Task Plans

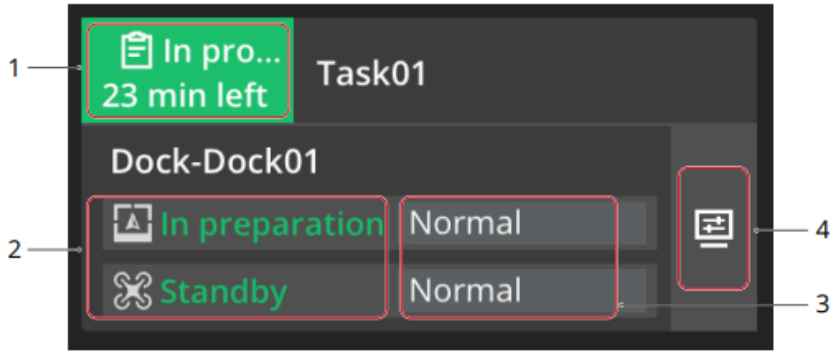
Users can view the task plan details and media file upload status, as well as perform actions on the task plan.

1. Planned/Actual Time: Displays the planned time of the task plan and the actual time when the task is performed. The planned time is estimated and can only be used as a reference.
2. Status: Includes To be performed, In progress, Task completed, Task failed, Task ended, and Suspended.
3. Type: Includes Immediate, Timed, and Recurring.
4. Route Name: Displays the flight route duplicate name. Click to view the duplicate in the editor. Editing and saving the duplicate are not supported.
5. 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:
   a. 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.
   b. Users can click Upload Now to prioritize the upload of the selected media files.
6. Actions:
   a. 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.
   b. For the flight tasks that are performed, users can click to copy the flight task, enter the flight route editor, and edit to create a new task plan.

https://dl.djicdn.com/downloads/DJI_FlightHub_2/DJI_FlightHub_2_User_Guide_v2.0.pdf

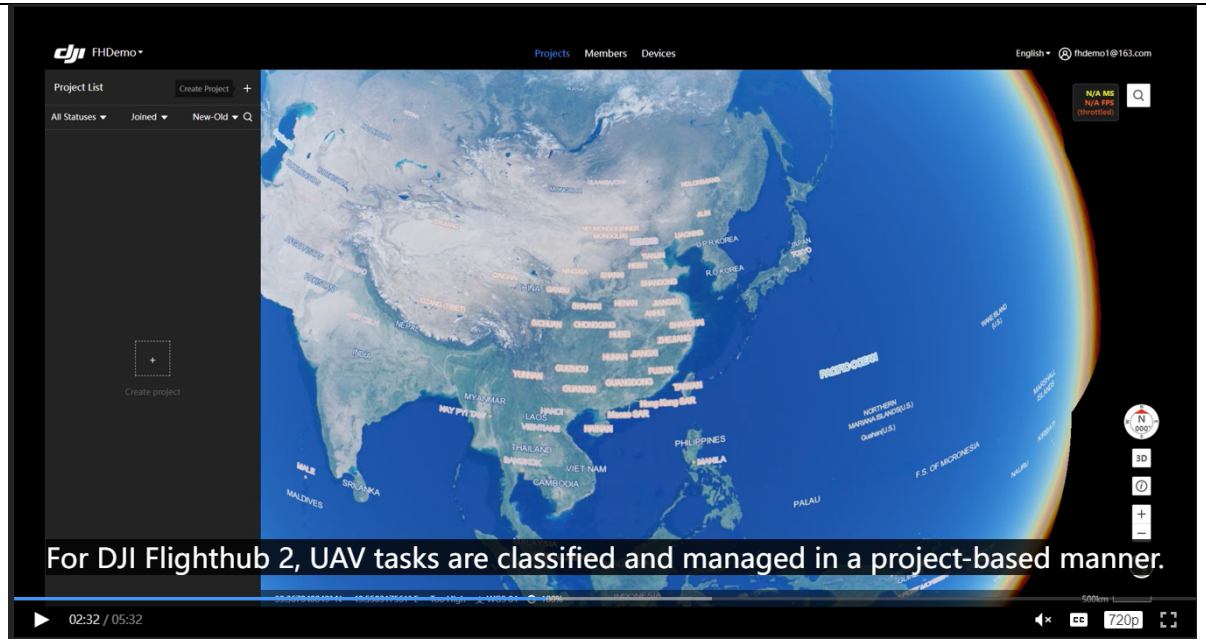
Dock

Users can view the flight task status, the dock and connected aircraft statuses, and the warning messages and open the device status window.



1. Flight task statuses include No task, To be performed, In progress, Task failed, Task ended, and Task completed. 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.

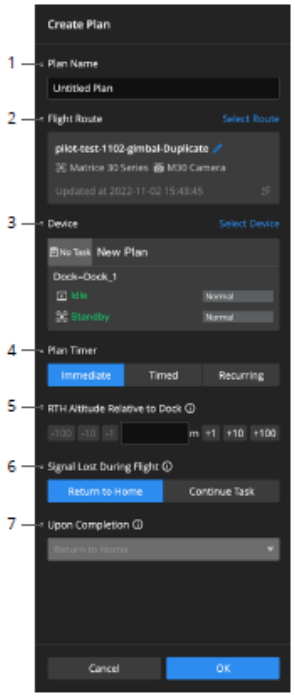
	 https://www.dji.com/flighthub-2/video
[3] The method according to claim 1, wherein the monitoring operation of the vehicle comprises monitoring a connection of the vehicle to a communications network associated with the fleet controller.	The Accused FlightHub 2 software includes functions to monitor a connection of the vehicle to a communications network associated with the fleet controller. For example, as discussed above for Element [1h], the Accused FlightHub 2 software provides "real-time situational awareness," supervise the fleet, live stream missions, synchronize mission status, device status, and mission details. This monitoring includes monitoring the connection of the drone to the communications network associated with the fleet controller. As another example, connectivity status is monitored such that the drone's mission parameters include instructions upon a disconnection from the communications network during flight.

Task Plan Library

Project members can click to enter the task plan library to view task plans and the administrators can create and manage plans.

Create a Plan

Click Create Plan to create a task plan.



1. Plan Name

   The plan name is required and should be within 50 characters.

2. 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.

3. Device

   Only docks can be selected.

4. Plan Timer

   Users can select from Immediate, Timed, and Recurring.

   a. When the plan timer is set to Immediate, the aircraft will immediately perform the flight task once the plan is created.

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5. RTH Altitude Relative to Dock

   The aircraft altitude relative to the dock when the aircraft is returning to the dock (Altitude range: 20 m - 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.

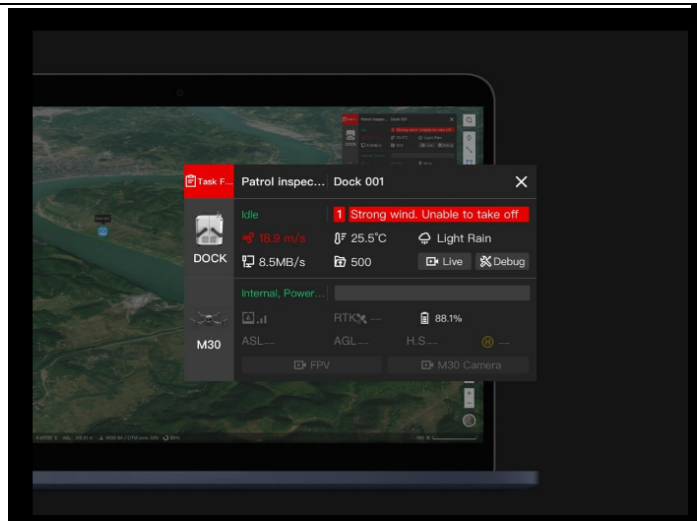
6. Signal Lost During Flight

   The aircraft will return to home or continue the flight task when it is disconnected from the dock.

7. Upon Completion

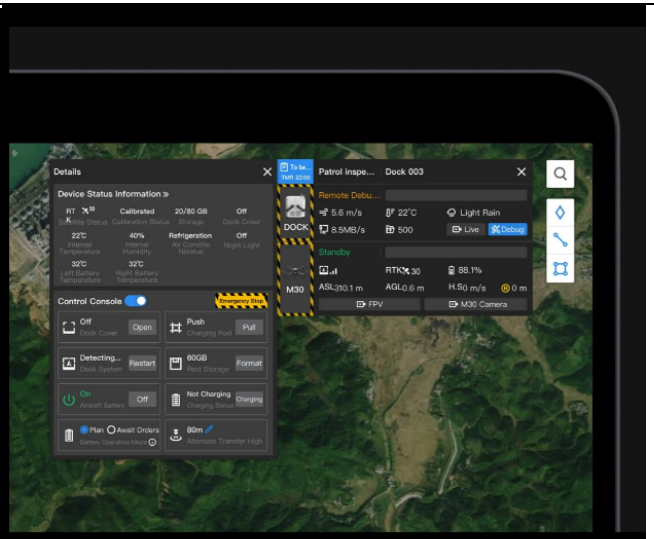
   Only Return to Home is supported when creating a task plan.

https://dl.djicdn.com/downloads/DJI_FlightHub_2/DJI_FlightHub_2_User_Guide_v2.0.pdf



Alerts

In the case of abnormal conditions such as heavy rains, strong winds, or any other situation that could affect the flight mission or the integrity of the equipment, FlightHub 2 will automatically trigger alerts.



Remote Maintenance

Check the status of DJI Docks remotely and perform debugging whenever needed. Keep your drone operations running without constant maintenance visits.

Streamlined Team Communication

Synchronize valuable information such as teams position, drone status, mission details, and more, in real time and across multiple device types, making team collaboration easier than ever.

DJI takes the security of your data seriously. We use best-in-class measures to protect the integrity of your photos, videos, flight logs, and other user data, allowing you to confidently use the full power of a cloud-based fleet management system. FlightHub 2 is built to maintain integrity across multiple levels of the drone and data management process – from device connection and maintenance, to data upload and transmission, to cloud service storage and operational security.

DJI FlightHub 2 uploads, stores and manages data on cloud servers operated by Amazon Web Services, which are compliant to ISO/IEC 27001 security certifications.

https://www.dji.com/flighthub-2

Monitor and Maintain Devices

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

1. 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.

2. 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, and operating mode can be modified.

	Online Devices Project members can view online aircraft and its connected remote controller on the Online Devices panel. Device statuses include: a. When a device is online, its information will be displayed on the panel. b. When a device is offline for less than five minutes, its information will be displayed in gray. c. When a device is offline for more than five minutes, its information will not be displayed. https://dl.djicdn.com/downloads/DJI_FlightHub_2/20221123/DJI_FlightHub_2_User_Guide_v2.0.pdf
[4] The method according to claim 3, wherein the monitoring the connection comprises: monitoring, by an access point of the communications network, a connection between the vehicle and the access point; and reporting, by the access point, a last vehicle status to the fleet controller.	The Accused FlightHub 2 software includes functions to monitor, by an access point of the communications network, a connection between the vehicle and the access point and report, by the access point, a last vehicle status to the fleet controller. For example, FlightHub 2 includes monitoring of the connection between the vehicle and the flight controller by monitoring the connection between the dock and/or pilot RC controller. The FlightHub 2 software also records the last vehicle status to the fleet controller (e.g., such that when the drone is disconnected, the last recorded time and coordinates of the drone are displayed).

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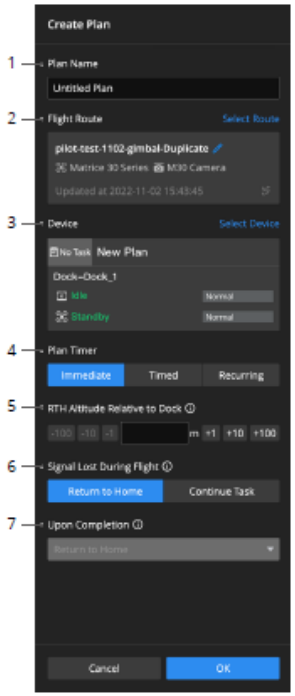

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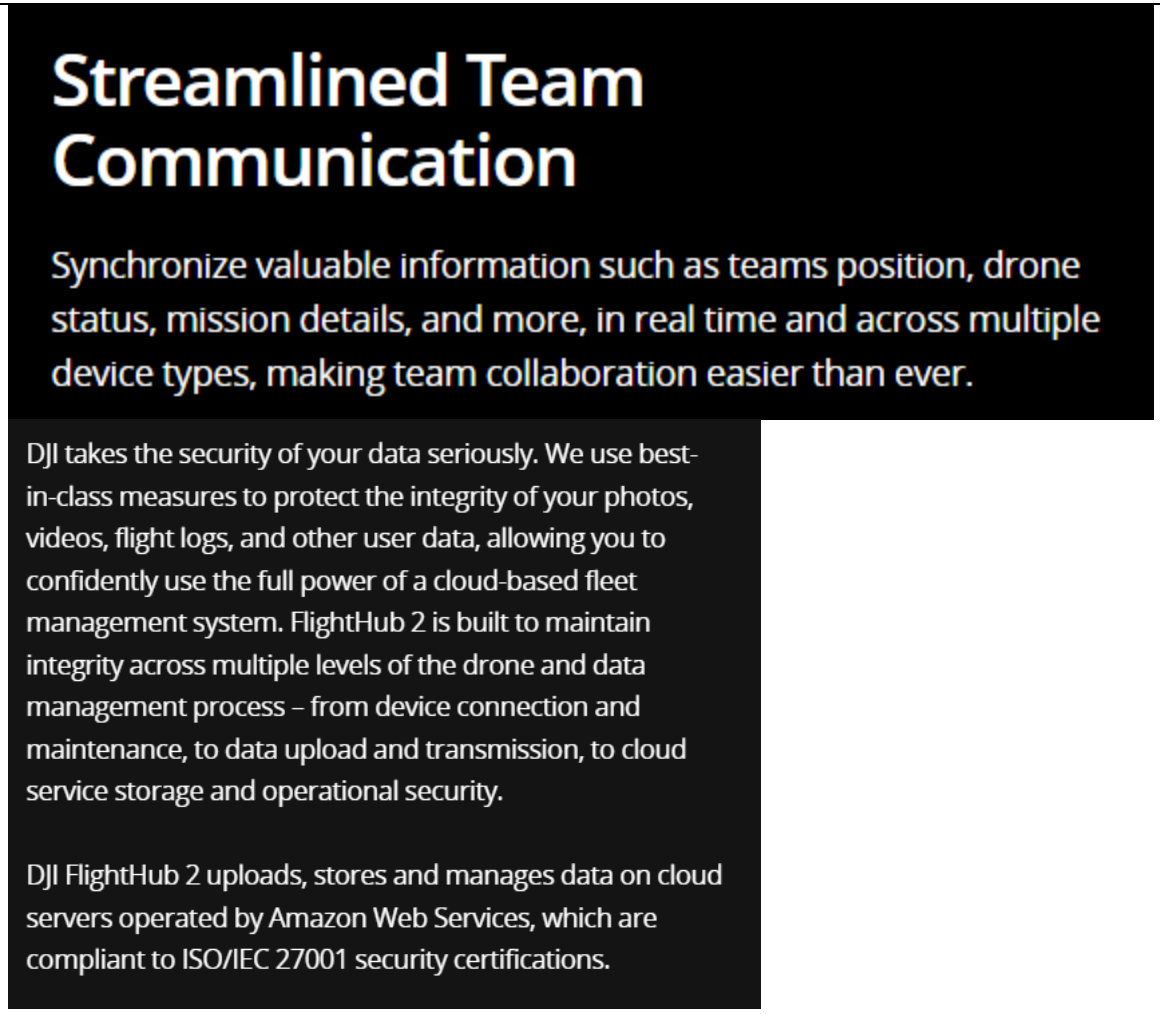
7. Upon Completion

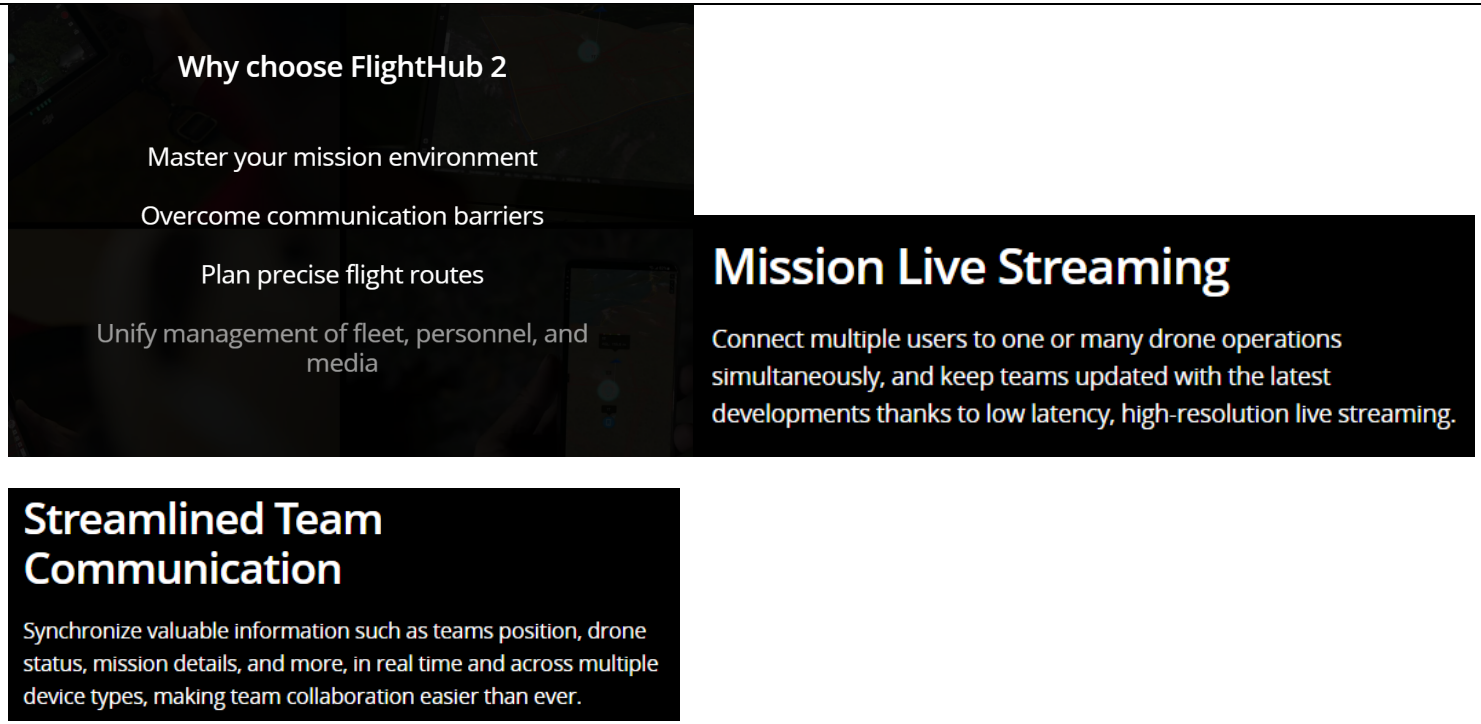
   Only Return to Home is supported when creating a task plan.

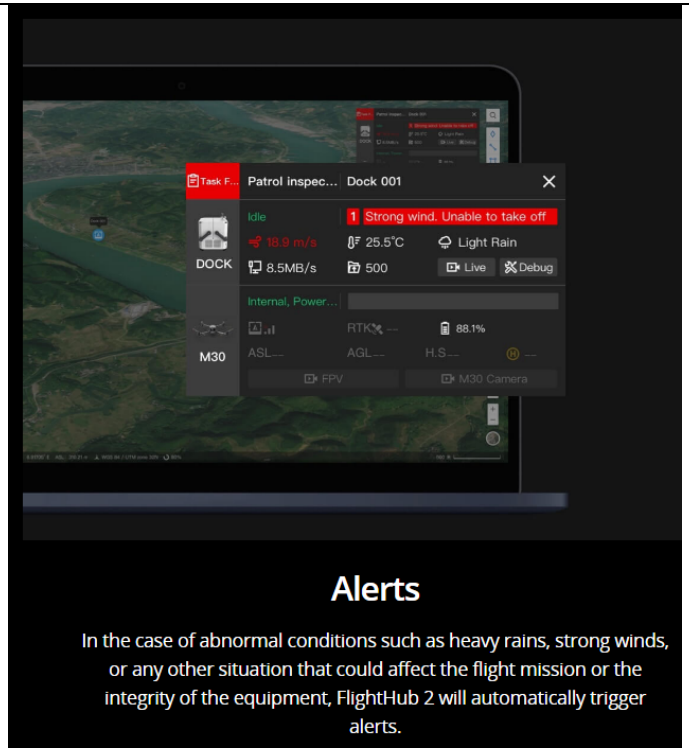
https://dl.djicdn.com/downloads/DJI_FlightHub_2/DJI_FlightHub_2_User_Guide_v2.0.pdf



https://www.dji.com/flighthub-2

	Monitor and Maintain Devices Users can click to monitor and maintain the dock and aircraft remotely. 1. 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. 2. 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, and operating mode can be modified. **Online Devices** Project members can view online aircraft and its connected remote controller on the Online Devices panel. Device statuses include: a. When a device is online, its information will be displayed on the panel. b. When a device is offline for less than five minutes, its information will be displayed in gray. c. When a device is offline for more than five minutes, its information will not be displayed. 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 at the middle of the map and then right-click to create a PinPoint to help locate the aircraft during searching. https://dl.djicdn.com/downloads/DJI_FlightHub_2/20221123/DJI_FlightHub_2_User_Guide_v2.0.pdf
[5a] The method according to claim 1, wherein the monitoring operation of the vehicle comprises determining, during performance of the mission, whether the mission parameters	The Accused FlightHub 2 software includes functions to determine, during performance of the mission, whether the mission parameters associated with the mission are supported by mission impact data received at the fleet controller. For example, FlightHub 2 determines during performance of a mission whether mission parameters are supported by mission impact data (including but not limited to abnormal condition data) received at the fleet controller.

associated with the mission are supported by mission impact data received at the fleet controller; and	

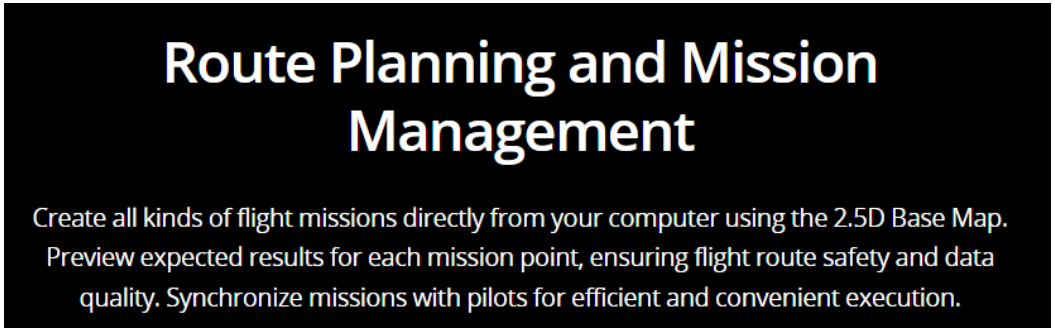
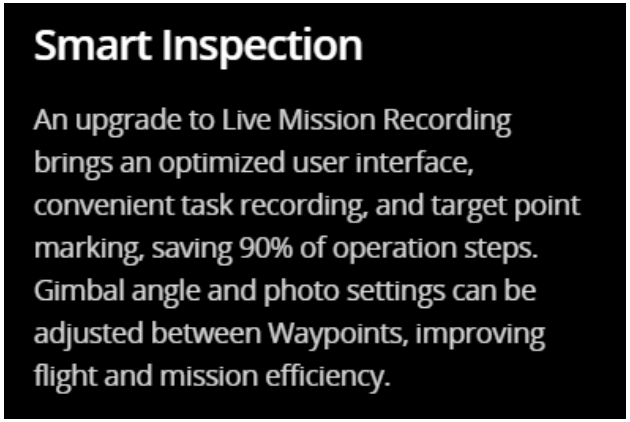


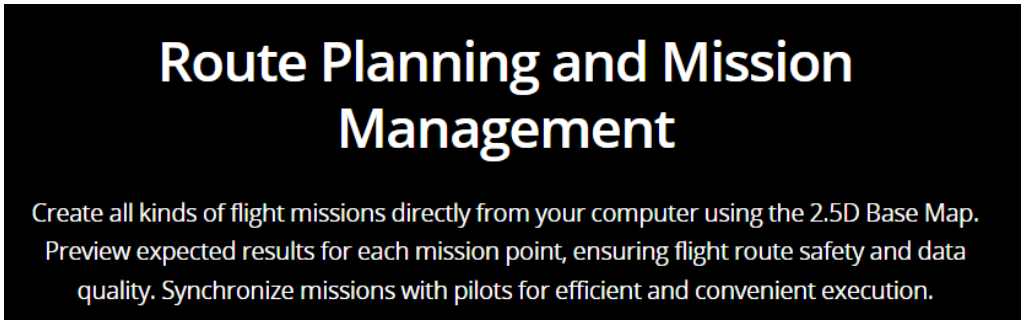
https://www.dji.com/flighthub-2

2. **Altitude, Ellipsoid Height (WGS84), Waypoint Type, Aircraft Yaw, and Flight Speed**
   These parameters are consistent with the corresponding flight route settings by default. If the flight route settings are changed, the above parameters will also be updated.

   To change the altitude of a single waypoint, uncheck Follow Route and drag the waypoint directly to move the horizontal position of the waypoint while keeping the current altitude. Project members can also press and hold the ALT or Option key to drag the waypoint and adjust the altitude of the waypoint while maintaining the horizontal position of the waypoint.

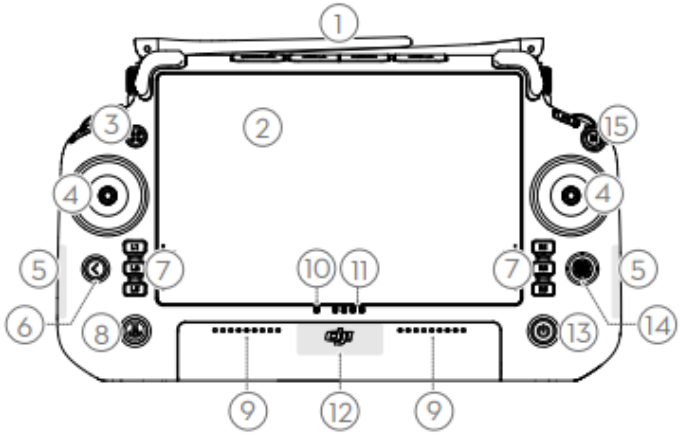
https://dl.djicdn.com/downloads/DJI_FlightHub_2/20221123/DJI_FlightHub_2_User_Guide_v2.0.pdf

[5b] wherein the method further comprises: generating, in response to the mission parameters not being supported by the mission impact data, adjusted vehicle commands according to the mission impact data and the mission parameters; and	The Accused FlightHub 2 software includes functions to generate, in response to the mission parameters not being supported by the mission impact data, adjusted vehicle commands according to the mission impact data and the mission parameters. For example, FlightHub 2 generates, in response to the mission parameters not being supported by mission impact data (including but not limited to abnormal condition data) adjusted vehicle commands according to the mission impact data and mission parameters. For example, FlightHub 2 generates alerts if conditions become abnormal during flight. FlightHub 2 may also adjust mission parameters of the flight (e.g., cause the drone to return home) in response to the mission impact data.  https://www.dji.com/flighthub-2  https://www.dji.com/matrice-30

	2. Altitude, Ellipsoid Height (WGS84), Waypoint Type, Aircraft Yaw, and Flight Speed These parameters are consistent with the corresponding flight route settings by default. If the flight route settings are changed, the above parameters will also be updated. To change the altitude of a single waypoint, uncheck Follow Route and drag the waypoint directly to move the horizontal position of the waypoint while keeping the current altitude. Project members can also press and hold the ALT or Option key to drag the waypoint and adjust the altitude of the waypoint while maintaining the horizontal position of the waypoint. https://dl.djicdn.com/downloads/DJI_FlightHub_2/20221123/DJI_FlightHub_2_User_Guide_v2.0.pdf
[5c] sending the adjusted vehicle commands to the vehicle using the connection, the adjusted vehicle commands causing the vehicle to execute the mission under control of the fleet controller according to the adjusted vehicle command.	The Accused FlightHub 2 software includes functions to send the adjusted vehicle commands to the vehicle using the connection, the adjusted vehicle commands causing the vehicle to execute the mission under control of the fleet controller according to the adjusted vehicle command. For example, FlightHub 2 generates alerts if conditions become abnormal during flight. FlightHub 2 may also adjust mission parameters of the flight (e.g., cause the drone to return home) in response to the mission impact data.  https://www.dji.com/flighthub-2

	2. Altitude, Ellipsoid Height (WGS84), Waypoint Type, Aircraft Yaw, and Flight Speed These parameters are consistent with the corresponding flight route settings by default. If the flight route settings are changed, the above parameters will also be updated. To change the altitude of a single waypoint, uncheck Follow Route and drag the waypoint directly to move the horizontal position of the waypoint while keeping the current altitude. Project members can also press and hold the ALT or Option key to drag the waypoint and adjust the altitude of the waypoint while maintaining the horizontal position of the waypoint. https://dl.djicdn.com/downloads/DJI_FlightHub_2/20221123/DJI_FlightHub_2_User_Guide_v2.0.pdf
[6a] The method according to claim 1, wherein the sending the vehicle commands to the vehicle comprises determining whether the vehicle is subject to single source control, wherein the determining whether the vehicle is subject to single source control comprises ensuring that the vehicle is subject to a single point of control at any one time; and	The Accused FlightHub 2 software includes functions to determine whether the vehicle is subject to single source control, wherein the determining whether the vehicle is subject to single source control comprises ensuring that the vehicle is subject to a single point of control at any one time. See Claim 1. As discussed above, FlightHub 2 include software that provides a for control of vehicle commands, including the flight route library and task plan library. These commands include determining whether the vehicle is subject to single source control including ensuring the vehicle is subject to a single point of control at any one time. method getPipelines `Pipelines getPipelines()` *Package:* dji.sdk.payload *Description:* The pipelines to transmit data between DJI Payload device and DJI mobile SDK. This function does not support dual controllers scenarios. It's only supported by Matrice 300 RTK. https://developer.dji.com/api-reference/android-api/Components/Payload/DJIPayload.html?search=dual%20control&i=1&#djipayload_pipelines_inline

Remote Controller Overview



1. **External RC Antennas**
   Transmit control and video wireless signals between the remote controller and the aircraft.

2. **Touchscreen**
   Displays system and app views and supports up to 10 touch points. Make sure the touchscreen is clean, and completely dry before use. Otherwise, viewing and touch effects may be affected.

3. **Aircraft Authority Button**
   When flying with a M30 series aircraft, the aircraft authority button is used to take control of the aircraft and indicate the aircraft control status. Refer to Guide on the home screen for more information.

8. **Return to Home (RTH) Button**
   Press and hold to initiate RTH. Press again to cancel RTH.

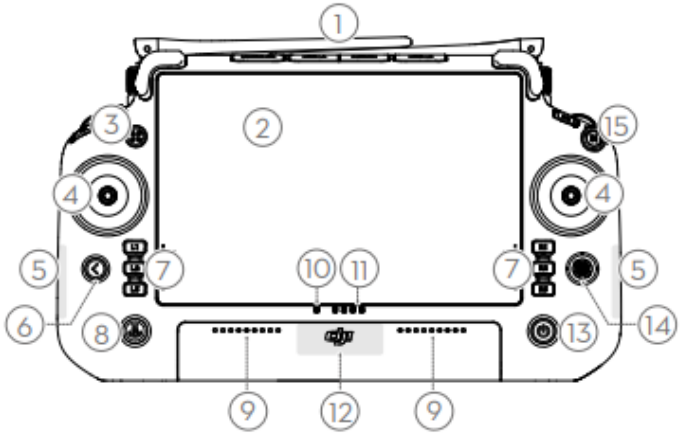
9. **Microphone**
   DO NOT block the microphones during usage.

10. **Status LED**
    Indicates the status of the remote controller. View detailed descriptions of the Status LED in the Remote Controller LEDs and Alert section or in Guide on the home screen of the remote controller.

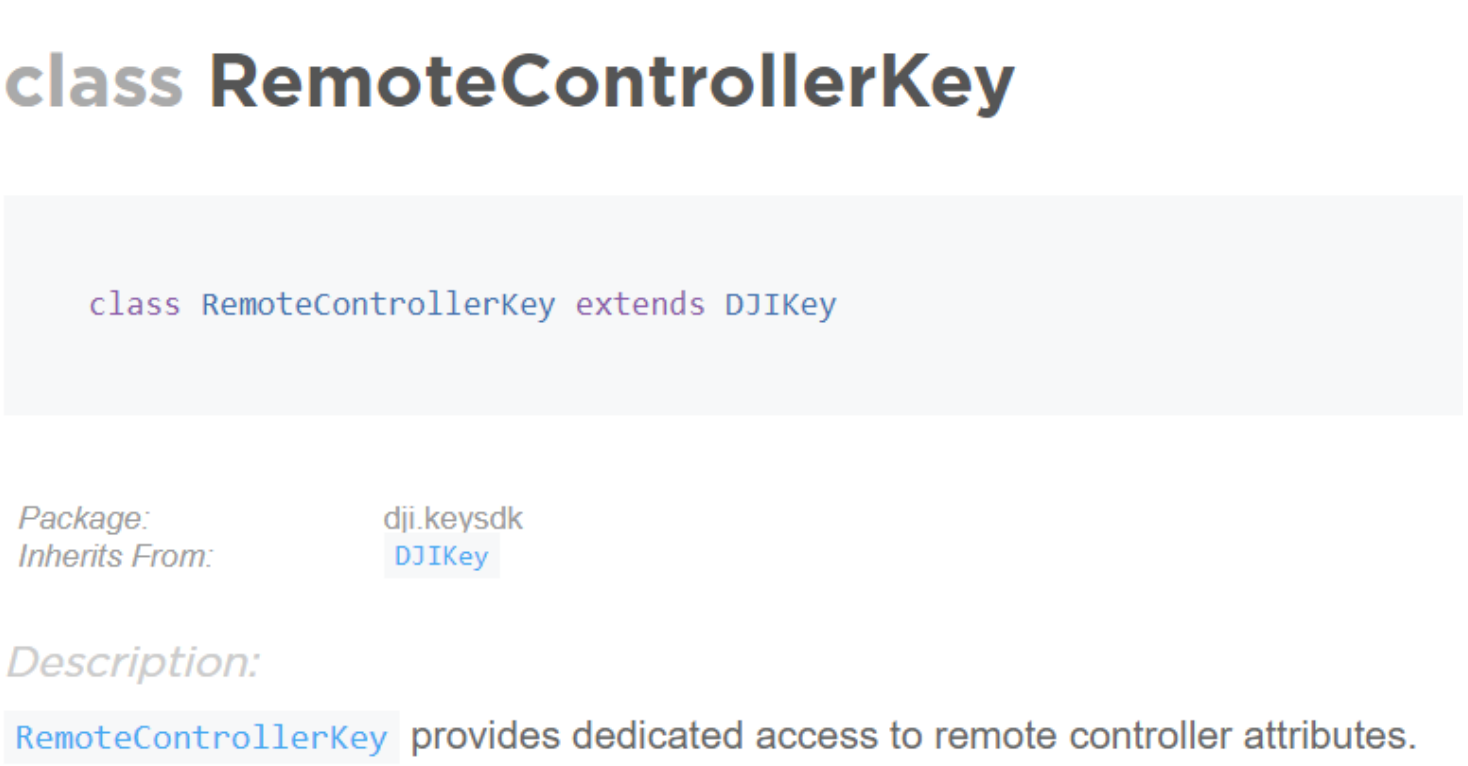
11. **Battery Level LEDs**
    Display the current battery level of the remote controller. View detailed descriptions of the Battery Level LEDs in the Remote Controller

	https://dl.djicdn.com/downloads/matrice-30-series/20220830/Matrice30_Series_User_Manual_V1.2_EN1.pdf **class RemoteControllerKey** `class RemoteControllerKey extends DJIKey` *Package:* dji.keysdk *Inherits From:* `DJIKey` *Description:* `RemoteControllerKey` provides dedicated access to remote controller attributes. https://developer.dji.com/api-reference/android-api/Components/KeyManager/DJIRemoteControllerKey.html?search=authority&i=0&#remotecontrollerkey_multi_rc_control_authority_surpass_key

	3. Either pilot can take over control of a device as needed. Press the aircraft control button to gain control of the aircraft. Tap on the upper right corner of the gimbal camera view in DJI Pilot 2 to gain control of the gimbal camera. After gaining aircraft control, the pilot can lock it by pressing and holding the aircraft authority button on the remote controller. The aircraft authority button will turn blue when the control is locked. The control sticks are used for operating the gimbal if the remote controller only has control over the gimbal camera. When the remote controller has full control, the control sticks are used for controlling the aircraft and the dials for adjusting gimbal movement. 4. In Advanced Dual Operator mode, a control transfer mechanism will be triggered if one of the remote controllers is disconnected from the aircraft. When this happens, control of the gimbal camera will shift from the disconnected remote controller to the other remote controller still connected with the aircraft. If the disconnected remote controller also has aircraft control, the other remote controller will receive a notification that the user may manually take over aircraft control. If the pilot of the connected remote controller chooses not to take over aircraft control, the aircraft will automatically perform the failsafe action. If the pilot of the connected remote controller does not choose either option within a specified time period, the aircraft will also activate the failsafe action. https://dl.djicdn.com/downloads/matrice-30-series/20220830/Matrice30_Series_User_Manual_V1.2_EN1.pdf
[6b] forwarding the vehicle commands to the vehicle in response the vehicle being subject to the single source control or a source of the vehicle commands being assigned an authority greater than any other set of vehicles	The Accused FlightHub 2 software includes functions to forward the vehicle commands to the vehicle in response the vehicle being subject to the single source control or a source of the vehicle commands being assigned an authority greater than any other set of vehicles commands associated with the vehicle.

commands associated with the vehicle.	**Remote Controller Overview**  1. **External RC Antennas** Transmit control and video wireless signals between the remote controller and the aircraft. 2. **Touchscreen** Displays system and app views and supports up to 10 touch points. Make sure the touchscreen is clean, and completely dry before use. Otherwise, viewing and touch effects may be affected. 3. **Aircraft Authority Button** When flying with a M30 series aircraft, the aircraft authority button is used to take control of the aircraft and indicate the aircraft control status. Refer to Guide on the home screen for more information. 8. **Return to Home (RTH) Button** Press and hold to initiate RTH. Press again to cancel RTH. 9. **Microphone** DO NOT block the microphones during usage. 10. **Status LED** Indicates the status of the remote controller. View detailed descriptions of the Status LED in the Remote Controller LEDs and Alert section or in Guide on the home screen of the remote controller. 11. **Battery Level LEDs** Display the current battery level of the remote controller. View detailed descriptions of the Battery Level LEDs in the Remote Controller

https://dl.djicdn.com/downloads/matrice-30-series/20220830/Matrice30_Series_User_Manual_V1.2_EN1.pdf

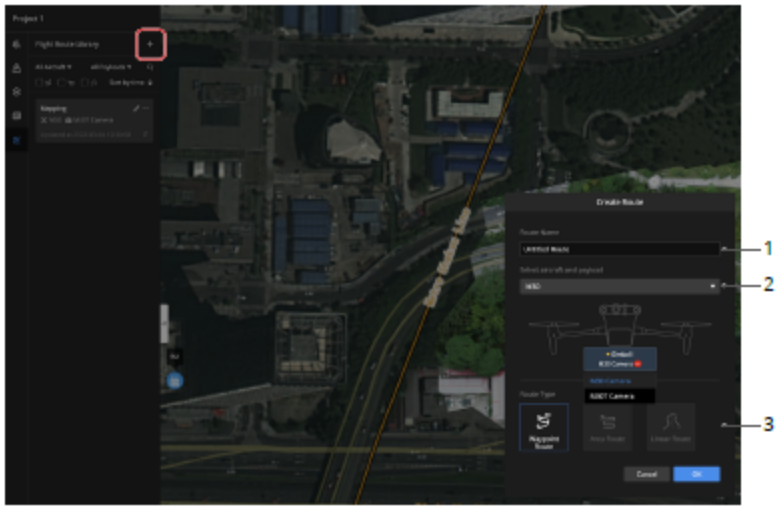


https://developer.dji.com/api-reference/android-api/Components/KeyManager/DJIRemoteControllerKey.html?search=authority&i=0&#remotecontrollerkey_multi_rc_control_authority_surpass_key

	3. Either pilot can take over control of a device as needed. Press the aircraft control button to gain control of the aircraft. Tap on the upper right corner of the gimbal camera view in DJI Pilot 2 to gain control of the gimbal camera. After gaining aircraft control, the pilot can lock it by pressing and holding the aircraft authority button on the remote controller. The aircraft authority button will turn blue when the control is locked. The control sticks are used for operating the gimbal if the remote controller only has control over the gimbal camera. When the remote controller has full control, the control sticks are used for controlling the aircraft and the dials for adjusting gimbal movement. 4. In Advanced Dual Operator mode, a control transfer mechanism will be triggered if one of the remote controllers is disconnected from the aircraft. When this happens, control of the gimbal camera will shift from the disconnected remote controller to the other remote controller still connected with the aircraft. If the disconnected remote controller also has aircraft control, the other remote controller will receive a notification that the user may manually take over aircraft control. If the pilot of the connected remote controller chooses not to take over aircraft control, the aircraft will automatically perform the failsafe action. If the pilot of the connected remote controller does not choose either option within a specified time period, the aircraft will also activate the failsafe action. https://dl.djicdn.com/downloads/matrice-30-series/20220830/Matrice30_Series_User_Manual_V1.2_EN1.pdf
[7] The method according to claim 1, wherein the requirements for use of the flight path comprise at least one of weight, size, minimum or maximum altitude, or airspeed.	The Accused FlightHub 2 software includes requirements for use of the flight path comprise at least one of weight, size, minimum or maximum altitude, or airspeed. For example, FlightHub 2 software includes requirements for use of the flight path that include payload weight, drone size, minimum and maximum altitude, and airspeed.

Create Flight Routes

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



1. Route Name
   The route name is required and should be within 60 characters.
2. Select aircraft and payload
   Only the Matrice 30 and Mavic 3 enterprise series are supported.
3. Route Type
   Only the Waypoint routes are supported.

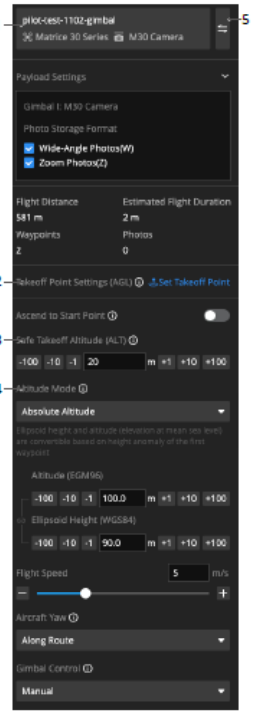
Click OK to create the flight route.

DJI FlightHub 2 User Guide

Edit Waypoint Routes

Users will be automatically directed to the flight route editor after creating a flight route. Members can also click to edit the flight route and waypoints.

Edit Flight Routes



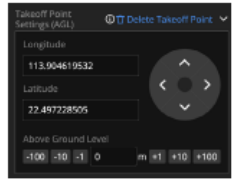
Move the mouse over ⓘ to view setting descriptions.

Pay attention to the settings below.

1. Basic Information
   Click to edit the flight route name and change the aircraft and payload.

   ⚠ Changing the payload will affect flight route settings.

2. Takeoff Point Settings (AGL)
   Click Set Takeoff Point and set the location where the aircraft will take off.
   a. Edit the longitude, latitude, and altitude above the ground level on the coordinate panel.



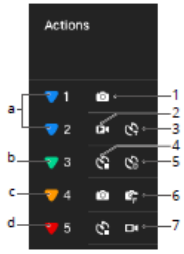
   b. Select and drag the takeoff point icon to move the takeoff point. Press and hold the Alt key and drag the icon up and down to adjust the altitude.
   c. Click Delete Takeoff Point to delete the takeoff point data.

• When the Altitude mode is set to Altitude Relative to Takeoff Point (ALT), the takeoff point will be a reference point used to plan the flight route. The actual takeoff point of an aircraft when performing a task may differ from the set takeoff point. The route altitude will be based on the altitude of the actual takeoff point during the flight.

3. Safe Takeoff Altitude (ALT)
   Safe Takeoff Altitude is the altitude relative to the takeoff point altitude. Aircraft will ascend to the safe takeoff altitude after takeoff and fly to the flight route start point.
4. Altitude Mode
   The Altitude mode is set to Absolute Altitude by default. Project members can also change it to Altitude Relative to Takeoff Point (ALT) or Above Ground Level.
5. Switch Between the Flight Route and Actions Panels
   Users can click to switch to the Actions panel.

Waypoint Action Icon Colors:

a. Blue: The waypoint parameters do not follow the flight route settings.
b. Green: The waypoint parameters follow the flight route settings.
c. Yellow: There are errors in the waypoint settings.
d. Red: There are severe errors in the waypoint settings, and the flight route cannot be performed.



Waypoint Action Icons:

1. Take a photo
2. Start recording
3. Start a timed interval shot
4. End the interval shot
5. Start a distance interval shot
6. Take a photo (Fixed angle)
7. End recording

https://dl.djicdn.com/downloads/DJI_FlightHub_2/20221123/DJI_FlightHub_2_User_Guide_v2.0.pdf

Maximum Altitude & Distance Restrictions

Maximum flight altitude restricts the aircraft flight altitude, while maximum flight distance restricts the aircraft flight radius around the Home Point. These limits can be set using the DJI Pilot 2 app for improved flight safety.

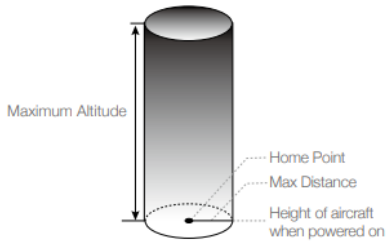
https://dl.djicdn.com/downloads/DJI_Mavic_3_Enterprise/20221212/DJI_Mavic_3E_3T_User_Manual_EN.pdf

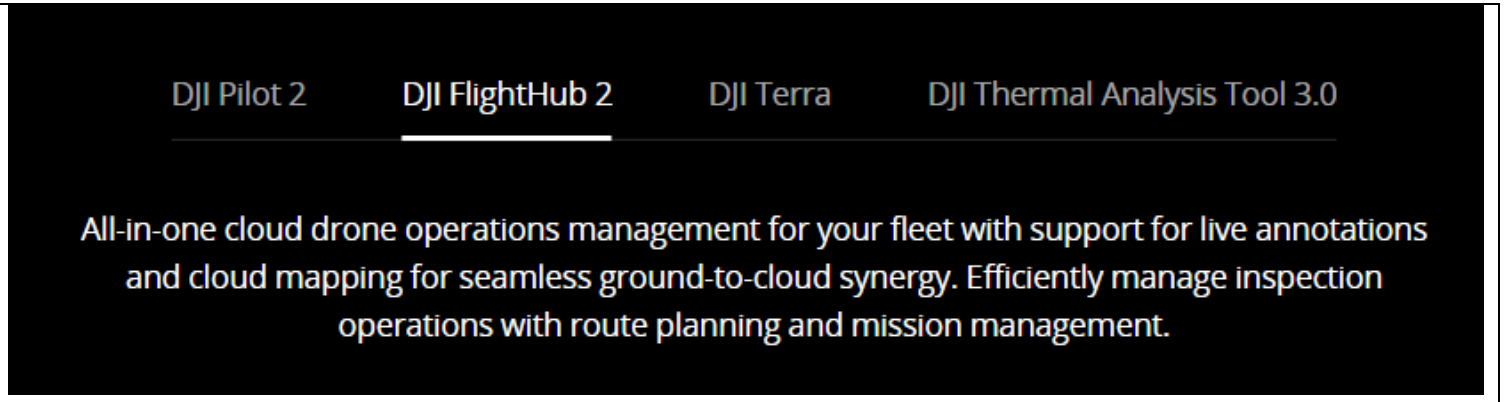
Strong GNSS Signal		
	Flight Restrictions	Prompt in DJI Pilot 2
Max Altitude	The altitude of the aircraft cannot exceed the value set in DJI Pilot 2.	Aircraft approaching max flight altitude. Fly with caution.
Max Distance	The straight-line distance from the aircraft to the Home Point cannot exceed the max flight distance set in DJI Pilot 2.	Aircraft approaching max flight distance. Fly with caution.

https://dl.djicdn.com/downloads/DJI_Mavic_3_Enterprise/20221212/DJI_Mavic_3E_3T_User_Manual_EN.pdf

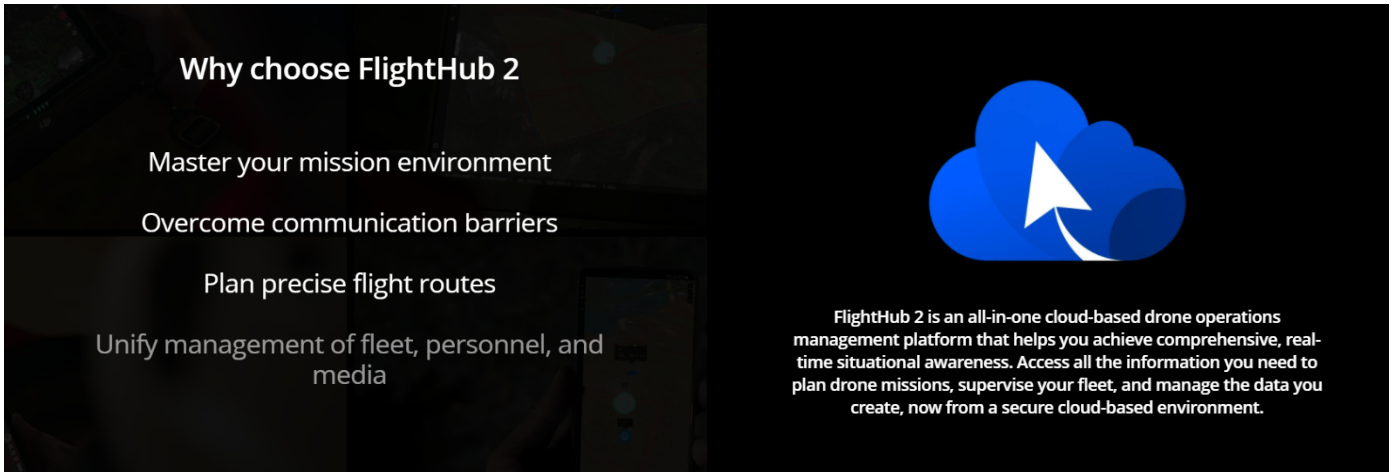
Annotation and Sync Map	✓	✓
Share Device Location	✓	✓
Real-time Mapping	Bind equipment with DJI FlightHub 2 for limited free trials of certain functions.	3,000 images/month [4] Unused number of mapping images will be rolled over into the following month only
Display Model	1 Includes 2D and 3D models. Only one model can be overlaid on the map at a time in a project	Unlimited
2.5D Map	✓	✓
Flight Path Planning	✓	✓

https://www.dji.com/flighthub-2

	MATRICE 30 SERIES User Manual **Maximum Altitude & Distance Restrictions** Maximum flight altitude restricts the aircraft flight altitude, while maximum flight distance restricts the aircraft flight radius around the Home Point. These limits can be set using the DJI Pilot 2 app for improved flight safety.  Home Point not manually updated during flight https://dl.djicdn.com/downloads/matrice-30-series/20220830/Matrice30_Series_User_Manual_V1.2_EN1.pdf 2. Set the return-to-home altitude, out-of-control action, maximum altitude and maximum flight distance, update the Home Point, select the control stick mode, and set the battery warning threshold, obstacle sensing switches and obstacle sensing distances. • It is recommended to carefully conduct the preflight check according to the operation scenario and requirements before takeoff. • Before executing a mission flight, conduct a preflight check and verify the basic parameter information of the mission flight. Refer to the Mission Flight section for details. https://dl.djicdn.com/downloads/matrice-30-series/20220830/Matrice30_Series_User_Manual_V1.2_EN1.pdf
[8pre] A fleet controller for controlling an autonomous vehicle fleet, comprising:	If the preamble is limiting, the accused DJI FlightHub 2 software includes a fleet controller for controlling an autonomous vehicle fleet. DJI's FlightHub2 is used by DJI and/or its customers to control a fleet comprising the Accused DJI Drones. For example, the DJI FlightHub2 functionality includes a fleet controller for controlling an autonomous vehicle fleet including route planning, mission management, and fleet supervision as shown by the evidence below.



https://www.dji.com/mavic-3-enterprise?site=brandsite&from=nav



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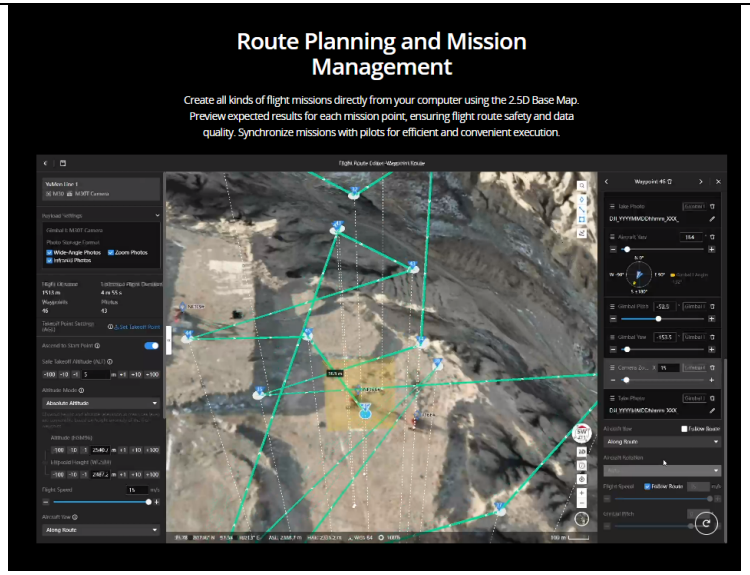
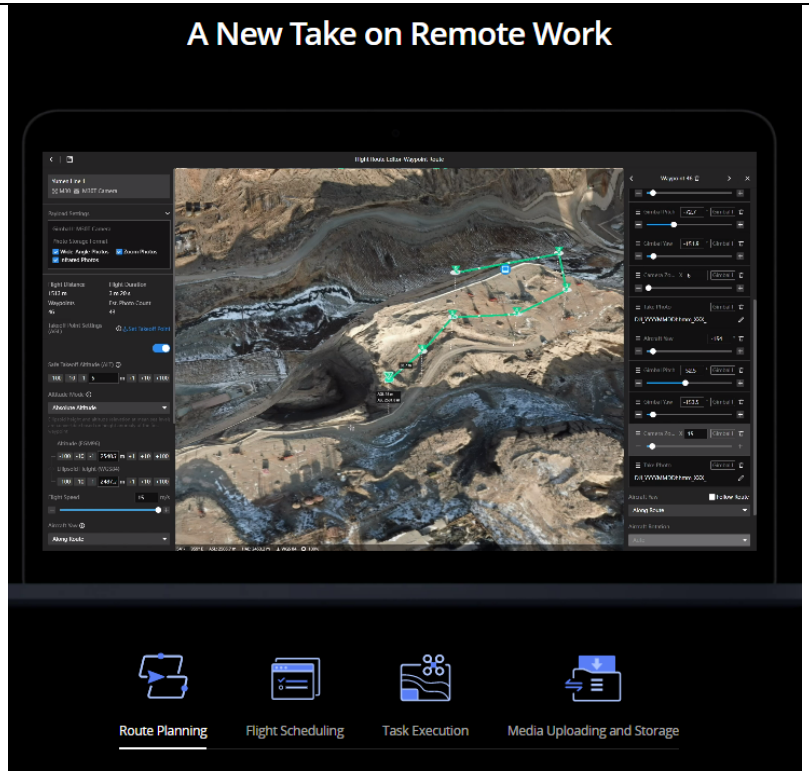
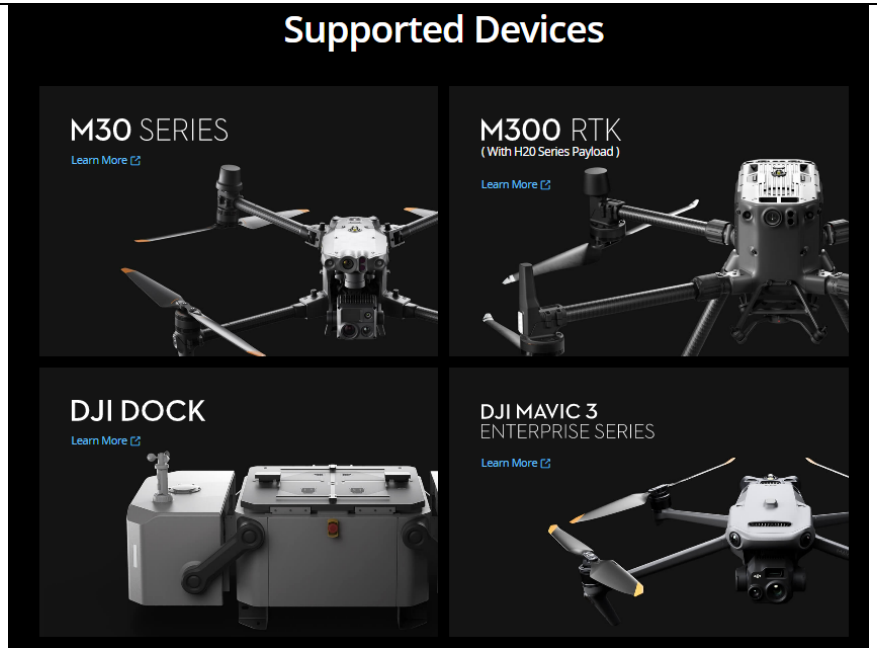
	 https://www.dji.com/flighthub-2



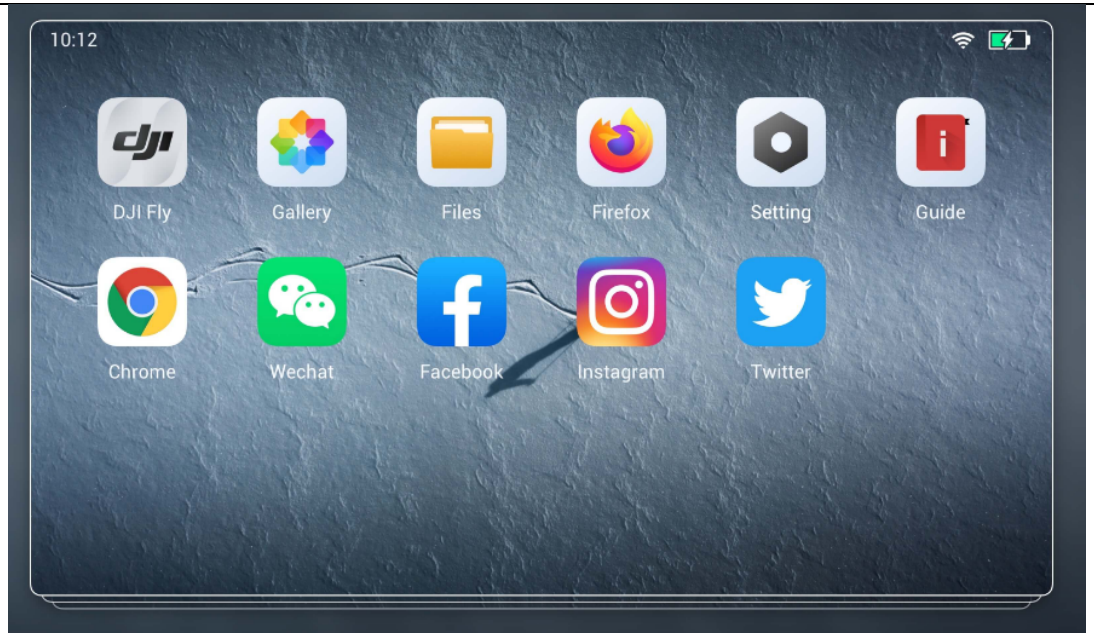
https://www.dji.com/flighthub-2

FlightHub 2 is DJI's complete ground-to-cloud drone operations management software, and it's packed with tools to help you plan missions, stream data, and collaborate with your team in real-time. From fast mapping to DJI Dock management, here are the top five features of FlightHub 2.

	Full control of DJI Dock operations FlightHub 2 is also your hub for all DJI Dock operations. Within the app, you can monitor the status of your M30, plan and schedule missions, and coordinate everything required for round-the-clock, automated operations. Cloud-based mission planning & collaboration FlightHub 2 combines data storage and fleet management with intuitive tools that support public safety and inspection operations in real-time. It's packed with collaborative solutions that improve situational awareness for all team members. We've built an empowering application that enables better data sharing communication, giving mission commanders everything they need to make smarter decisions and deploy resources more effectively. https://enterprise-insights.dji.com/blog/flighthub-2-top-features The fleet of vehicles controlled via FlightHub 2 include at least the M30 Series (Matrice 30, Matrice 30 T), M300 RTK (aka Matrice 300 RTK), and DJI Mavic 3:

	 https://www.dji.com/flighthub-2 https://www.dji.com/mavic-3-enterprise?site=brandsite&from=nav
[8a] a processor; and	The accused DJI's FlightHub 2 software includes a fleet controller comprising a processor. DJI's FlightHub2 is used by DJI and/or its customers to control a fleet comprising the Accused DJI Drones. For example, the DJI FlightHub

	2 processor executes functions that include route planning, mission management, and fleet supervision as shown by Element [8a] and by the evidence below. As another example, the DJI FlightHub 2 platform can be accessed via the DJI RC controller, which includes a processor as shown below. https://www.dji.com/mavic-3-classic https://www.dji.com/mavic-3?site=brandsite&from=nav

	 https://www.dji.com/rc-pro **Registration and Login** Users can visit https://fh.dji.com, create a DJI account, and log in to DJI FlightHub 2. • 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. https://dl.djicdn.com/downloads/DJI_FlightHub_2/20221123/DJI_FlightHub_2_User_Guide_v2.0.pdf
[8b] a non-transitory computer-readable storage medium storing a program to be executed by the processor, the program	The accused DJI FlightHub 2 software comprising a non-transitory computer-readable storage medium storing a program to be executed by the processor. For example, DJI's FlightHub2 is used by DJI and/or its customers to control a fleet comprising the Accused DJI Drones comprising a non-transitory computer-readable storage medium storing a program to be executed by the processor, the program including instructions for executing the steps set forth below. As another example, the DJI

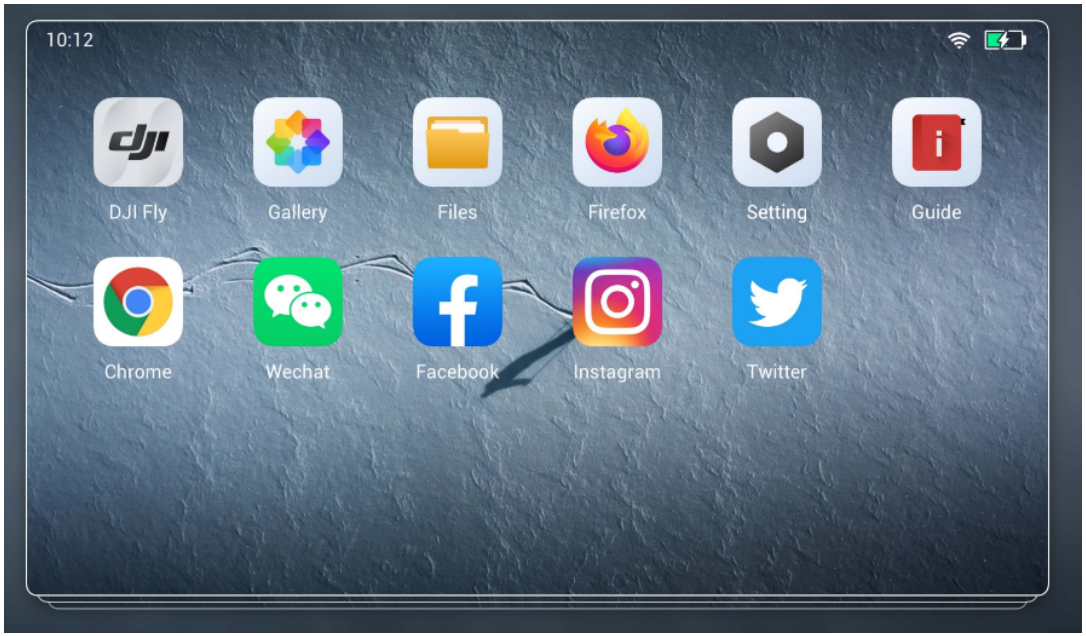
including instructions for:	FlightHub 2 platform can be accessed via the DJI RC controller, which includes a non-transitory computer-readable storage medium storing a program to be executed by the processor, the program including the instructions set forth shown below. https://fh.dji.com/login https://www.dji.com/flighthub-2

	 https://www.dji.com/mavic-3-classic	 https://www.dji.com/mavic-3?site=brandsite&from=nav

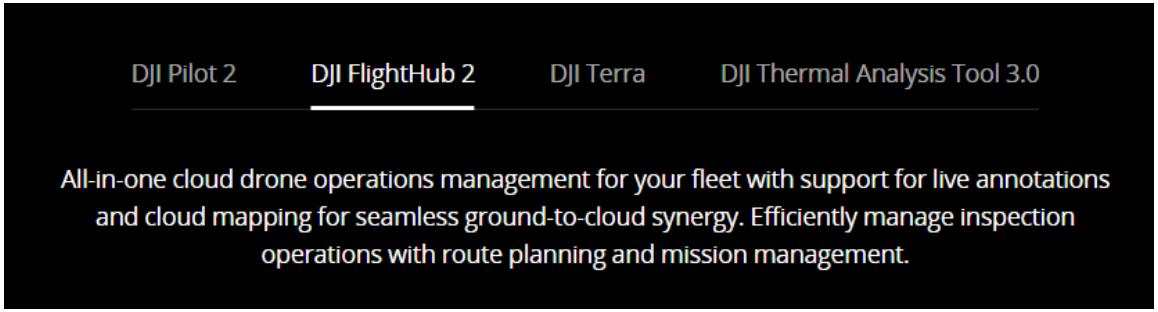
General Specs

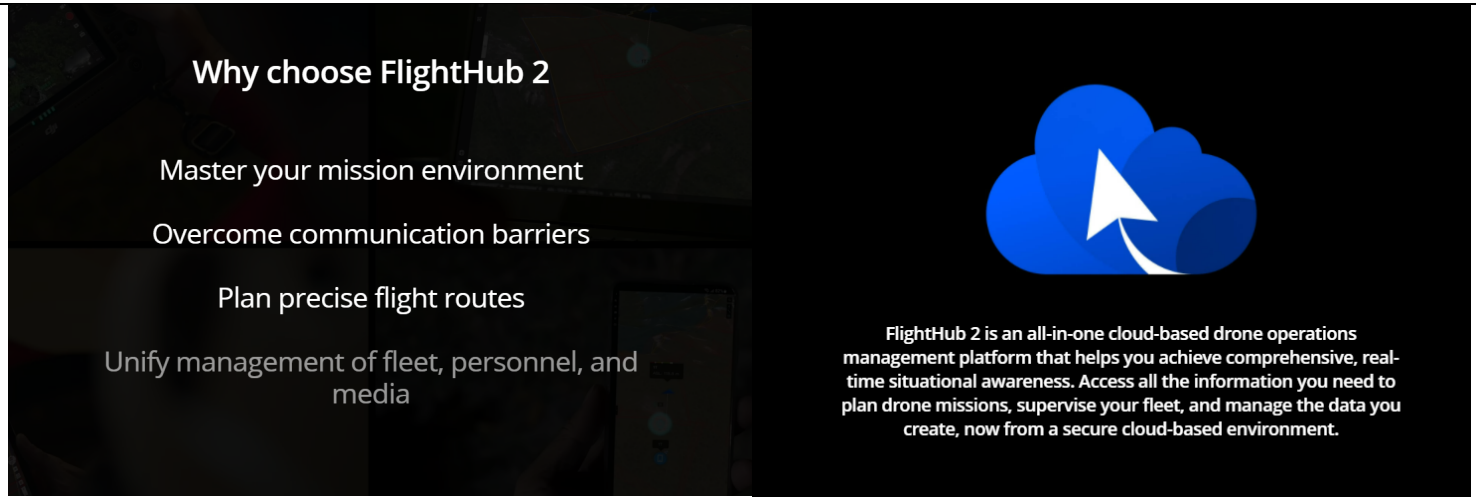
Battery	Li-ion (5000 mAh @ 7.2 V)
Charging Type	Recommended to be charged with USB charger at 12 V or 15 V
Rated Power	12 W
Storage Capacity	32GB internal + expandable storage via microSD card

https://www.dji.com/rc-pro/specs

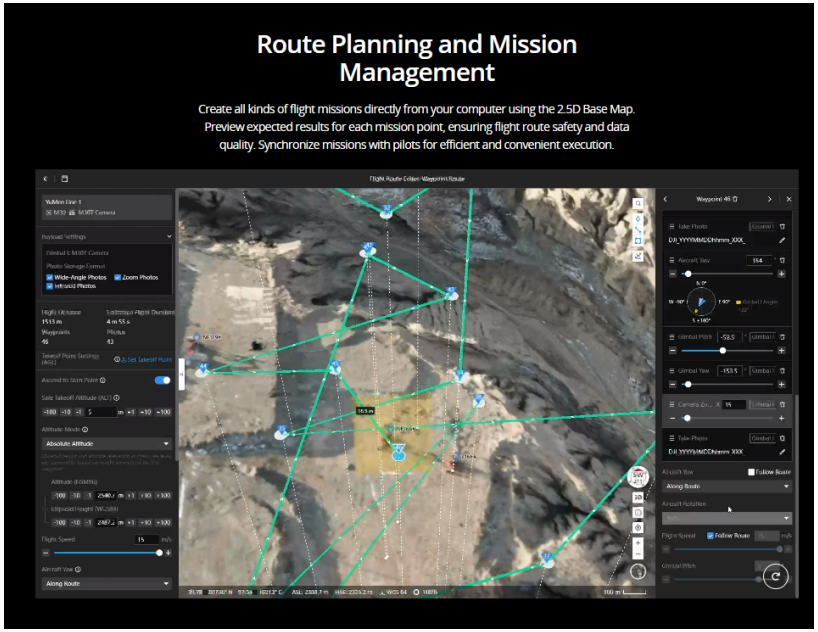


https://www.dji.com/rc-pro

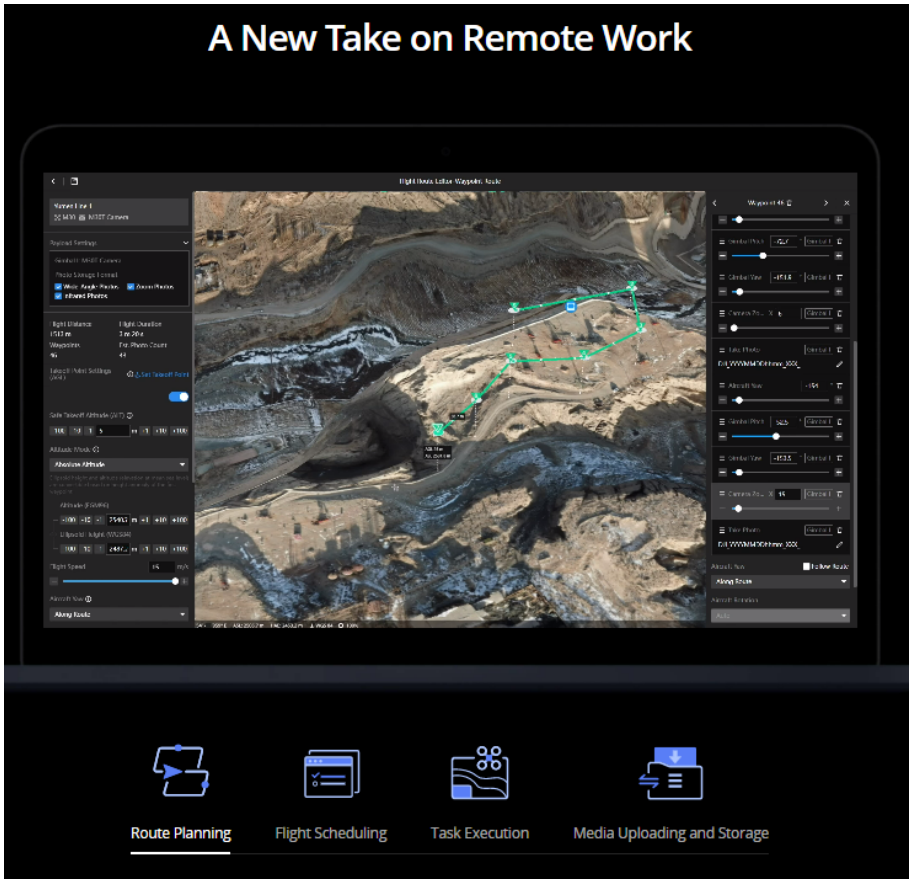
	 https://dl.djicdn.com/downloads/DJI_FlightHub_2/20221123/DJI_FlightHub_2_User_Guide_v2.0.pdf
[8c] obtaining, from a master schedule, a mission for a vehicle of a fleet of autonomous vehicles, wherein the mission is associated with a mission entry of the master schedule;	The accused DJI FlightHub 2 software includes a fleet controller that includes instructions for obtaining, from a master schedule, a mission for a vehicle of a fleet of autonomous vehicles, wherein the mission is associated with a mission entry of the master schedule. For example, DJI describes that FlightHub 2 provides for planning, creating, managing, scheduling, and synchronizing missions and flight routes. FlightHub 2 includes, for example, a task plan library and/or flight route library comprising a master schedule, from which a task can be obtained, where each task is associated with a mission entry of the master schedule. Missions of the flight route library can be obtained, for example, via the creation and editing of flight routes from the master schedule.  https://www.dji.com/mavic-3-enterprise?site=brandsite&from=nav



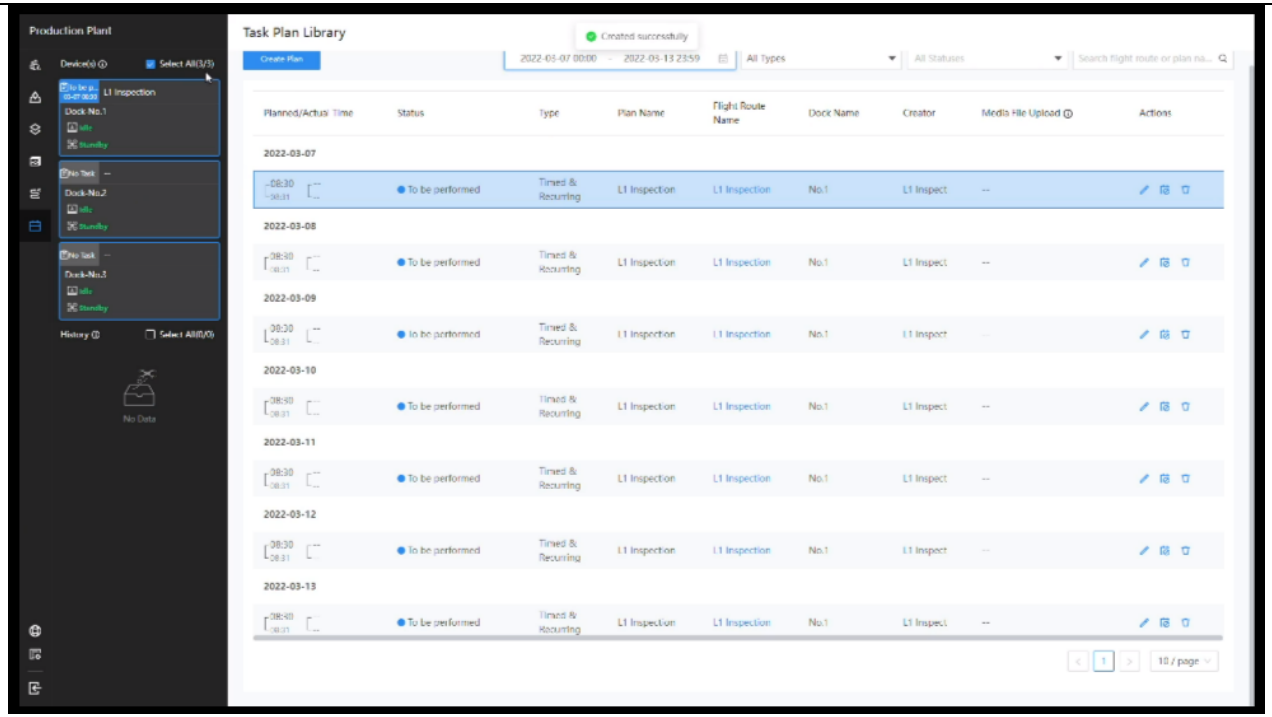
https://www.dji.com/flighthub-2



https://www.dji.com/flighthub-2



https://www.dji.com/flighthub-2



https://www.dji.com/flighthub-2

Flight Route Library

Project members can click to enter the flight route library to import, create, and edit flight routes.

Import Flight Routes

Click > Import KMZ File to select and import KMZ flight routes. The upload progress and status will be displayed during the flight route upload. Users can stop uploading files when the files are being or waiting to be uploaded.

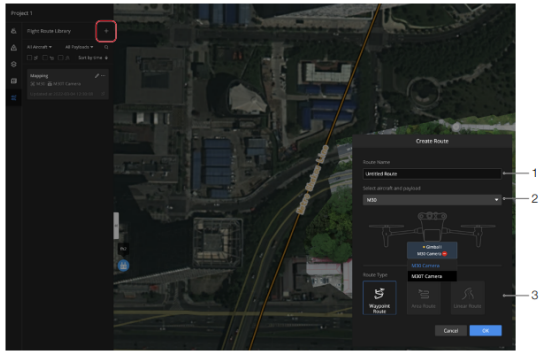
• The KMZ file must include wpmz/template.kml and wpmz/waylines.wpml.

https://dl.djicdn.com/downloads/DJI_FlightHub_2/20221123/DJI_FlightHub_2_User_Guide_v2.0.pdf, 30.

	FlightHub 2 is DJI's complete ground-to-cloud drone operations management software, and it's packed with tools to help you plan missions, stream data, and collaborate with your team in real-time. From fast mapping to DJI Dock management, here are the top five features of FlightHub 2. Full control of DJI Dock operations FlightHub 2 is also your hub for all DJI Dock operations. Within the app, you can monitor the status of your M30, plan and schedule missions, and coordinate everything required for round-the-clock, automated operations. Cloud-based mission planning & collaboration FlightHub 2 combines data storage and fleet management with intuitive tools that support public safety and inspection operations in real-time. It's packed with collaborative solutions that improve situational awareness for all team members. We've built an empowering application that enables better data sharing communication, giving mission commanders everything they need to make smarter decisions and deploy resources more effectively. https://enterprise-insights.dji.com/blog/flighthub-2-top-features

Create Flight Routes

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



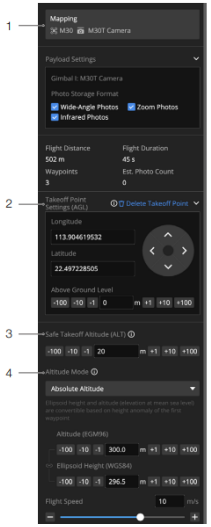
1. Route Name
   The route name is required and should be within 60 characters.
2. Select aircraft and payload
   Only Matrice 30 series are supported.
3. Route Type
   Only Waypoint routes are supported.

Click OK to create the flight route.

Edit Waypoint Routes

Edit Flight Routes

Enter the flight route editor and set flight route details.



Move the mouse over ⓘ to view setting descriptions.

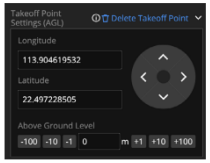
Pay attention to the settings below.

1. Basic Information
   Click to edit the flight route name and change the aircraft and payload.

   ⚠ Changing the payload will affect flight route settings.

2. Takeoff Point Settings (AGL)
   Click Set Takeoff Point and set the location where the aircraft will take off.

   A. Edit the longitude, latitude, and altitude above the ground level on the coordinate panel.



   B. Select and drag the takeoff point icon to move the takeoff point. Press and hold the Alt key and drag the icon up and down to adjust the altitude.

DJI FlightHub 2 User Guide

3. **Safe Takeoff Altitude (ALT)**

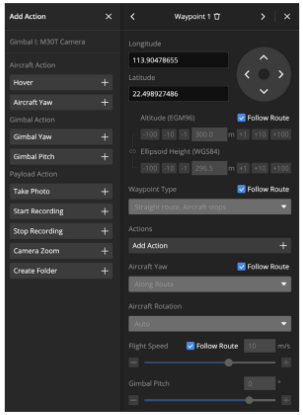
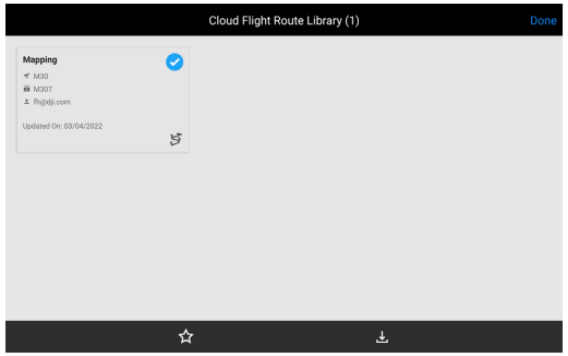
   Safe Takeoff Altitude is the altitude relative to the takeoff point altitude. Aircraft will ascend to the safe takeoff altitude after takeoff and fly to the flight route start point.

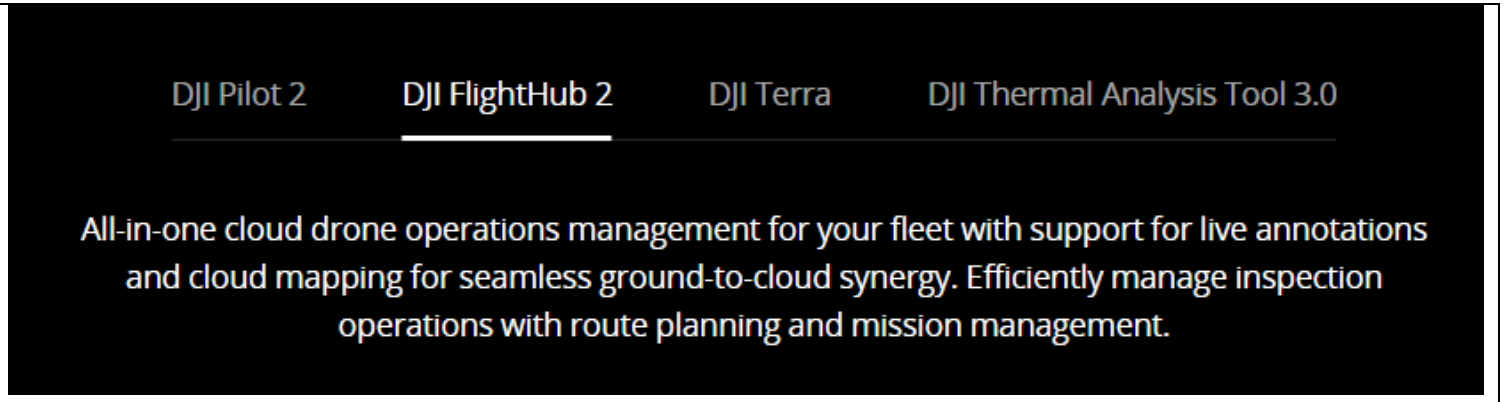
4. **Altitude Mode**

   The Altitude mode is set to Absolute Altitude by default. Project members can also change it to Altitude Relative to Takeoff Point (ALT) or Above Ground Level.

5. **Return-to-Home Altitude (ALT)**

   The return-to-home altitude should be set based on the actual flight condition, surrounding environment, and GEO information. It is recommended that the altitude be set higher than the highest geographical point in the flight area.

	Edit Waypoints Select and click on the map to add waypoints. Select a waypoint and set waypoint details.  1. Longitude and Latitude The longitude and latitude of an aircraft are obtained from its geographical location on the map. 2. Altitude, Ellipsoid Height (WGS84), Waypoint Type, Aircraft Yaw, and Flight Speed These parameters are consistent with the corresponding flight route settings by default. If the flight route settings are changed, the above parameters will also be updated. 3. Actions Click "+" to add actions for the aircraft, gimbal, and payload. 4. Click on the upper left corner to save the flight route settings. 22 © 2022 DJI All Rights Reserved. **DJI FlightHub 2** User Guide **Perform Flight Tasks** DJI Pilot users can log in to the DJI FlightHub 2 cloud service and perform cloud flight tasks. 1. Enter the home screen of DJI Pilot, tap Flight Route, select Cloud to view flight routes created on DJI FlightHub 2. 2. Select the flight route and tap , the flight route will be downloaded to Flight Route Library.  3. Select and enter flight route settings. Tap to perform the flight task. https://dl.djicdn.com/downloads/DJI_FlightHub_2/DJI_FlightHub_2_User_Guide.pdf
[8d] identifying a flight path associated with the mission;	The accused DJI FlightHub 2 software includes instructions to identify a flight path associated with the mission. For example, the DJI FlightHub 2 functionality provides functions to create, plan, and edit flight paths associated with each mission.



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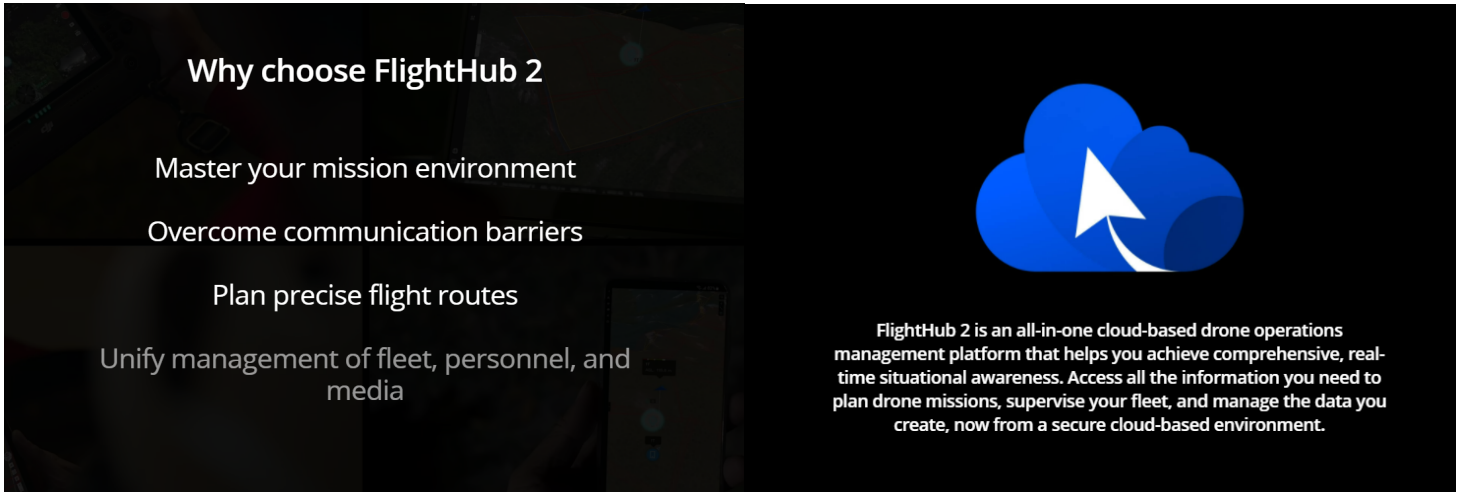
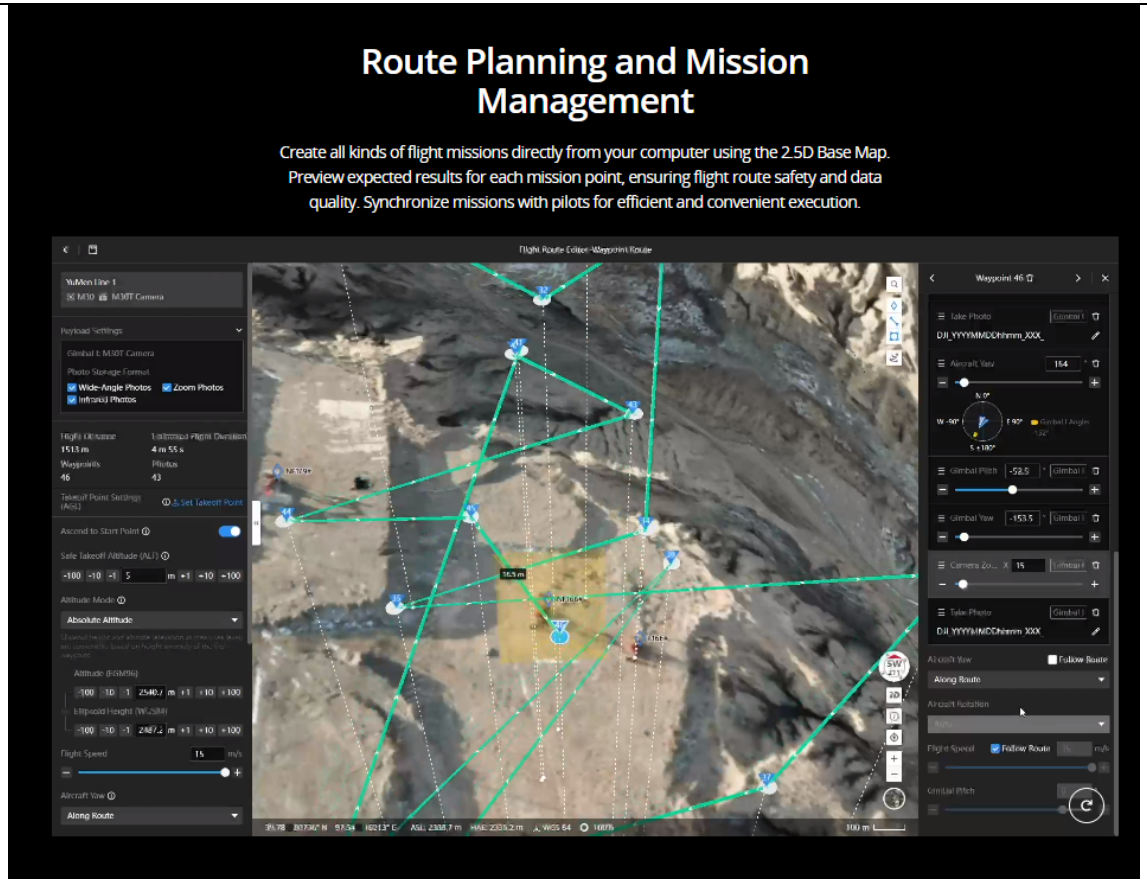


https://www.dji.com/flighthub-2



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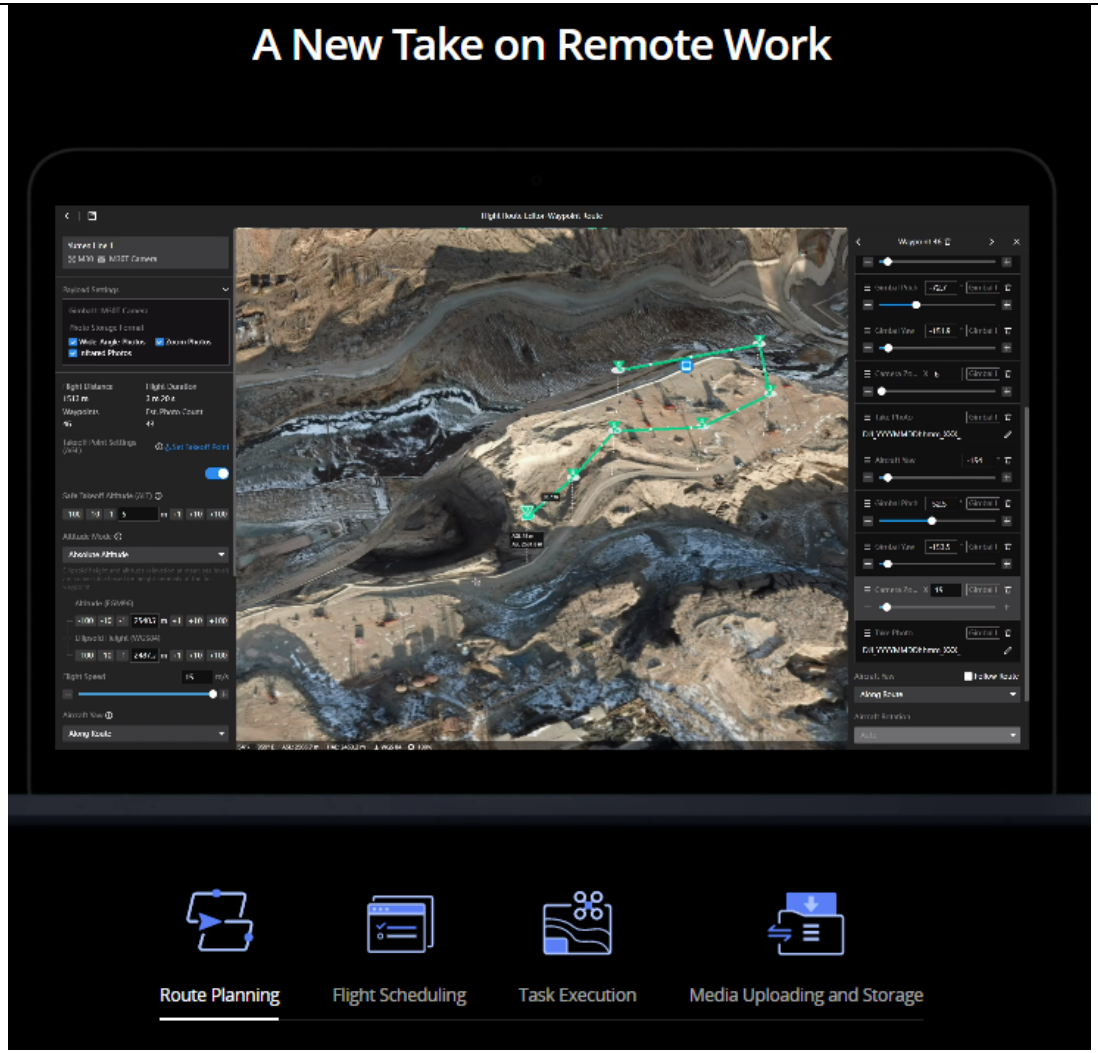

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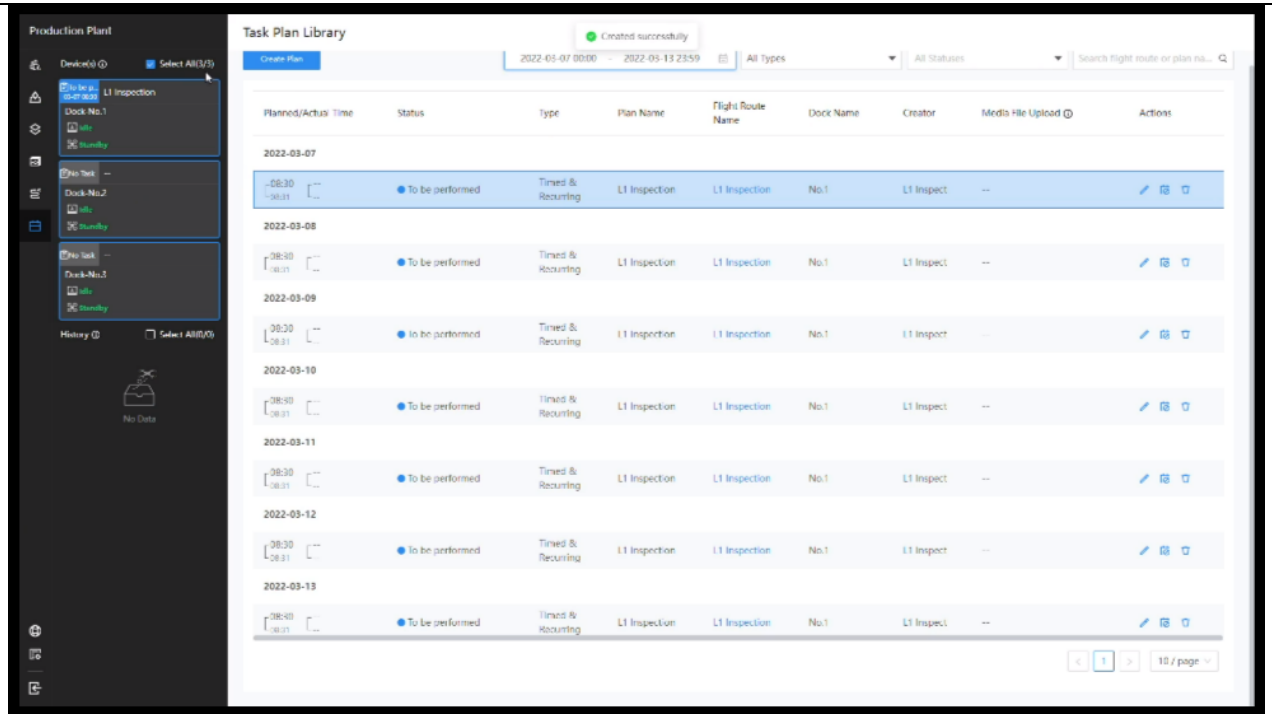

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- The KMZ file must include wpmz/template.kml and wpmz/waylines.wpml.

https://dl.djicdn.com/downloads/DJI_FlightHub_2/20221123/DJI_FlightHub_2_User_Guide_v2.0.pdf, 30.

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Create Flight Routes

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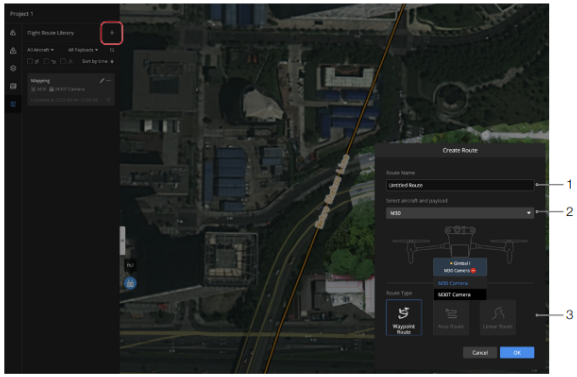


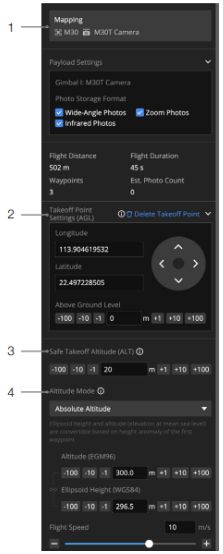
1. Route Name
   The route name is required and should be within 60 characters.
2. Select aircraft and payload
   Only Matrice 30 series are supported.
3. Route Type
   Only Waypoint routes are supported.

Click OK to create the flight route.

Edit Waypoint Routes

Edit Flight Routes

Enter the flight route editor and set flight route details.



Move the mouse over ⓘ to view setting descriptions.

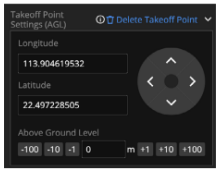
Pay attention to the settings below.

1. Basic Information
   Click to edit the flight route name and change the aircraft and payload.

   ⚠ Changing the payload will affect flight route settings.

2. Takeoff Point Settings (AGL)
   Click Set Takeoff Point and set the location where the aircraft will take off.

   A. Edit the longitude, latitude, and altitude above the ground level on the coordinate panel.



   B. Select and drag the takeoff point icon to move the takeoff point. Press and hold the Alt key and drag the icon up and down to adjust the altitude.

DJI FlightHub 2 User Guide

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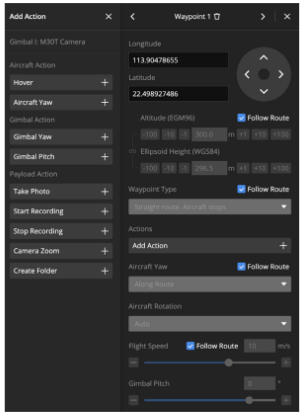
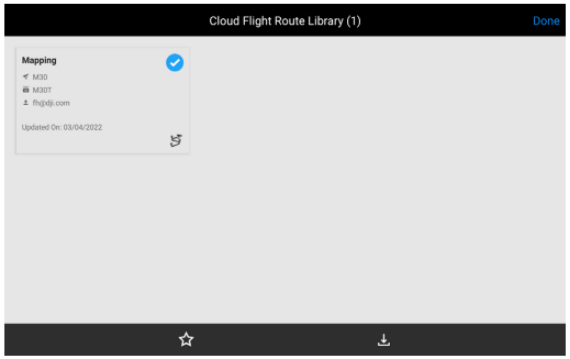
	Edit Waypoints Select and click on the map to add waypoints. Select a waypoint and set waypoint details.  1. Longitude and Latitude The longitude and latitude of an aircraft are obtained from its geographical location on the map. 2. Altitude, Ellipsoid Height (WGS84), Waypoint Type, Aircraft Yaw, and Flight Speed These parameters are consistent with the corresponding flight route settings by default. If the flight route settings are changed, the above parameters will also be updated. 3. Actions Click "+" to add actions for the aircraft, gimbal, and payload. 4. Click on the upper left corner to save the flight route settings. 22 © 2022 DJI All Rights Reserved. **DJI FlightHub 2** User Guide **Perform Flight Tasks** DJI Pilot users can log in to the DJI FlightHub 2 cloud service and perform cloud flight tasks. 1. Enter the home screen of DJI Pilot, tap Flight Route, select Cloud to view flight routes created on DJI FlightHub 2. 2. Select the flight route and tap , the flight route will be downloaded to Flight Route Library.  3. Select and enter flight route settings. Tap to perform the flight task. https://dl.djicdn.com/downloads/DJI_FlightHub_2/DJI_FlightHub_2_User_Guide.pdf
[8e] verifying a usability of the flight path with a unmanned aircraft system (UAS) traffic management (UTM), wherein the UTM performs checking on the flight path for traffic in the flight path, availability of the flight path due to flight restrictions and	The accused DJI FlightHub 2 software includes instructions to verify a usability of the flight path with a unmanned aircraft system (UAS) traffic management (UTM), wherein the UTM performs checking on the flight path for traffic in the flight path, availability of the flight path due to flight restrictions and requirements for use of the flight path. For example, the FlightHub 2 software's flight route creation and editing software includes functions to ensure the flight route is compliant with flight safety and restriction updates set by the GEO system and prevents drones from flying routes into restricted airspace (e.g., implements restricted zones and altitude restrictions). The FlightHub 2 software also "synchronizes" routes and checks the planned route for traffic in the flight path (e.g., prevents drone route collisions).

requirements for use of the flight path;

Flight Restrictions

GEO (Geospatial Environment Online) System

DJI's Geospatial Environment Online (GEO) system is a global information system that provides real-time information on flight safety and restriction updates and prevents UAVs from flying in restricted airspace. Under exceptional circumstances, restricted areas can be unlocked to allow flight. Prior to that, the user must submit an unlocking request based on the current restriction level in the intended flight area. The GEO system may not fully comply with local laws and regulations. Users shall be responsible for their own flight safety and must consult with the local authorities on the relevant legal and regulatory requirements before requesting to unlock a flight in a restricted area.

https://dl.djicdn.com/downloads/DJI_Mavic_3_Enterprise/20221212/DJI_Mavic_3E_3T_User_Manual_EN.pdf

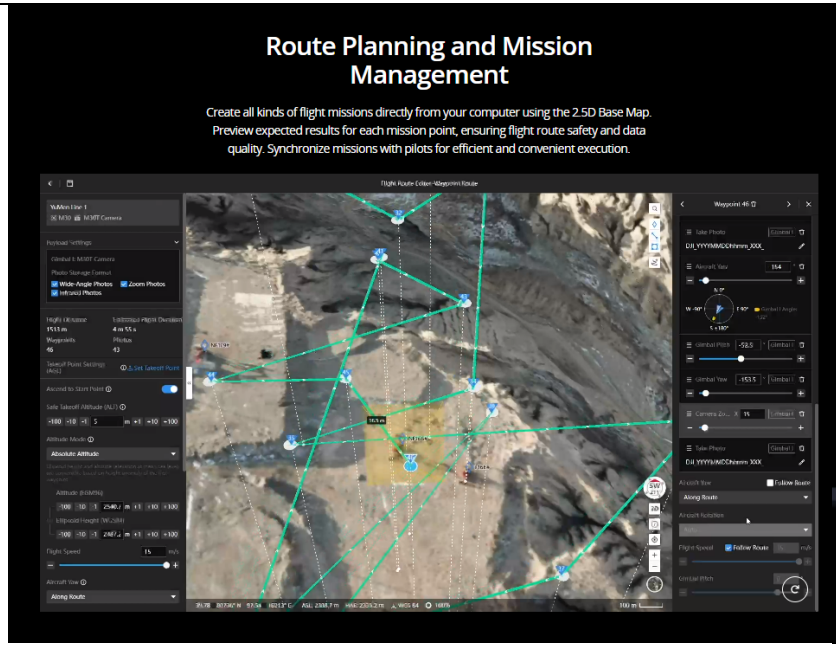
Flight Restrictions in GEO Zones

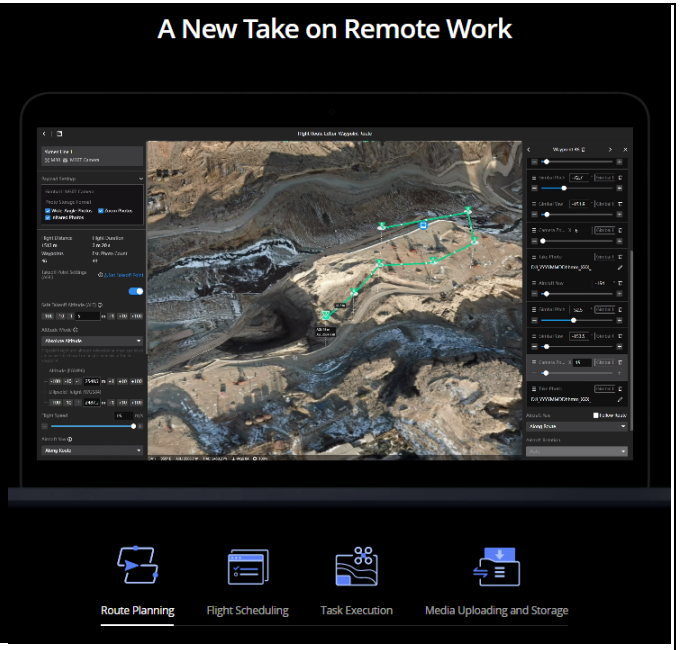
The following section describes in detail the flight restrictions for the above mentioned GEO Zones.

GEO Zone	Flight Restriction	Scenario
Restricted Zones (Red)	UAVs are prohibited from flying in Restricted Zones. If you have obtained permission to fly in a Restricted Zone, please visit https://www.dji.com/flysafe or contact flysafe@dji.com to unlock the zone.	Takeoff: the aircraft motors cannot be started in Restricted Zones.
		In Flight: when the aircraft flies inside a Restricted Zone, a 100-second countdown will commence in DJI Pilot 2. When the countdown is finished, the aircraft will land immediately in semi-automatic descent mode and turn off its motors after landing.
		In Flight: when the aircraft approaches the boundary of a Restricted Zone, the aircraft will automatically decelerate and hover.

Authorization Zones (Blue)	The aircraft will not be able to take off in an Authorization Zone unless it obtains a permission to fly in the area.	Takeoff: the aircraft motors cannot be started in Authorization Zones. To fly in an Authorization Zone, the user is required to submit an unlocking request registered with a DJI-verified phone number.
		In Flight: when the aircraft flies inside an Authorization Zone, a100-second countdown will commence in DJI Pilot 2. When the countdown is finished, the aircraft will land immediately in semi-automatic descent mode and turn off its motors after landing.
Warning Zones (Yellow)	A warning will be displayed when the aircraft flies inside a Warning Zone.	The aircraft can fly in the zone but the user is required to understand the warning.
Enhanced Warning Zones (Orange)	When the aircraft flies in an Enhanced Warning Zone, a warning will be displayed prompting the user to confirm the flight path.	The aircraft can continue to fly once the warning is confirmed.
Altitude Zones (Gray)	The aircraft altitude is limited when flying inside an Altitude Zone.	When the GNSS signal is strong, the aircraft cannot fly above the altitude limit. In Flight: when the GNSS signal changes from weak to strong, a 100-second countdown will commence in DJI Pilot 2 if the aircraft exceeds the altitude limit. When the countdown is finished, the aircraft will descend below the altitude limit and hover.
		When the aircraft approaches the boundary of an Altitude Zone and the GNSS signal is strong, the aircraft will decelerate automatically and hover if the aircraft is above the altitude limit.

https://dl.djicdn.com/downloads/DJI_Mavic_3_Enterprise/20221212/DJI_Mavic_3E_3T_User_Manual_EN.pdf





https://www.dji.com/flighthub-2

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https://enterprise-insights.dji.com/blog/flighthub-2-top-features

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

1. Click Q to search geographic locations. The location will be displayed in the middle of the web page.
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 and the project point of interest will be displayed in the middle of the web page.

DJI FlightHub 2 User Guide

3. **Safe Takeoff Altitude (ALT)**
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https://dl.djicdn.com/downloads/DJI_FlightHub_2/DJI_FlightHub_2_User_Guide.pdf

DJI Improves Geofencing To Enhance Protection of European Airports and Facilities

Updated System Refines Airspace Data To Better Reflect Safety Risks

DJI, the world's leader in civilian drones and aerial imaging technology, is improving its geofencing technology with the launch of its Geospatial Environment Online (GEO) 2.0 system across Europe, bringing state-of-the-art geofencing to a total of 32 European countries.

GEO 2.0 creates detailed three-dimensional "bow tie" safety zones surrounding runway flight paths and uses complex polygon shapes around other sensitive facilities, rather than just simple circles used in earlier geofencing versions. This applies in the 13 countries covered by DJI's original GEO system, as well as 19 new countries that did not previously have advanced geofencing. The new system better reflects the actual safety risk posed in those areas and is more flexbile in lower-risk areas, for example by permitting authorized users to conduct drone activities in locations parallel to runways.

The revamp of DJI's GEO system will also include Temporary Flight Restrictions (TFRs) imposed during major events or natural disasters. The TFRs will be based on authoritative data from Eurocontrol.

DJI has chosen Altitude Angel as its new partner to deliver accurate, real-time and relevant geospatial data for airports, TFRs and other sensitive areas in 32 European countries. In Europe, Altitude Angel replaces DJI's previous geospatial data provider AirMap. DJI worked together with Altitude Angel last year in Operation Zenith, a full-scale test at Manchester Airport of its GuardianUTM O/S platform for unmanned traffic management in controlled airspace.

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DJI geofencing uses GPS and other navigational satellite signals to automatically help prevent drones from flying near sensitive locations such as airports, prisons, nuclear power plants and high-profile events. In certain locations, a DJI drone cannot take off within, or fly into, a geofenced area without special authorisation. Drone pilots with verified DJI accounts can unlock some areas if they have legitimate reasons and necessary approvals, but the most critical areas require extra steps from DJI to unlock them. DJI has streamlined the approval process so professional drone pilots with authorisation to fly in sensitive locations can receive unlocking codes within 30 minutes by submitting a request online.

The expansion of European coverage means that DJI's most advanced geofencing system, GEO 2.0, will now be available in 19 more countries than the original GEO system launched in 2016. The new countries are: Bulgaria, Croatia, Cyprus, Czech Republic, Estonia, Finland, Greece, Hungary, Iceland, Latvia, Liechtenstein, Lithuania, Malta, Norway, Poland, Romania, Slovakia, Slovenia and Sweden. These are added to the existing 13 GEO countries which will also be upgraded to GEO 2.0: Austria, Belgium, Denmark, France, Germany, Ireland, Italy, Luxembourg, the Netherlands, Portugal, Spain, Switzerland and the United Kingdom.

GEO 2.0 applies the strictest geofencing restrictions to a 1.2 kilometer (3/4 mile) wide rectangle around each runway and the three-dimensional flight paths at either end, where airplanes ascend and descend. More flexible geofencing restrictions apply to an oval area within 6 kilometers (3.7 miles) of each runway. This bow tie shape opens more areas on the sides of runways to beneficial drone uses, as well as low-altitude areas more than 3 kilometers (1.9 miles) from the end of a runway, while increasing protection in the locations where traditional aircraft actually fly.

https://www.dji.com/newsroom/news/dji-improves-geofencing-to-enhance-protection-of-european-airports-and-facilities

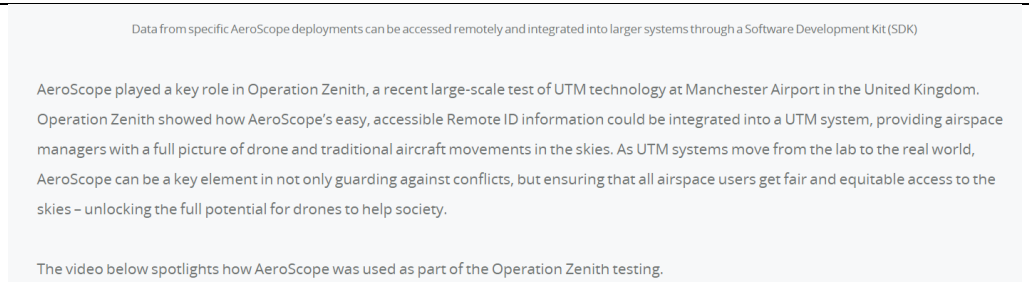
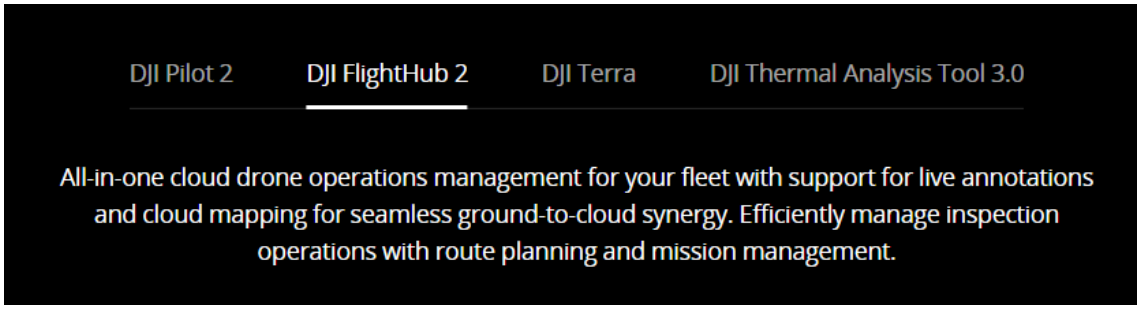
DJI AEROSCOPE ENABLES REMOTE ID IN AN UNMANNED TRAFFIC MANAGEMENT SYSTEM

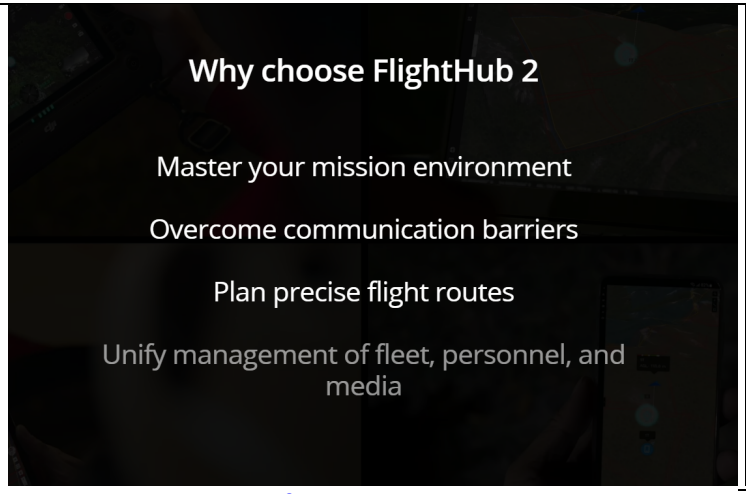
Operation Zenith Shows Value of AeroScope in an Integrated UTM System

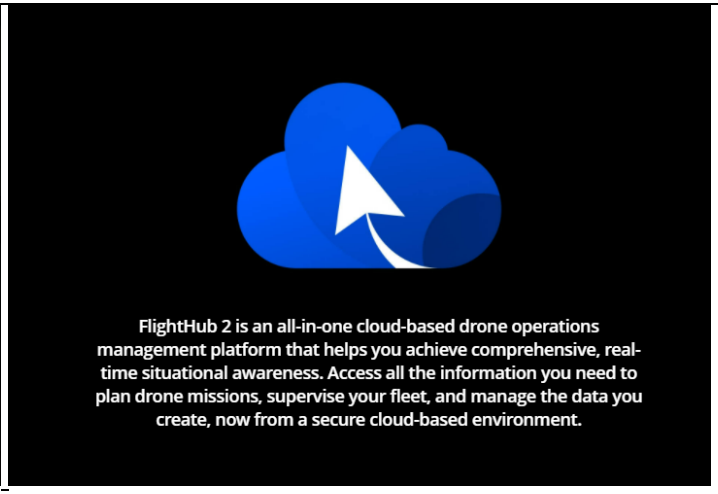
DJI AeroScope transmits basic telemetry and identification about airborne drones to authorities, providing critical information to help secure our skies

DJI's AeroScope is a Remote ID system that provides authorized users with the location, altitude, speed and direction of every DJI drone within radio range, as well as the location of the drone pilot and the serial number of the drone. Authorized users such as airports and police departments can see this information displayed on a computer map for every drone within the multi-mile range of AeroScope's antennae. This telemetry information is broadcast directly from the drone to the AeroScope receiver, allowing authorities to identify and track those drones, and take action if any of them raise concerns.

National aviation regulators understand that Remote ID will be a key component of future Unmanned Traffic Management (UTM) systems, which will simultaneously track drones and traditional aircraft in crowded airspace. Government agencies, academic centers and private companies are developing UTM prototypes to prevent conflicts and collisions, watch for unauthorized aircraft in restricted areas, and protect controlled airspace from unexpected intrusions.

	 https://enterprise.dji.com/news/detail/aeroscope-enables-remote-id-in-utm-system.
[8f] modifying the flight path according to data from the UTM in response to the UTM indicating that the usability of the flight path is not verified;	The accused DJI FlightHub 2 software includes instructions to modify the flight path according to data from the UTM in response to the UTM indicating that the usability of the flight path is not verified. For example, the FlightHub 2 software's flight route creation and editing software includes functions to modify the flight route according to flight safety and restriction updates set by the GEO system in response to the UTM indicating that the usability of the flight is not verified (e.g., the path traverses one or more Restricted/Warning Zones).  https://www.dji.com/mavic-3-enterprise?site=brandsite&from=nav





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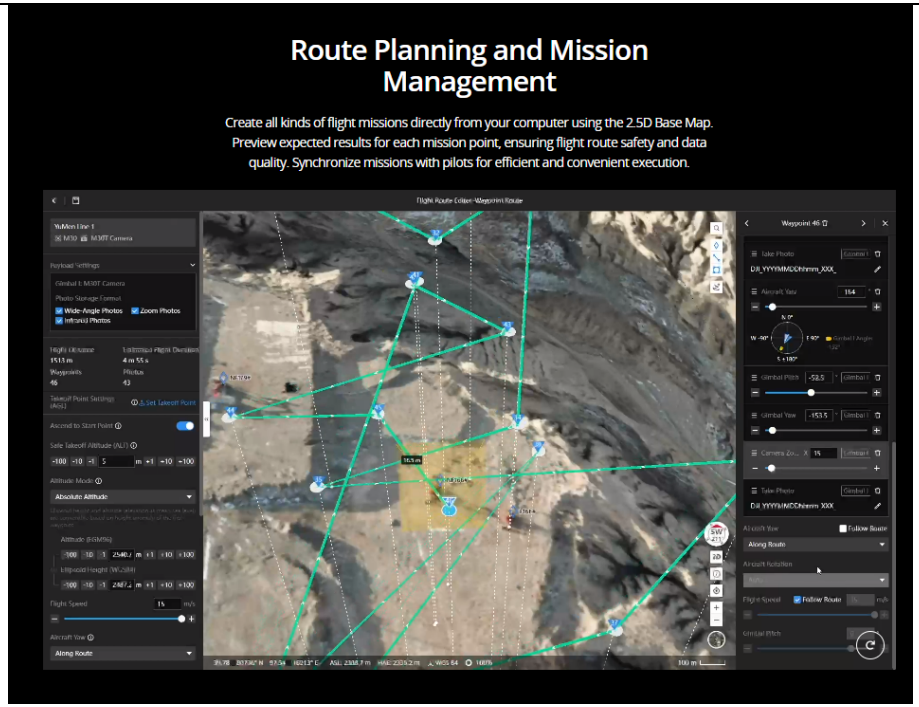

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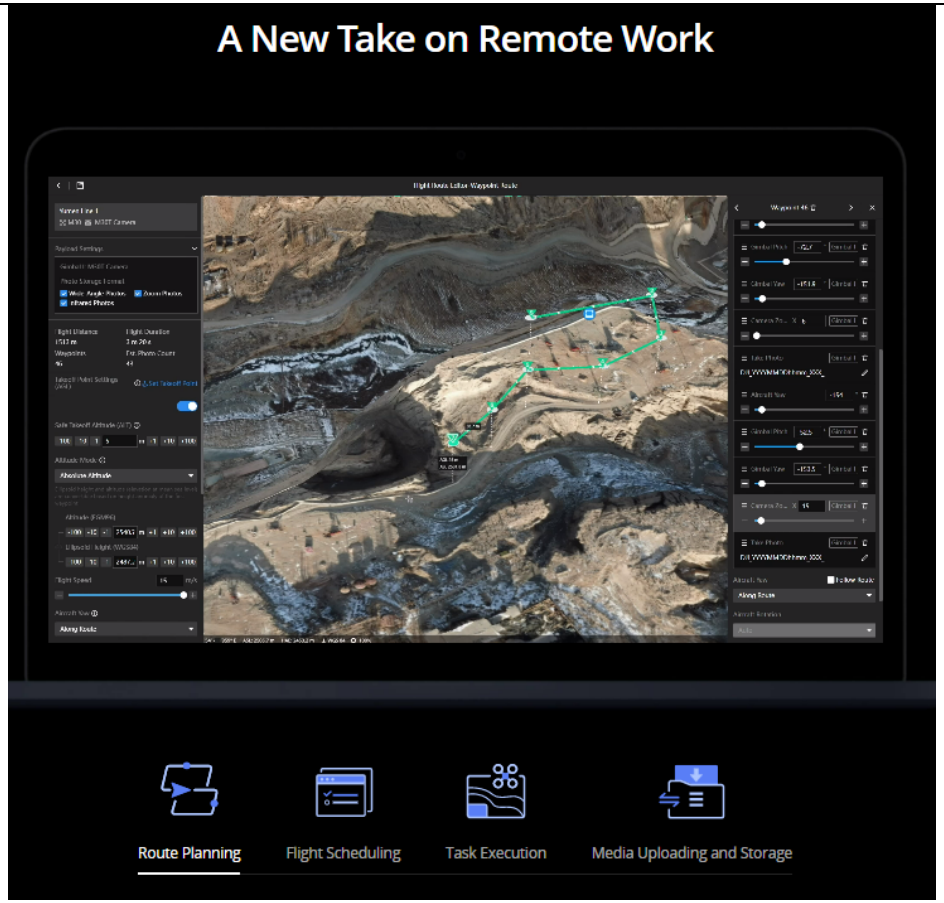

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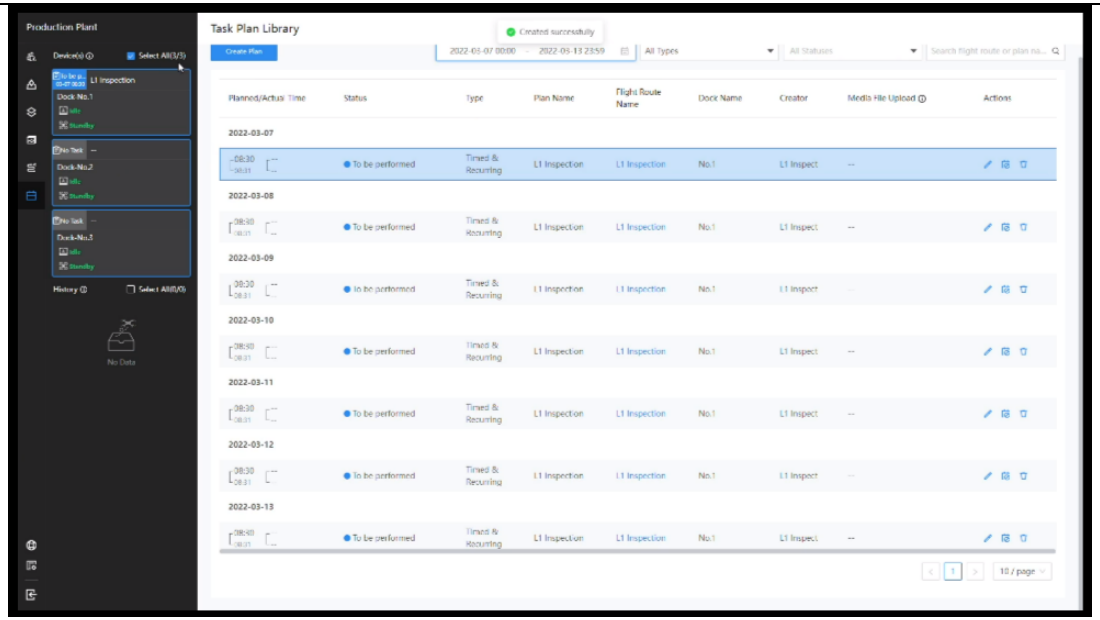


https://www.dji.com/flighthub-2

Flight Route Library

Project members can click to enter the flight route library to import, create, and edit flight routes.

Import Flight Routes

Click > Import KMZ File to select and import KMZ flight routes. The upload progress and status will be displayed during the flight route upload. Users can stop uploading files when the files are being or waiting to be uploaded.

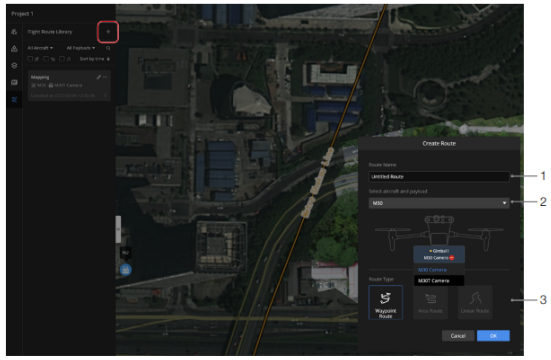
• The KMZ file must include wpmz/template.kml and wpmz/waylines.wpml.

https://dl.djicdn.com/downloads/DJI_FlightHub_2/20221123/DJI_FlightHub_2_User_Guide_v2.0.pdf, 30.

	FlightHub 2 is DJI's complete ground-to-cloud drone operations management software, and it's packed with tools to help you plan missions, stream data, and collaborate with your team in real-time. From fast mapping to DJI Dock management, here are the top five features of FlightHub 2. ## Full control of DJI Dock operations FlightHub 2 is also your hub for all DJI Dock operations. Within the app, you can monitor the status of your M30, plan and schedule missions, and coordinate everything required for round-the-clock, automated operations. ## Cloud-based mission planning & collaboration FlightHub 2 combines data storage and fleet management with intuitive tools that support public safety and inspection operations in real-time. It's packed with collaborative solutions that improve situational awareness for all team members. We've built an empowering application that enables better data sharing communication, giving mission commanders everything they need to make smarter decisions and deploy resources more effectively. https://enterprise-insights.dji.com/blog/flighthub-2-top-features

Create Flight Routes

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



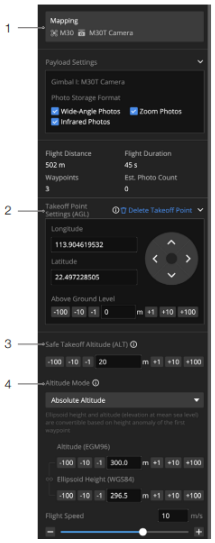
1. **Route Name**
   The route name is required and should be within 60 characters.
2. **Select aircraft and payload**
   Only Matrice 30 series are supported.
3. **Route Type**
   Only Waypoint routes are supported.

Click OK to create the flight route.

Edit Waypoint Routes

Edit Flight Routes

Enter the flight route editor and set flight route details.



Move the mouse over ⓘ to view setting descriptions.

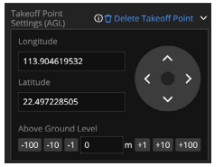
Pay attention to the settings below.

1. **Basic Information**
   Click to edit the flight route name and change the aircraft and payload.

   ⚠ Changing the payload will affect flight route settings.

2. **Takeoff Point Settings (AGL)**
   Click Set Takeoff Point and set the location where the aircraft will take off.

   A. Edit the longitude, latitude, and altitude above the ground level on the coordinate panel.



   B. Select and drag the takeoff point icon to move the takeoff point. Press and hold the Alt key and drag the icon up and down to adjust the altitude.

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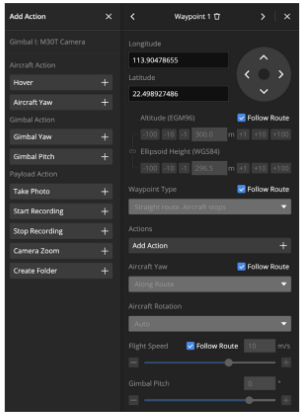
Edit Waypoints

Select and click on the map to add waypoints. Select a waypoint and set waypoint details.



1. **Longitude and Latitude**
   The longitude and latitude of an aircraft are obtained from its geographical location on the map.
2. **Altitude, Ellipsoid Height (WGS84), Waypoint Type, Aircraft Yaw, and Flight Speed**
   These parameters are consistent with the corresponding flight route settings by default. If the flight route settings are changed, the above parameters will also be updated.
3. **Actions**
   Click "+" to add actions for the aircraft, gimbal, and payload.
4. Click on the upper left corner to save the flight route settings.

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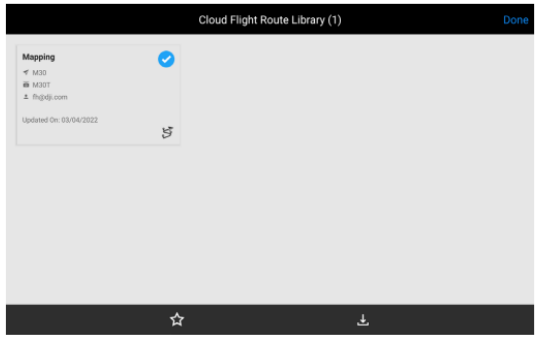
DJI FlightHub 2 User Guide

Perform Flight Tasks

DJI Pilot users can log in to the DJI FlightHub 2 cloud service and perform cloud flight tasks.

1. Enter the home screen of DJI Pilot, tap Flight Route, select Cloud to view flight routes created on DJI FlightHub 2.
2. Select the flight route and tap , the flight route will be downloaded to Flight Route Library.



3. Select and enter flight route settings. Tap to perform the flight task.

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Flight Restrictions

GEO (Geospatial Environment Online) System

DJI's Geospatial Environment Online (GEO) system is a global information system that provides real-time information on flight safety and restriction updates and prevents UAVs from flying in restricted airspace. Under exceptional circumstances, restricted areas can be unlocked to allow flight. Prior to that, the user must submit an unlocking request based on the current restriction level in the intended flight area. The GEO system may not fully comply with local laws and regulations. Users shall be responsible for their own flight safety and must consult with the local authorities on the relevant legal and regulatory requirements before requesting to unlock a flight in a restricted area.

https://dl.djicdn.com/downloads/DJI_Mavic_3_Enterprise/20221212/DJI_Mavic_3E_3T_User_Manual_EN.pdf

Flight Restrictions in GEO Zones

The following section describes in detail the flight restrictions for the above mentioned GEO Zones.

GEO Zone	Flight Restriction	Scenario
Restricted Zones (Red)	UAVs are prohibited from flying in Restricted Zones. If you have obtained permission to fly in a Restricted Zone, please visit https://www.dji.com/flysafe or contact flysafe@dji.com to unlock the zone.	Takeoff: the aircraft motors cannot be started in Restricted Zones.
		In Flight: when the aircraft flies inside a Restricted Zone, a 100-second countdown will commence in DJI Pilot 2. When the countdown is finished, the aircraft will land immediately in semi-automatic descent mode and turn off its motors after landing.
		In Flight: when the aircraft approaches the boundary of a Restricted Zone, the aircraft will automatically decelerate and hover.

Authorization Zones (Blue)	The aircraft will not be able to take off in an Authorization Zone unless it obtains a permission to fly in the area.	Takeoff: the aircraft motors cannot be started in Authorization Zones. To fly in an Authorization Zone, the user is required to submit an unlocking request registered with a DJI-verified phone number.
		In Flight: when the aircraft flies inside an Authorization Zone, a100-second countdown will commence in DJI Pilot 2. When the countdown is finished, the aircraft will land immediately in semi-automatic descent mode and turn off its motors after landing.
Warning Zones (Yellow)	A warning will be displayed when the aircraft flies inside a Warning Zone.	The aircraft can fly in the zone but the user is required to understand the warning.
Enhanced Warning Zones (Orange)	When the aircraft flies in an Enhanced Warning Zone, a warning will be displayed prompting the user to confirm the flight path.	The aircraft can continue to fly once the warning is confirmed.
Altitude Zones (Gray)	The aircraft altitude is limited when flying inside an Altitude Zone.	When the GNSS signal is strong, the aircraft cannot fly above the altitude limit. In Flight: when the GNSS signal changes from weak to strong, a 100-second countdown will commence in DJI Pilot 2 if the aircraft exceeds the altitude limit. When the countdown is finished, the aircraft will descend below the altitude limit and hover.
		When the aircraft approaches the boundary of an Altitude Zone and the GNSS signal is strong, the aircraft will decelerate automatically and hover if the aircraft is above the altitude limit.

https://dl.djicdn.com/downloads/DJI_Mavic_3_Enterprise/20221212/DJI_Mavic_3E_3T_User_Manual_EN.pdf

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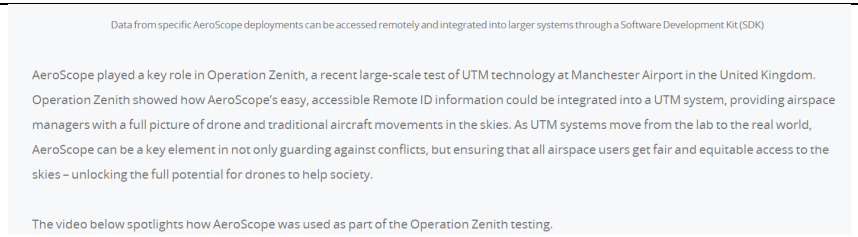
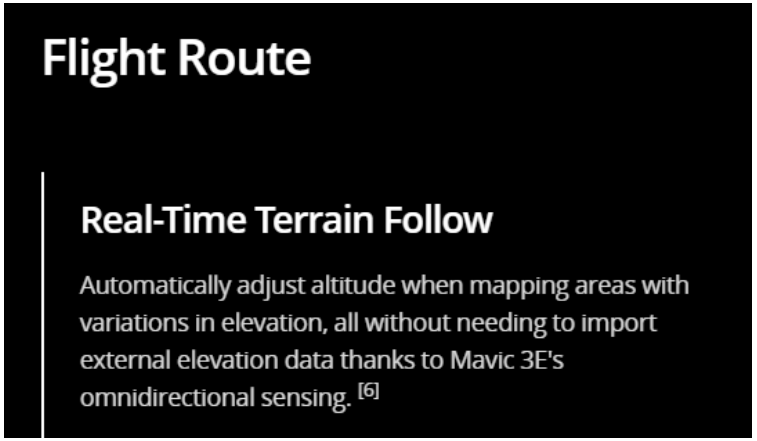
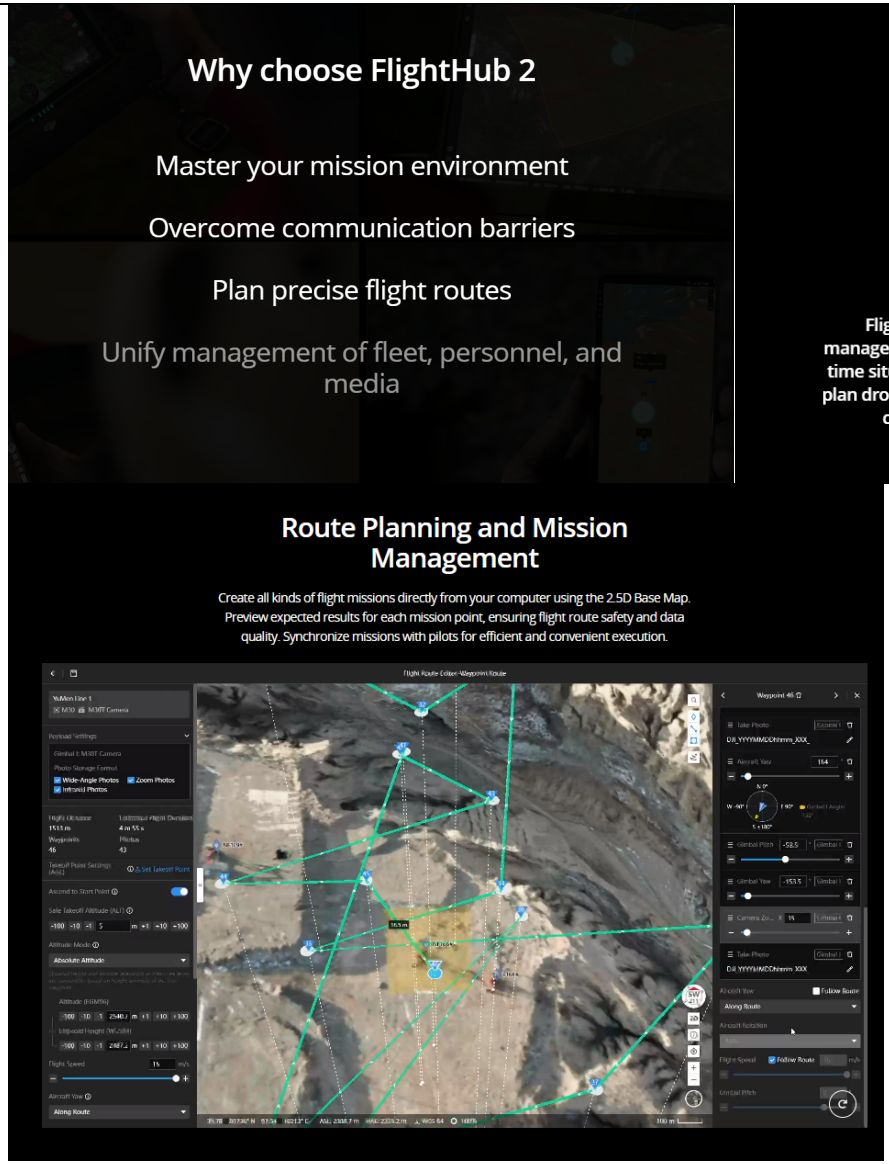
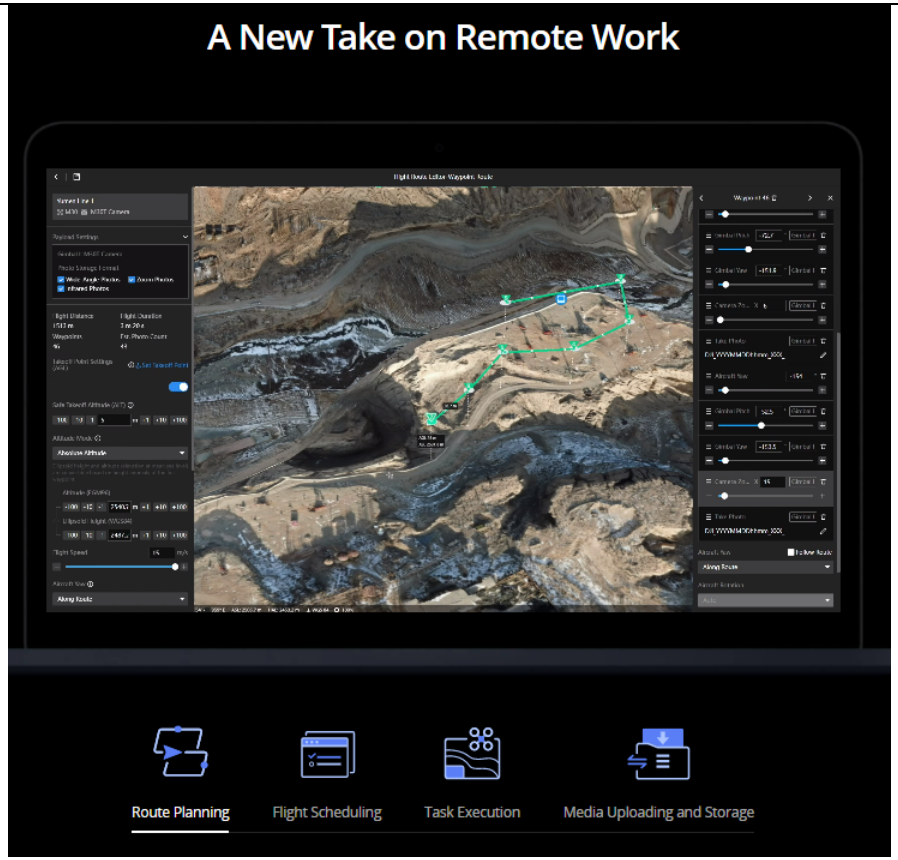
	 https://enterprise.dji.com/news/detail/aeroscope-enables-remote-id-in-utm-system  https://www.dji.com/mavic-3-enterprise?site=brandsite&from=nav.
[8g] generating vehicle commands according to mission parameters associated with the mission based on the flight path;	The accused DJI FlightHub 2 software includes instructions to generate vehicle commands according to mission parameters associated with the mission based on the flight path. For example, FlightHub 2 generates vehicle commands to cause the Accused DJI Drones to operate according to the mission parameters stored by the flight route library and/or task plan library. The Accused DJI Drones follow the parameters set according to the flight route, including traveling along the flight path according to the waypoints set for the route, using the altitude, speed, camera settings, schedule, time, and other mission parameters set by FlightHub 2 flight path.


Why choose FlightHub 2
Master your mission environment
Overcome communication barriers
Plan precise flight routes
Unify management of fleet, personnel, and media
FlightHub 2 is an all-in-one cloud-based drone operations management platform that helps you achieve comprehensive, real-time situational awareness. Access all the information you need to plan drone missions, supervise your fleet, and manage the data you create, now from a secure cloud-based environment.
Route Planning and Mission Management
Create all kinds of flight missions directly from your computer using the 2.5D Base Map. Preview expected results for each mission point, ensuring flight route safety and data quality. Synchronize missions with pilots for efficient and convenient execution.



https://www.dji.com/flighthub-2

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Full control of DJI Dock operations

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Create Flight Routes

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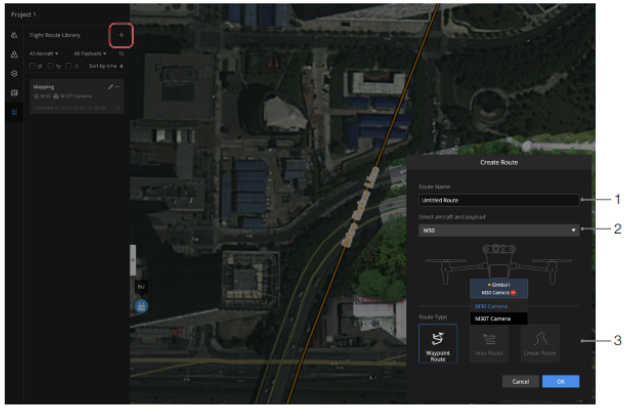

1. **Route Name**
   The route name is required and should be within 60 characters.
2. **Select aircraft and payload**
   Only Matrice 30 series are supported.
3. **Route Type**
   Only Waypoint routes are supported.

Click OK to create the flight route.

Edit Waypoint Routes

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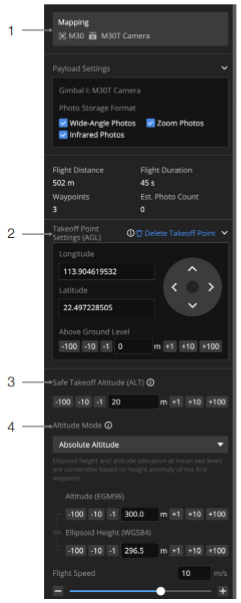
Enter the flight route editor and set flight route details.



Move the mouse over ⓘ to view setting descriptions.

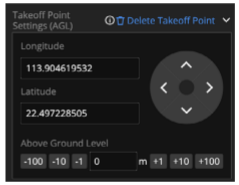
Pay attention to the settings below.

1. **Basic Information**
   Click to edit the flight route name and change the aircraft and payload.

   ⚠ Changing the payload will affect flight route settings.

2. **Takeoff Point Settings (AGL)**
   Click Set Takeoff Point and set the location where the aircraft will take off.

   A. Edit the longitude, latitude, and altitude above the ground level on the coordinate panel.



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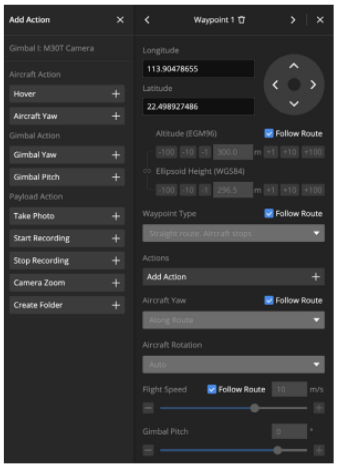
Edit Waypoints

Select and click on the map to add waypoints. Select a waypoint and set waypoint details.



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3. **Actions**
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4. Click on the upper left corner to save the flight route settings.

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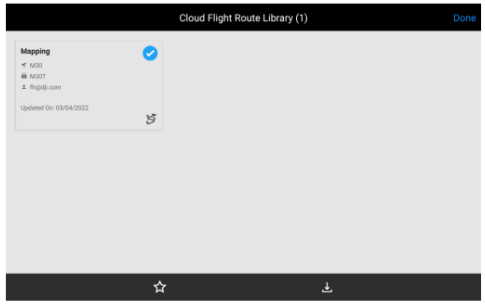
Perform Flight Tasks

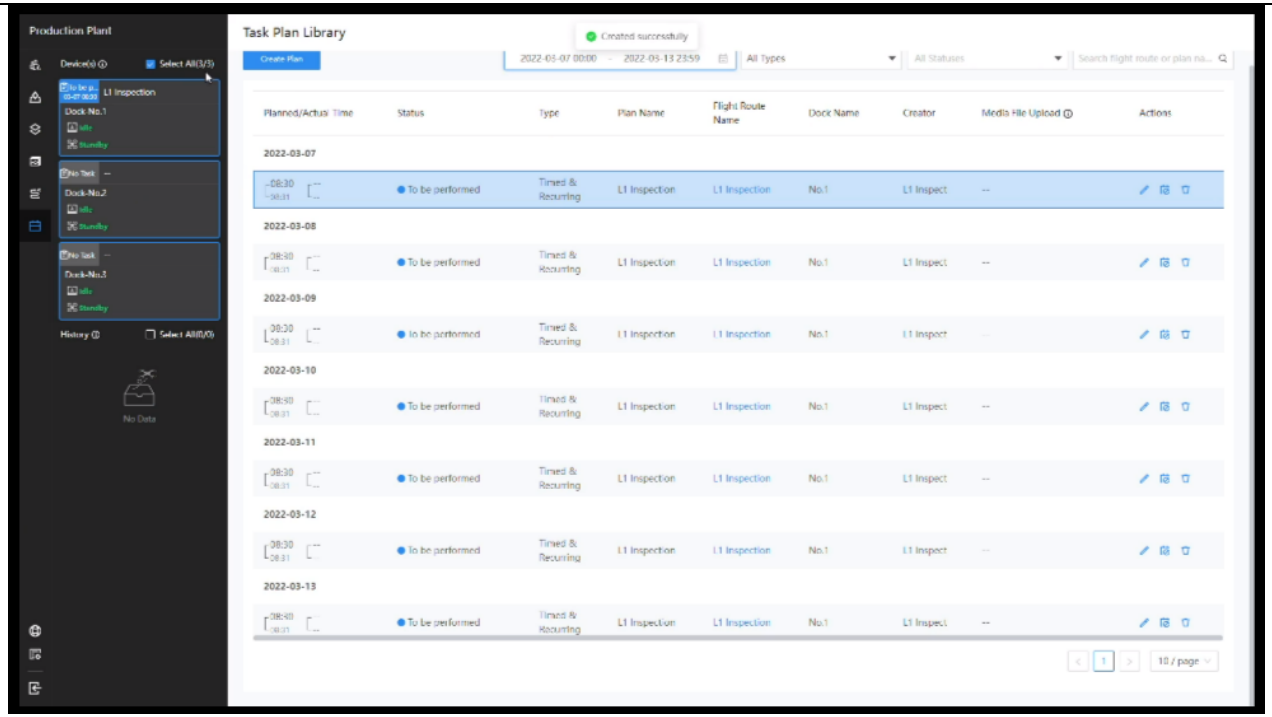
DJI Pilot users can log in to the DJI FlightHub 2 cloud service and perform cloud flight tasks.

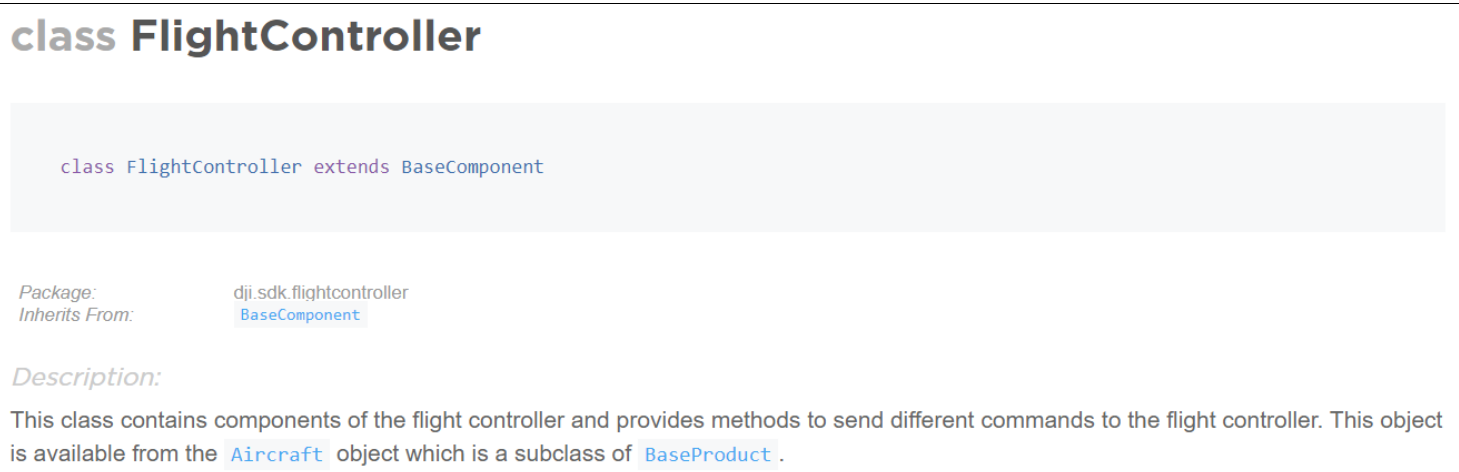
1. Enter the home screen of DJI Pilot, tap Flight Route, select Cloud to view flight routes created on DJI FlightHub 2.
2. Select the flight route and tap , the flight route will be downloaded to Flight Route Library.

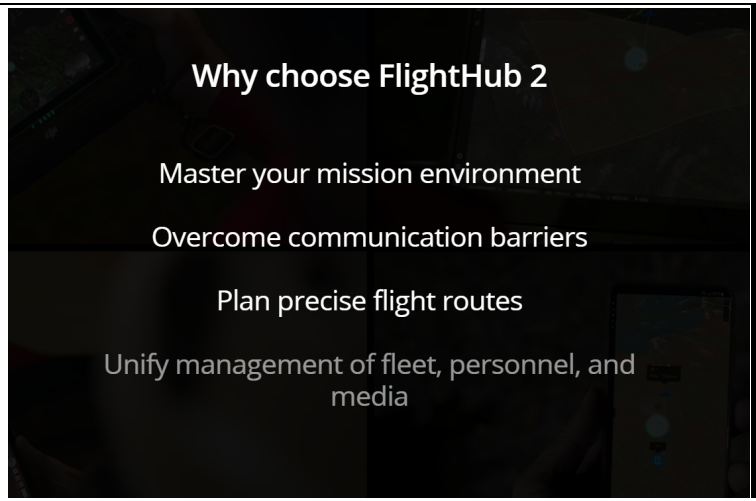


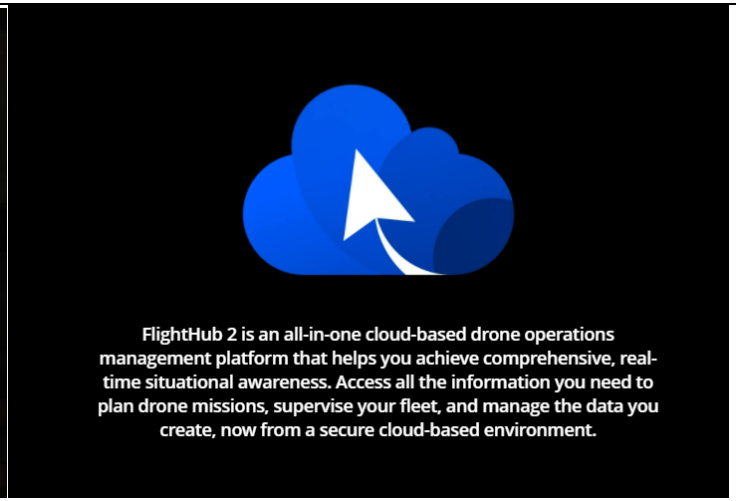
3. Select and enter flight route settings. Tap to perform the flight task.

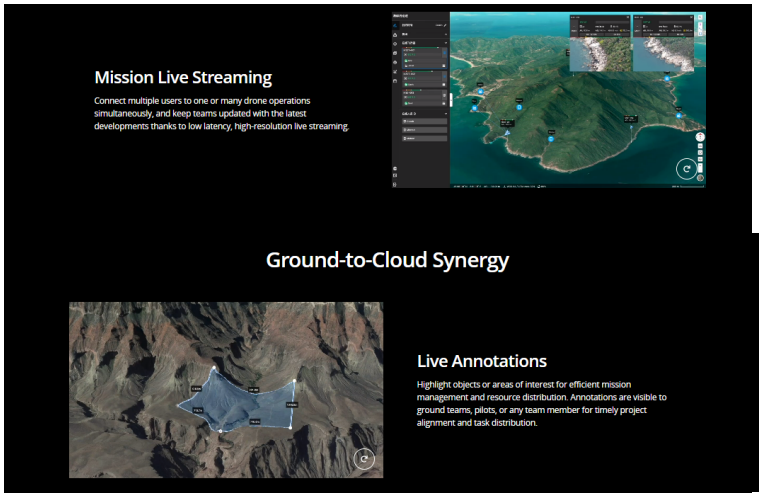
https://dl.djicdn.com/downloads/DJI_FlightHub_2/DJI_FlightHub_2_User_Guide.pdf

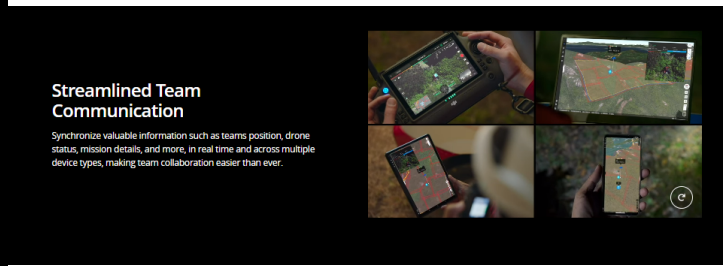
	 https://www.dji.com/flighthub-2

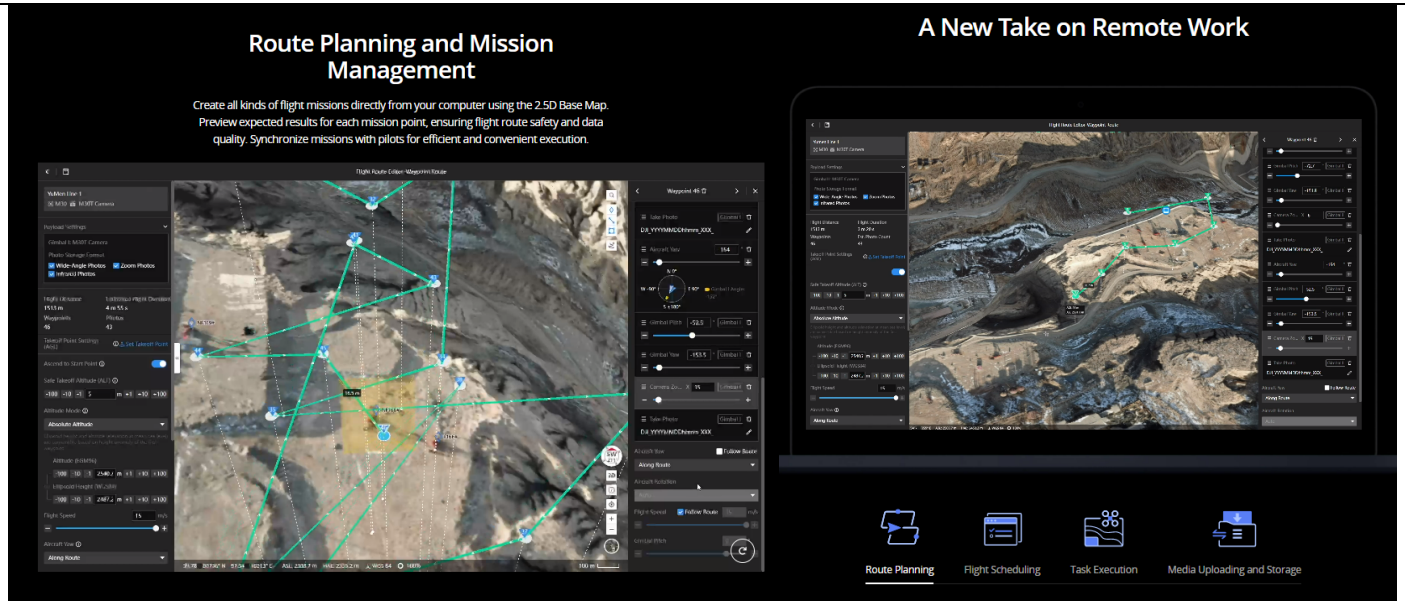
	 https://developer.dji.com/api-reference/android-api/Components/FlightController/DJIFlightController.html?search=commands&i=0&
[8h] maintaining a persistent connection with the vehicle through a communications network;	The accused DJI FlightHub 2 software includes instructions to maintain a persistent connection with the vehicle through a communications network. For example, the DJI FlightHub 2 software provides for "real-time situational awareness," mission live streaming, synchronization of mission details, live annotations. all of which utilize a persistent connection with the vehicle through a communications network. As another example, the DJI FlightHub 2 software permits the pilot of the drone to access FlightHub 2 software from the drone's RC controller thus providing a persistent connection with the vehicle through a communications network.


Why choose FlightHub 2
Master your mission environment
Overcome communication barriers
Plan precise flight routes
Unify management of fleet, personnel, and media


FlightHub 2 is an all-in-one cloud-based drone operations management platform that helps you achieve comprehensive, real-time situational awareness. Access all the information you need to plan drone missions, supervise your fleet, and manage the data you create, now from a secure cloud-based environment.


Mission Live Streaming
Connect multiple users to one or many drone operations simultaneously, and keep teams updated with the latest developments thanks to low latency, high-resolution live streaming.
Ground-to-Cloud Synergy
Live Annotations
Highlight objects or areas of interest for efficient mission management and resource distribution. Annotations are visible to ground teams, pilots, or any team member for timely project alignment and task distribution.


Streamlined Team Communication
Synchronize valuable information such as teams position, drone status, mission details, and more, in real time and across multiple device types, making team collaboration easier than ever.



https://www.dji.com/flighthub-2

March 21, 2022

It's safe to say that drones have already been established as critical tools for emergency teams and inspection crews, and the insights drones deliver from above are invaluable. But as teams bring in more drones, more payloads, more pilots, and more data, the emphasis is now on how this all fits into the big picture.

To make the most of UAV technology, incident commanders and drone program managers need a software solution to help synchronize ground teams with what the drones pick up.

The situational awareness drones provide is most powerful when it's available to the right people at the right time. That's where DJI FlightHub 2 enters the scene.

FlightHub 2 is DJI's complete ground-to-cloud drone operations management software, and it's packed with tools to help you plan missions, stream data, and collaborate with your team in real-time. From fast mapping to DJI Dock management, here are the top five features of FlightHub 2.

> FlightHub 2 is entirely cloud-based, which means it's accessible, not only to pilots with remote controllers but also to everyone else on the team who has a device with a web browser.
>
> This includes laptops and computers, tablets, and cell phones. All you have to do is log in to your team's FlightHub 2 mission, or "Project," and you will have access to the same intelligence gathered by the drones.
>
> Every team member that's logged in can see and add updates as the mission unfolds. The command center computer, the drone pilots' RC, the cell phones of the team on the ground - everyone shares a single interactive map that enables active collaboration.

Advanced media management

FlightHub 2 was built for more than just search and rescue teams and emergency first responders, but also any job, like surveying and inspection, that uses drones and needs to keep organized.

FlightHub 2 has powerful mission planning functions, so flight routes or tasks can be created, saved, and shared to other pilots. It also has everything you need to effectively store and manage your aerial data. On top of embedding information in real-time onto 2.5D cloud maps, all of your photos and videos can be automatically uploaded to the cloud for later analysis.

Crew members can be assigned varying levels of access and tasks can be assigned in the cloud.

Full control of DJI Dock operations

FlightHub 2 is also your hub for all DJI Dock operations. Within the app, you can monitor the status of your M30, plan and schedule missions, and coordinate everything required for round-the-clock, automated operations.

Cloud-based mission planning & collaboration

FlightHub 2 combines data storage and fleet management with intuitive tools that support public safety and inspection operations in real-time. It's packed with collaborative solutions that improve situational awareness for all team members. We've built an empowering application that enables better data sharing communication, giving mission commanders everything they need to make smarter decisions and deploy resources more effectively.

https://enterprise-insights.dji.com/blog/flighthub-2-top-features

Real-Time Project Information

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

Online Project Information

After joining a project, project members can view team information, such as device statuses and online members on the left panel. Device statuses include:

A. When a device is online, its information will be displayed on the left panel.

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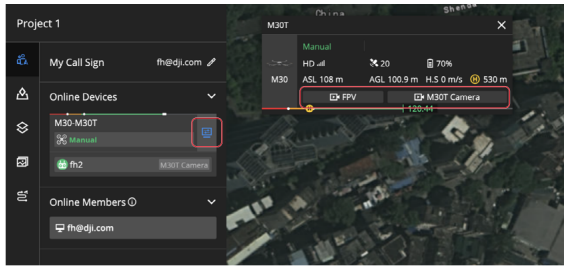
C. When a device is offline for more than five minutes, its information will not be displayed.

Aircraft and remote controller locations will be displayed on the map. Click the aircraft or the remote controller icon and a line connecting the aircraft to its linked remote controller will be displayed. A window above the aircraft shows the aircraft call sign and its altitude above the sea level. Click the window to open the Device Details and Livestreams panel.

DJI FlightHub 2 User Guide

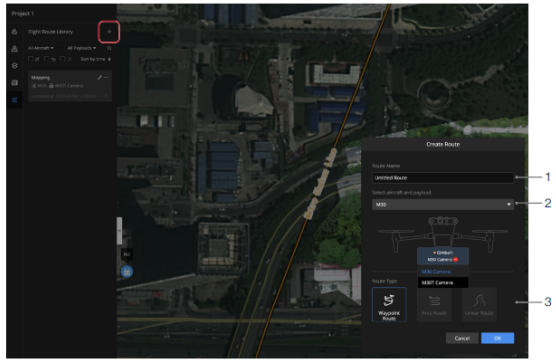
Device Details and Livestreams

When a device is online, project members can click to view device details, such as the transmission signal strength, satellite connection status, and aircraft altitude. Click camera buttons to view livestreams from the aircraft camera or payload. During a livestream, click to start recording, and the recorded video will be stored to Media Files automatically.



Create Flight Routes

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



1. Route Name
   The route name is required and should be within 60 characters.
2. Select aircraft and payload
   Only Matrice 30 series are supported.
3. Route Type
   Only Waypoint routes are supported.

Click OK to create the flight route.

3. Safe Takeoff Altitude (ALT)
   Safe Takeoff Altitude is the altitude relative to the takeoff point altitude. Aircraft will ascend to the safe takeoff altitude after takeoff and fly to the flight route start point.
4. Altitude Mode
   The Altitude mode is set to Absolute Altitude by default. Project members can also change it to Altitude Relative to Takeoff Point (ALT) or Above Ground Level.
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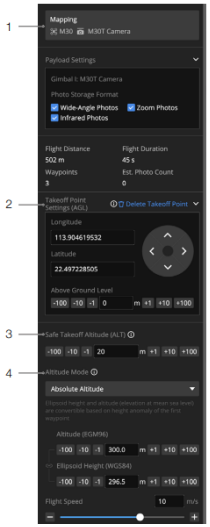
   The return-to-home altitude should be set based on the actual flight condition, surrounding environment, and GEO information. It is recommended that the altitude be set higher than the highest geographical point in the flight area.

Edit Waypoint Routes

Edit Flight Routes

Enter the flight route editor and set flight route details.



Move the mouse over ⓘ to view setting descriptions.

Pay attention to the settings below.

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   Click Set Takeoff Point and set the location where the aircraft will take off.

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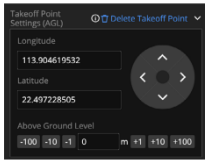

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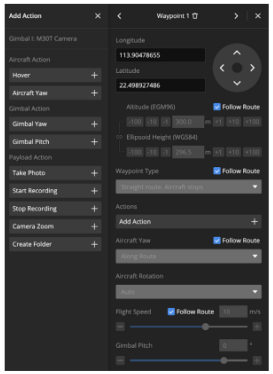
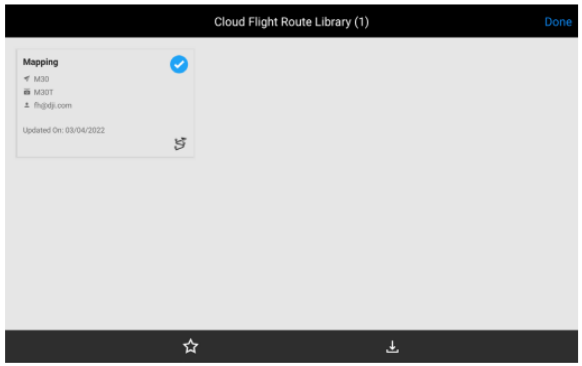
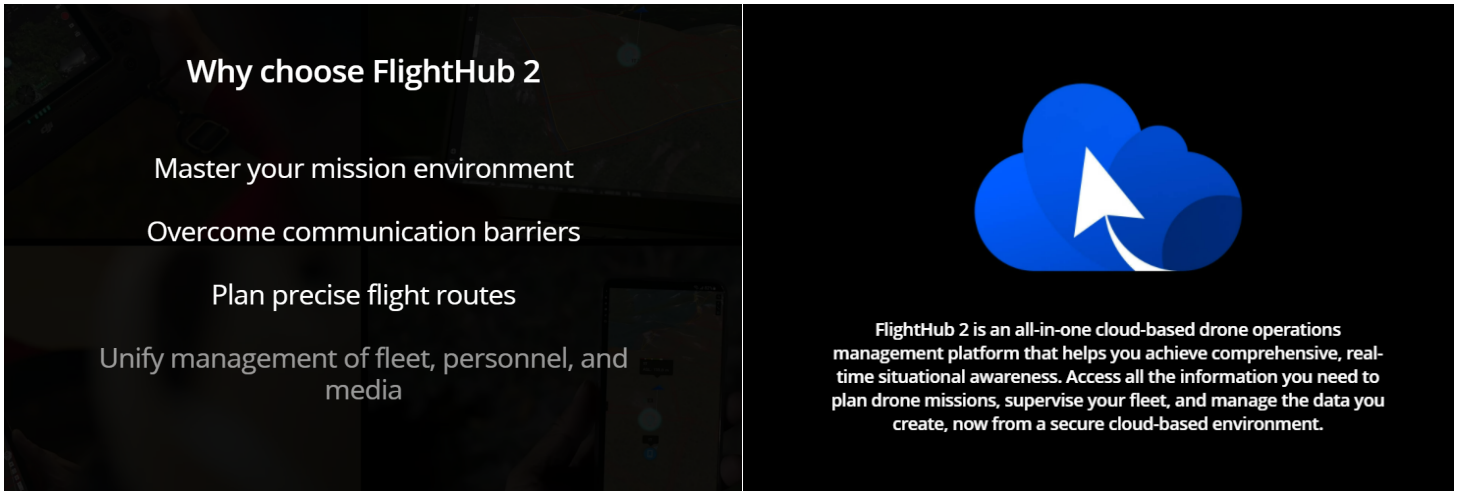
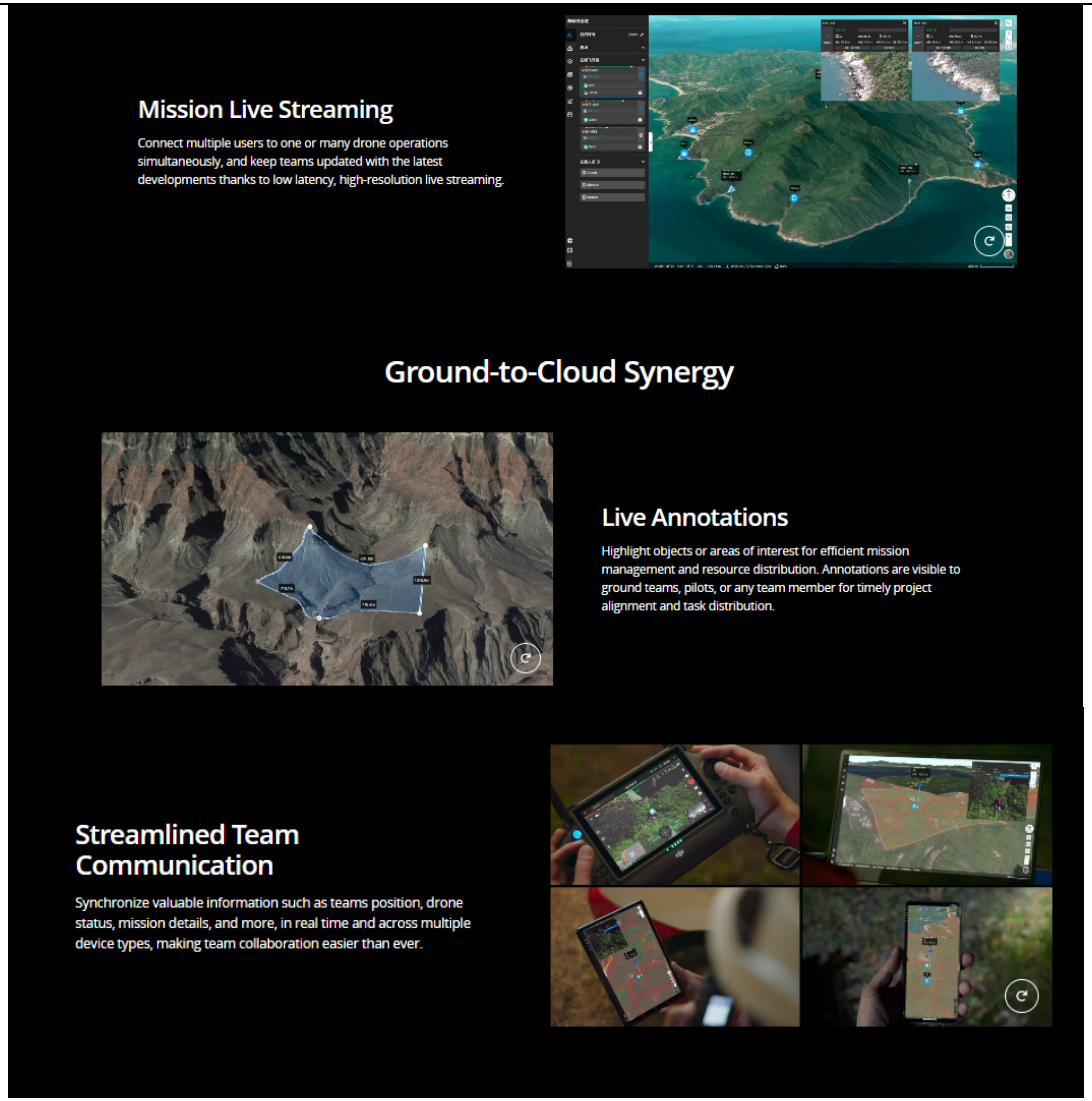
	Edit Waypoints Select and click on the map to add waypoints. Select a waypoint and set waypoint details.  1. **Longitude and Latitude** The longitude and latitude of an aircraft are obtained from its geographical location on the map. 2. **Altitude, Ellipsoid Height (WGS84), Waypoint Type, Aircraft Yaw, and Flight Speed** These parameters are consistent with the corresponding flight route settings by default. If the flight route settings are changed, the above parameters will also be updated. 3. **Actions** Click "+" to add actions for the aircraft, gimbal, and payload. 4. Click on the upper left corner to save the flight route settings. 22 © 2022 DJI All Rights Reserved. **DJI FlightHub 2** User Guide **Perform Flight Tasks** DJI Pilot users can log in to the DJI FlightHub 2 cloud service and perform cloud flight tasks. 1. Enter the home screen of DJI Pilot, tap Flight Route, select Cloud to view flight routes created on DJI FlightHub 2. 2. Select the flight route and tap , the flight route will be downloaded to Flight Route Library.  3. Select and enter flight route settings. Tap to perform the flight task. https://dl.djicdn.com/downloads/DJI_FlightHub_2/DJI_FlightHub_2_User_Guide.pdf **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. https://dl.djicdn.com/downloads/DJI_FlightHub_2/20221123/DJI_FlightHub_2_User_Guide_v2.0.pdf
[8i] sending the vehicle commands to the vehicle using the connection, the vehicle commands causing the	The accused DJI FlightHub 2 software includes instructions for sending the vehicle commands to the vehicle using the connection, the vehicle commands causing the vehicle to execute the mission under control of the fleet controller.

vehicle to execute the mission under control of the fleet controller; and	For example, the DJI FlightHub2 software transmits flight routes and mission parameters to one or more of the Accused DJI Drones in the fleet, which cause the drone to execute the mission under control of the DJI FlightHub 2 flight controller. 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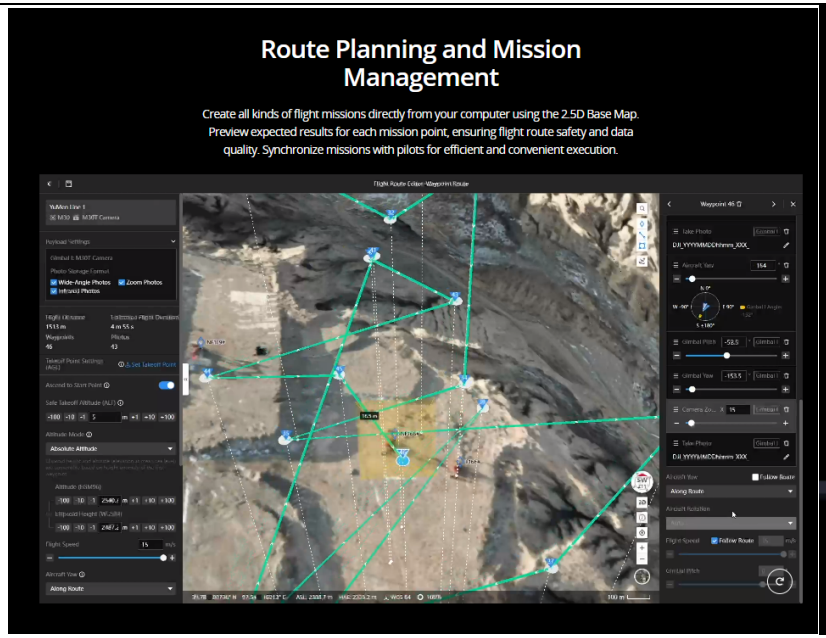

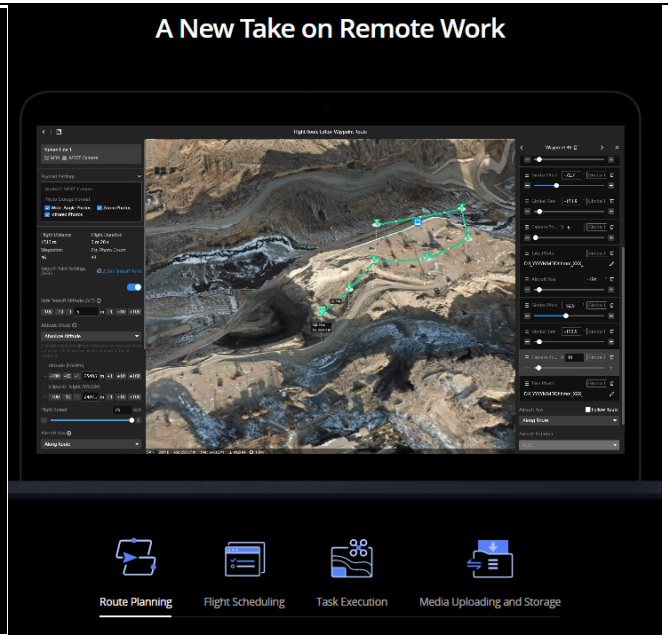

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DJI FlightHub 2 User Guide

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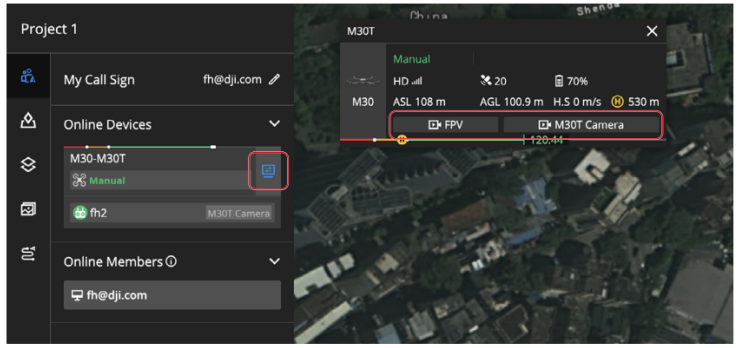

Create Flight Routes

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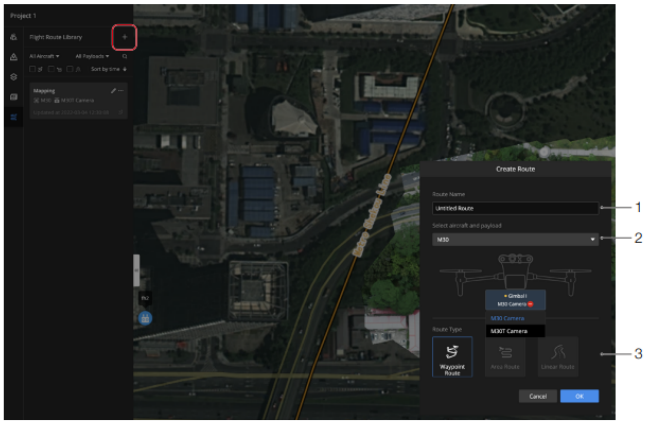


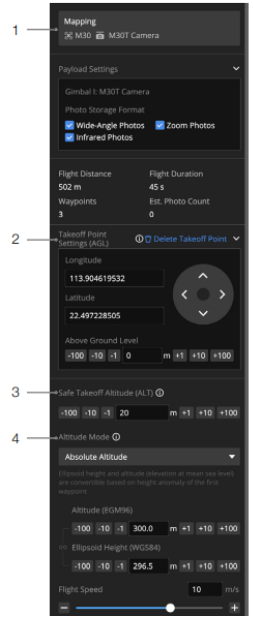
1. **Route Name**
   The route name is required and should be within 60 characters.
2. **Select aircraft and payload**
   Only Matrice 30 series are supported.
3. **Route Type**
   Only Waypoint routes are supported.

Click OK to create the flight route.

Edit Waypoint Routes

Edit Flight Routes

Enter the flight route editor and set flight route details.



Move the mouse over ⓘ to view setting descriptions.

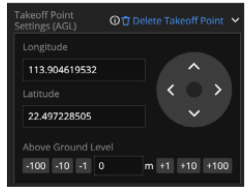
Pay attention to the settings below.

1. **Basic Information**
   Click to edit the flight route name and change the aircraft and payload.

   ⚠ Changing the payload will affect flight route settings.

2. **Takeoff Point Settings (AGL)**
   Click Set Takeoff Point and set the location where the aircraft will take off.

   A. Edit the longitude, latitude, and altitude above the ground level on the coordinate panel.



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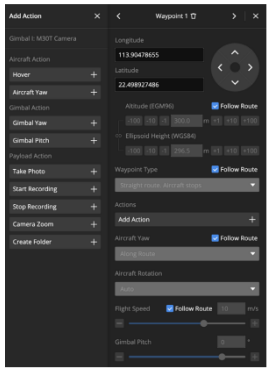
Edit Waypoints

Select and click on the map to add waypoints. Select a waypoint and set waypoint details.



1. **Longitude and Latitude**
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2. **Altitude, Ellipsoid Height (WGS84), Waypoint Type, Aircraft Yaw, and Flight Speed**
   These parameters are consistent with the corresponding flight route settings by default. If the flight route settings are changed, the above parameters will also be updated.
3. **Actions**
   Click "+" to add actions for the aircraft, gimbal, and payload.
4. Click on the upper left corner to save the flight route settings.

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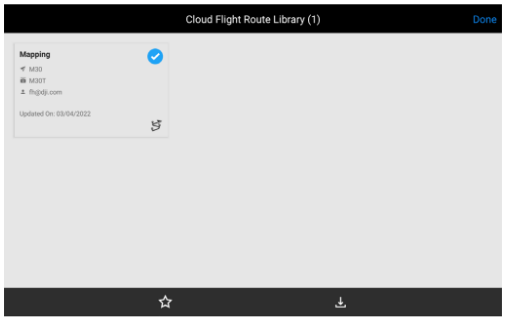
Perform Flight Tasks

DJI Pilot users can log in to the DJI FlightHub 2 cloud service and perform cloud flight tasks.

1. Enter the home screen of DJI Pilot, tap Flight Route, select Cloud to view flight routes created on DJI FlightHub 2.
2. Select the flight route and tap , the flight route will be downloaded to Flight Route Library.



3. Select and enter flight route settings. Tap to perform the flight task.

https://dl.djicdn.com/downloads/DJI_FlightHub_2/DJI_FlightHub_2_User_Guide.pdf

Description:

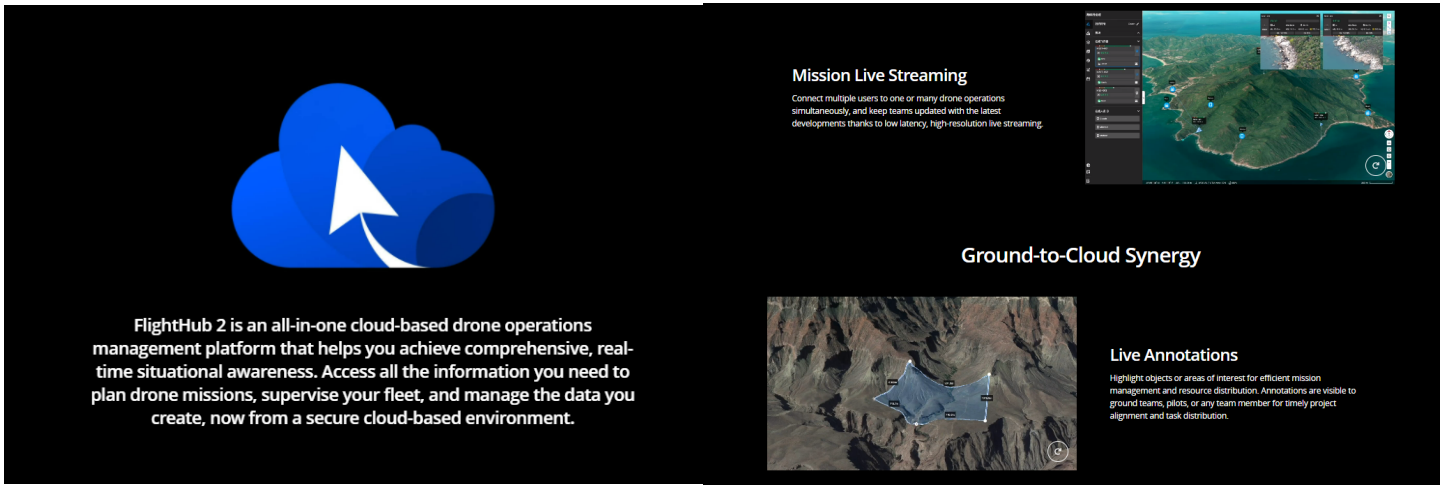
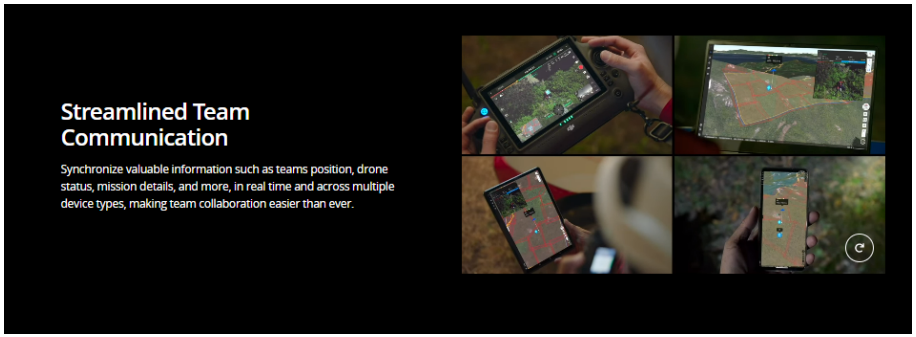
Mission Control handles execution of missions. Either single missions can be run through dedicated mission operators, or a series of missions and actions can be run serially using the Timeline.

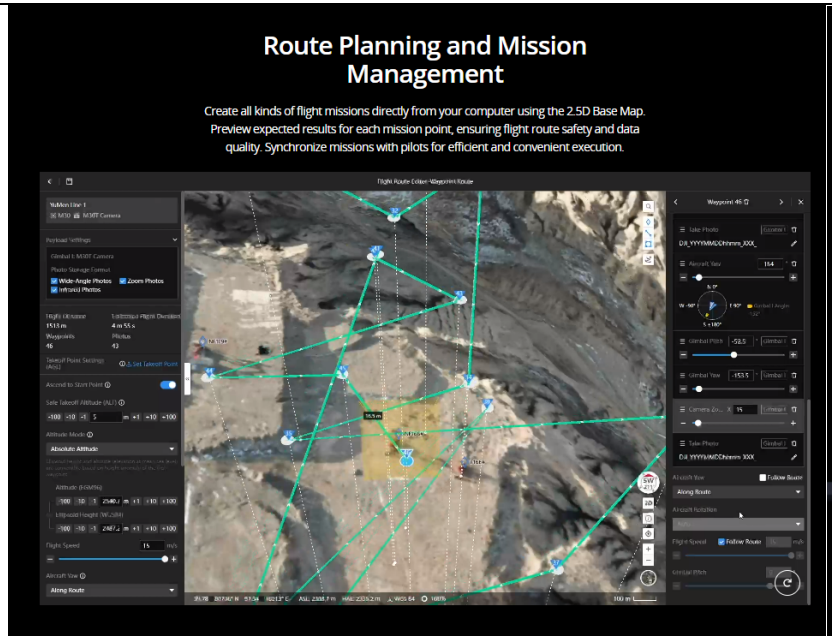
Mission operators look after execution of a single mission. A mission operator has APIs to control the mission (e.g. start, stop, pause etc.) and provides mission state through listeners.

Mission Control's Timeline is made up of a series of Timeline elements which can be Waypoint missions, Hotpoint missions (through the Hotpoint action `HotpointAction`) or objects that follow the `TimelineElement` protocol. `MissionAction` is a Timeline element, with `AircraftYawAction` and `GimbalAttitudeAction` subclasses being examples of specific actions. If a mission is being executed in a Timeline, the mission operator can still be used to get state information of the mission as well as change mission execution parameters.

Timeline elements can also have triggers (`Trigger`) associated with them. Triggers are separate objects that are run in parallel with a Timeline element. The trigger object is used to initiate actions if a set of criteria are met. For example, a trigger could be used to monitor battery level, and then initiate an action once a threshold is passed. Mission Control's Timeline is only supported by aircrafts. Handheld devices (e.g. OSMO) do not support this feature.

> Mission Control is accessed from `getMissionControl` in `DJISDKManager`.

	https://developer.dji.com/api-reference/android-api/Components/Missions/DJIMissionControl.html?search=mission&i=0&
[8j] monitoring operation of the vehicle during performance of the mission.	The Accused FlightHub 2 software includes instructions to monitor operation of the vehicle during performance of the mission. For example, the Accused FlightHub 2 software provides "real-time situational awareness," supervise the fleet, live stream missions, synchronize mission status, device status, and mission details.  



https://www.dji.com/flighthub-2

March 21, 2022

It's safe to say that drones have already been established as critical tools for emergency teams and inspection crews, and the insights drones deliver from above are invaluable. But as teams bring in more drones, more payloads, more pilots, and more data, the emphasis is now on how this all fits into the big picture.

To make the most of UAV technology, incident commanders and drone program managers need a software solution to help synchronize ground teams with what the drones pick up.

The situational awareness drones provide is most powerful when it's available to the right people at the right time. That's where DJI FlightHub 2 enters the scene.

FlightHub 2 is DJI's complete ground-to-cloud drone operations management software, and it's packed with tools to help you plan missions, stream data, and collaborate with your team in real-time. From fast mapping to DJI Dock management, here are the top five features of FlightHub 2.

FlightHub 2 is entirely cloud-based, which means it's accessible, not only to pilots with remote controllers but also to everyone else on the team who has a device with a web browser.

This includes laptops and computers, tablets, and cell phones. All you have to do is log in to your team's FlightHub 2 mission, or "Project," and you will have access to the same intelligence gathered by the drones.

Every team member that's logged in can see and add updates as the mission unfolds. The command center computer, the drone pilots' RC, the cell phones of the team on the ground - everyone shares a single interactive map that enables active collaboration.

Advanced media management

FlightHub 2 was built for more than just search and rescue teams and emergency first responders, but also any job, like surveying and inspection, that uses drones and needs to keep organized.

FlightHub 2 has powerful mission planning functions, so flight routes or tasks can be created, saved, and shared to other pilots. It also has everything you need to effectively store and manage your aerial data. On top of embedding information in real-time onto 2.5D cloud maps, all of your photos and videos can be automatically uploaded to the cloud for later analysis.

Crew members can be assigned varying levels of access and tasks can be assigned in the cloud.

Full control of DJI Dock operations

FlightHub 2 is also your hub for all DJI Dock operations. Within the app, you can monitor the status of your M30, plan and schedule missions, and coordinate everything required for round-the-clock, automated operations.

Cloud-based mission planning & collaboration

FlightHub 2 combines data storage and fleet management with intuitive tools that support public safety and inspection operations in real-time. It's packed with collaborative solutions that improve situational awareness for all team members. We've built an empowering application that enables better data sharing communication, giving mission commanders everything they need to make smarter decisions and deploy resources more effectively.

https://enterprise-insights.dji.com/blog/flighthub-2-top-features

Real-Time Project Information

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

Online Project Information

After joining a project, project members can view team information, such as device statuses and online members on the left panel. Device statuses include:

A. When a device is online, its information will be displayed on the left panel.

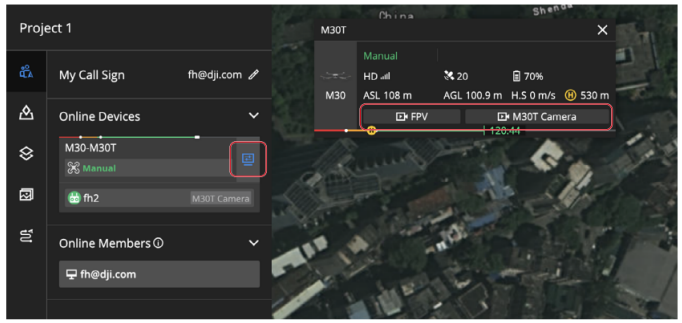
B. When a device is offline for less than five minutes, its information will be displayed in gray.

C. When a device is offline for more than five minutes, its information will not be displayed.

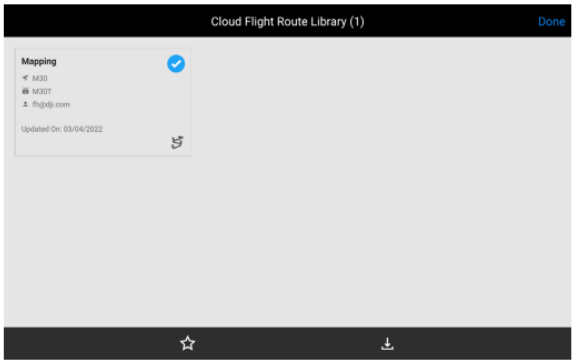
Aircraft and remote controller locations will be displayed on the map. Click the aircraft or the remote controller icon and a line connecting the aircraft to its linked remote controller will be displayed. A window above the aircraft shows the aircraft call sign and its altitude above the sea level. Click the window to open the Device Details and Livestreams panel.

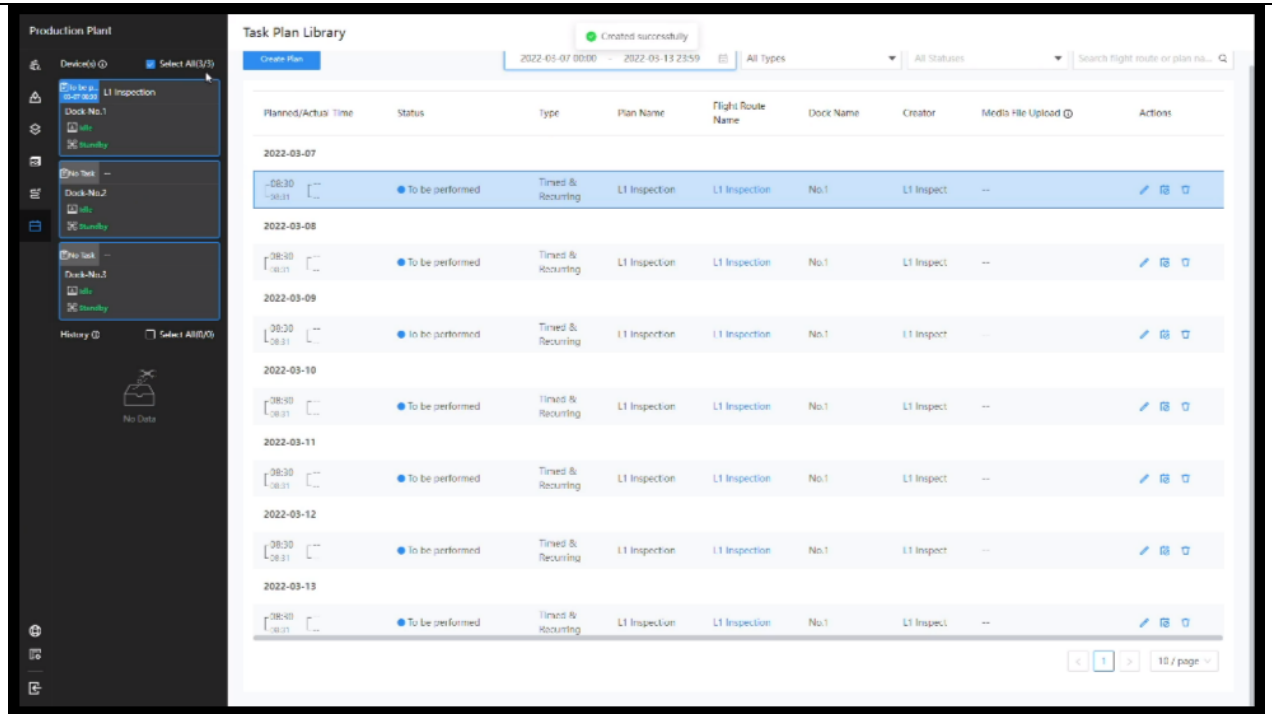
Device Details and Livestreams

When a device is online, project members can click to view device details, such as the transmission signal strength, satellite connection status, and aircraft altitude. Click camera buttons to view livestreams from the aircraft camera or payload. During a livestream, click to start recording, and the recorded video will be stored to Media Files automatically.



3. **Safe Takeoff Altitude (ALT)**
   Safe Takeoff Altitude is the altitude relative to the takeoff point altitude. Aircraft will ascend to the safe takeoff altitude after takeoff and fly to the flight route start point.
4. **Altitude Mode**
   The Altitude mode is set to Absolute Altitude by default. Project members can also change it to Altitude Relative to Takeoff Point (ALT) or Above Ground Level.
5. **Return-to-Home Altitude (ALT)**
   The return-to-home altitude should be set based on the actual flight condition, surrounding environment, and GEO information. It is recommended that the altitude be set higher than the highest geographical point in the flight area.

	DJI FlightHub 2 User Guide **Perform Flight Tasks** DJI Pilot users can log in to the DJI FlightHub 2 cloud service and perform cloud flight tasks. 1. Enter the home screen of DJI Pilot, tap Flight Route, select Cloud to view flight routes created on DJI FlightHub 2. 2. Select the flight route and tap , the flight route will be downloaded to Flight Route Library.  3. Select and enter flight route settings. Tap to perform the flight task. https://dl.djicdn.com/downloads/DJI_FlightHub_2/DJI_FlightHub_2_User_Guide.pdf
[9] The fleet controller according to claim 8, wherein the instructions for the obtaining the mission include instructions for obtaining the mission from the master schedule according to a priority of mission	The Accused FlightHub 2 software includes instructions to obtain the mission from the master schedule according to a priority of mission entries in the master schedule. For example, the Accused FlightHub 2 software includes the ability to plan and execute high priority missions. As another example, the Accused FlightHub 2 software has the ability to execute missions according to the priority set by the task plan library.

entries in the master schedule.	 https://www.dji.com/flighthub-2 final HIGH_PRIORITY_MISSION_EXECUTING `static final DJIMissionError HIGH_PRIORITY_MISSION_EXECUTING = new DJIMissionError("A higher priority mission is executing", 0xD7)` *Package:* dji.common.error *Description:* A higher priority mission is executing.

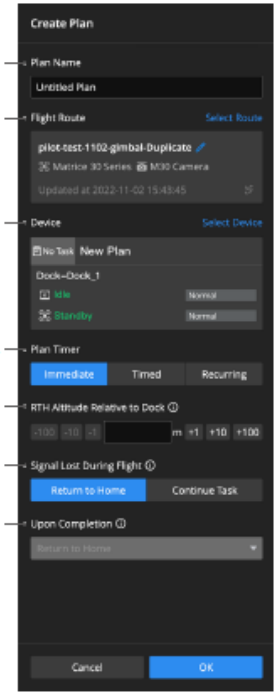
https://developer.dji.com/api-reference/android-api/Components/SDKError/DJIError_DJIMissionManagerError.html?search=priority&i=0&#djierror_djimissionmanagererror_mission_result_high_priority_mission_executing_inline

Task Plan Library

Project members can click to enter the task plan library to view task plans and the administrators can create and manage plans.

Create a Plan

Click Create Plan to create a task plan.



1. Plan Name

   The plan name is required and should be within 50 characters.
2. 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.
3. Device

   Only docks can be selected.
4. Plan Timer

   Users can select from Immediate, Timed, and Recurring.

   a. When the plan timer is set to Immediate, the aircraft will immediately perform the flight task once the plan is created.

   b. When the plan timer is set to Timed, the aircraft will perform the flight task when the set time is reached.

   c. When the plan timer is set to Recurring, the aircraft will perform repeated flight tasks when the set time is reached.
5. RTH Altitude Relative to Dock

   The aircraft altitude relative to the dock when the aircraft is returning to the dock (Altitude range: 20 m - 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.

6. Signal Lost During Flight

   The aircraft will return to home or continue the flight task when it is disconnected from the dock.
7. Upon Completion

   Only Return to Home is supported when creating a task plan.

https://dl.djicdn.com/downloads/DJI_FlightHub_2/DJI_FlightHub_2_User_Guide_v2.0.pdf

DJI FlightHub 2 User Guide

Manage Task Plans

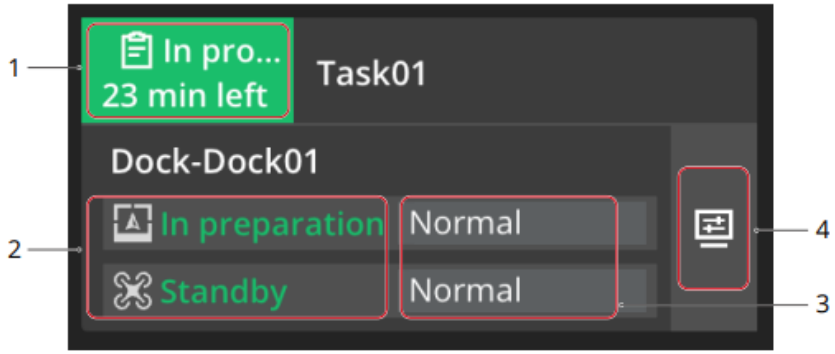
Users can view the task plan details and media file upload status, as well as perform actions on the task plan.

1. Planned/Actual Time: Displays the planned time of the task plan and the actual time when the task is performed. The planned time is estimated and can only be used as a reference.
2. Status: Includes To be performed, In progress, Task completed, Task failed, Task ended, and Suspended.
3. Type: Includes Immediate, Timed, and Recurring.
4. Route Name: Displays the flight route duplicate name. Click to view the duplicate in the editor. Editing and saving the duplicate are not supported.
5. 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:
   a. 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.
   b. Users can click Upload Now to prioritize the upload of the selected media files.
6. Actions:
   a. 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.
   b. For the flight tasks that are performed, users can click to copy the flight task, enter the flight route editor, and edit to create a new task plan.

https://dl.djicdn.com/downloads/DJI_FlightHub_2/DJI_FlightHub_2_User_Guide_v2.0.pdf

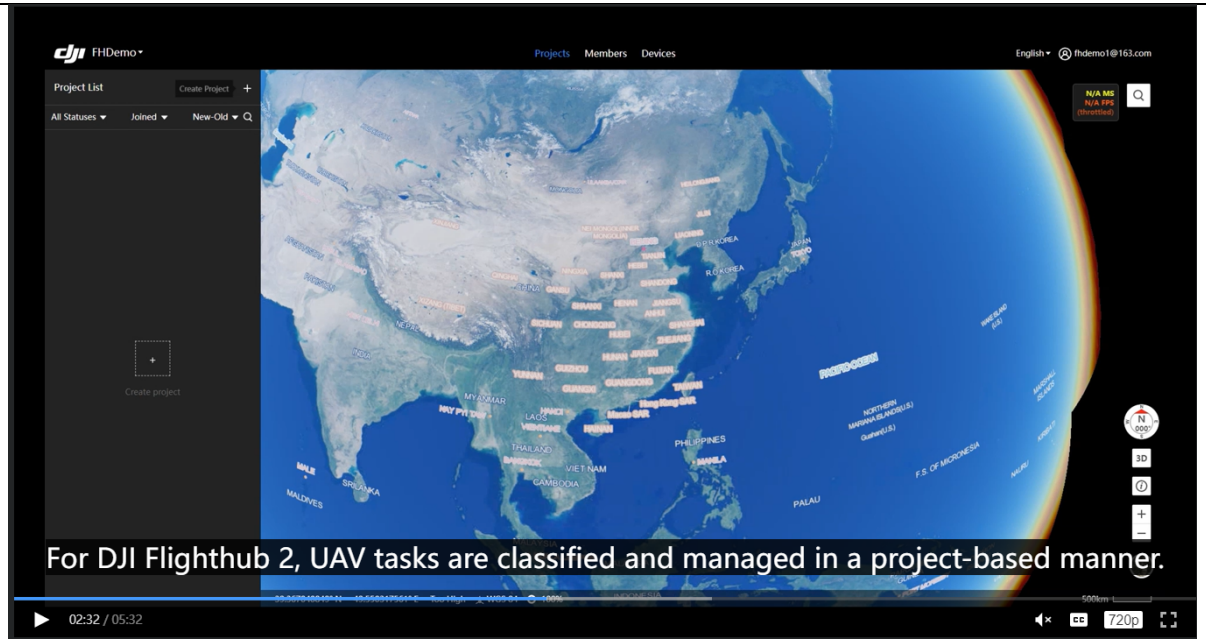
Dock

Users can view the flight task status, the dock and connected aircraft statuses, and the warning messages and open the device status window.



1. Flight task statuses include No task, To be performed, In progress, Task failed, Task ended, and Task completed. 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.

	 https://www.dji.com/flighthub-2/video
[10] The fleet controller according to claim 8, wherein the instructions for the monitoring operation of the vehicle include instructions for receiving, from an access point of the communications network, a last vehicle status in response to loss of a connection between the vehicle and the access point hosting	The Accused FlightHub 2 software includes instructions for monitoring a connection of the vehicle to a communications network associated with the fleet controller. For example, as discussed above for Element 8[j], the Accused FlightHub 2 software provides "real-time situational awareness," supervise the fleet, live stream missions, synchronize mission status, device status, and mission details. This monitoring includes monitoring the connection of the drone to the communications network associated with the fleet controller. As another example, connectivity status is monitored such that the drone's mission parameters include instructions upon a disconnection from the communications network during flight.

the persistent connection.	

Task Plan Library

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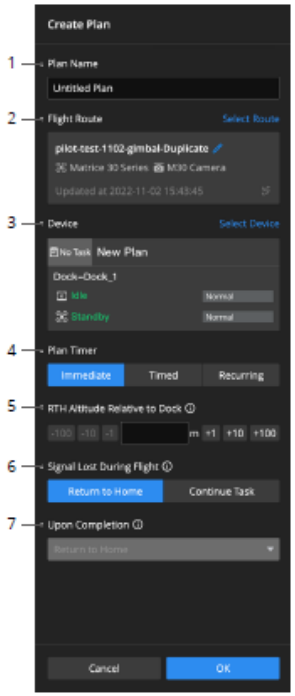

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   - The duplicate cannot be modified after the plan is created, and the duplicate will be deleted after the plan is deleted. Modifying the flight route in the flight route library will not affect the flight route duplicate.

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   c. When the plan timer is set to Recurring, the aircraft will perform repeated flight tasks when the set time is reached.

5. RTH Altitude Relative to Dock

   The aircraft altitude relative to the dock when the aircraft is returning to the dock (Altitude range: 20 m - 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.

6. Signal Lost During Flight

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7. Upon Completion

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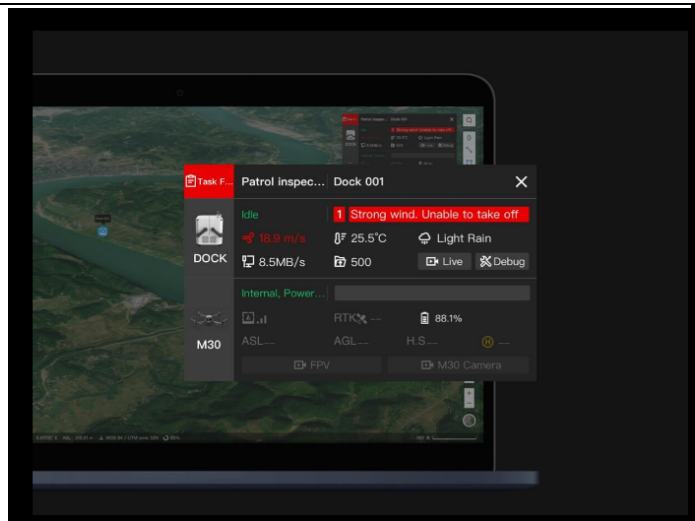
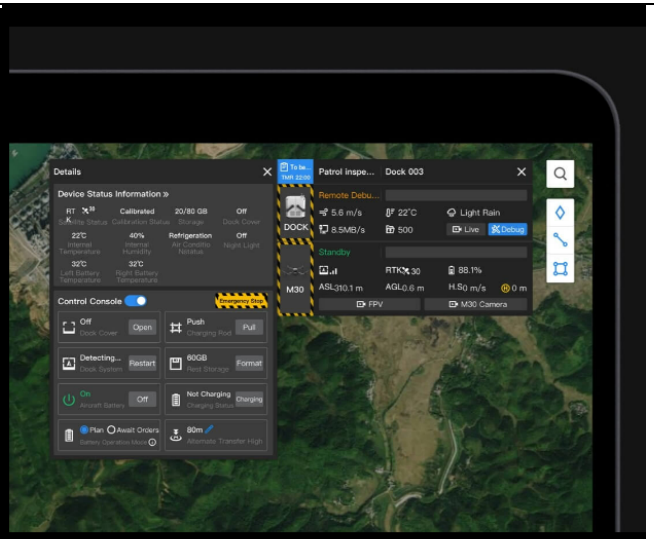


Alerts

In the case of abnormal conditions such as heavy rains, strong winds, or any other situation that could affect the flight mission or the integrity of the equipment, FlightHub 2 will automatically trigger alerts.



Remote Maintenance

Check the status of DJI Docks remotely and perform debugging whenever needed. Keep your drone operations running without constant maintenance visits.

Streamlined Team Communication

Synchronize valuable information such as teams position, drone status, mission details, and more, in real time and across multiple device types, making team collaboration easier than ever.

DJI takes the security of your data seriously. We use best-in-class measures to protect the integrity of your photos, videos, flight logs, and other user data, allowing you to confidently use the full power of a cloud-based fleet management system. FlightHub 2 is built to maintain integrity across multiple levels of the drone and data management process – from device connection and maintenance, to data upload and transmission, to cloud service storage and operational security.

DJI FlightHub 2 uploads, stores and manages data on cloud servers operated by Amazon Web Services, which are compliant to ISO/IEC 27001 security certifications.

https://www.dji.com/flighthub-2

Monitor and Maintain Devices

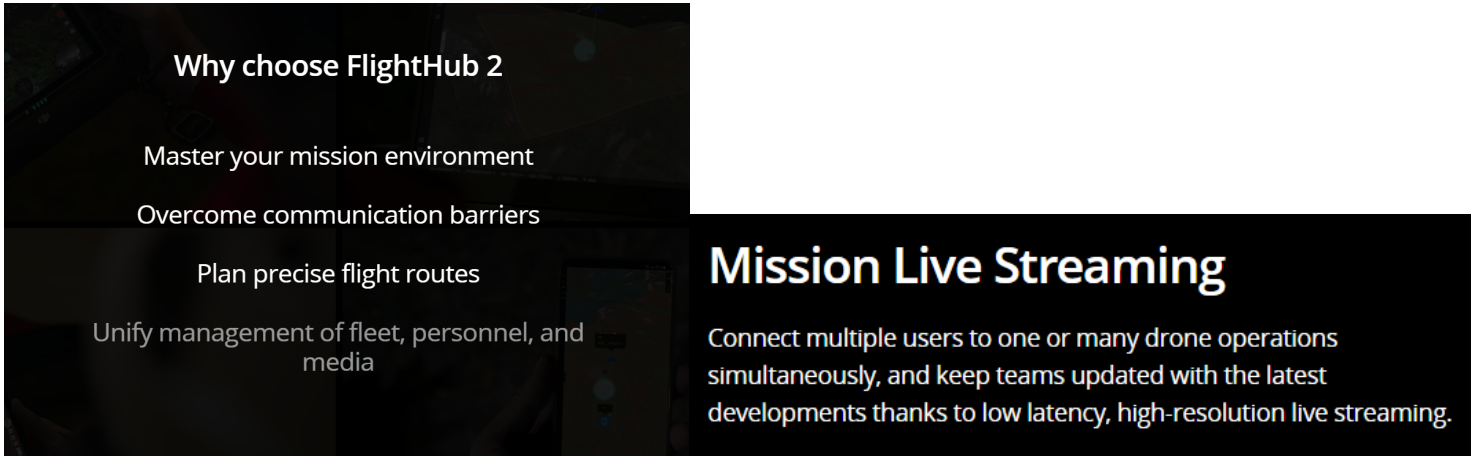
Users can click to monitor and maintain the dock and aircraft remotely.

1. 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.

2. 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, and operating mode can be modified.

	Online Devices Project members can view online aircraft and its connected remote controller on the Online Devices panel. Device statuses include: a. When a device is online, its information will be displayed on the panel. b. When a device is offline for less than five minutes, its information will be displayed in gray. c. When a device is offline for more than five minutes, its information will not be displayed. https://dl.djicdn.com/downloads/DJI_FlightHub_2/20221123/DJI_FlightHub_2_User_Guide_v2.0.pdf
[11a] The fleet controller according to claim 8, wherein the instructions for the monitoring operation of the vehicle include instructions for determining, during performance of the mission, whether the mission parameters associated with the mission are supported by mission impact data received at the fleet controller; and	The Accused FlightHub 2 software includes instructions for determining, during performance of the mission, whether the mission parameters associated with the mission are supported by mission impact data received at the fleet controller. For example, FlightHub 2 determines during performance of a mission whether mission parameters are supported by mission impact data (including but not limited to abnormal condition data) received at the fleet controller. 

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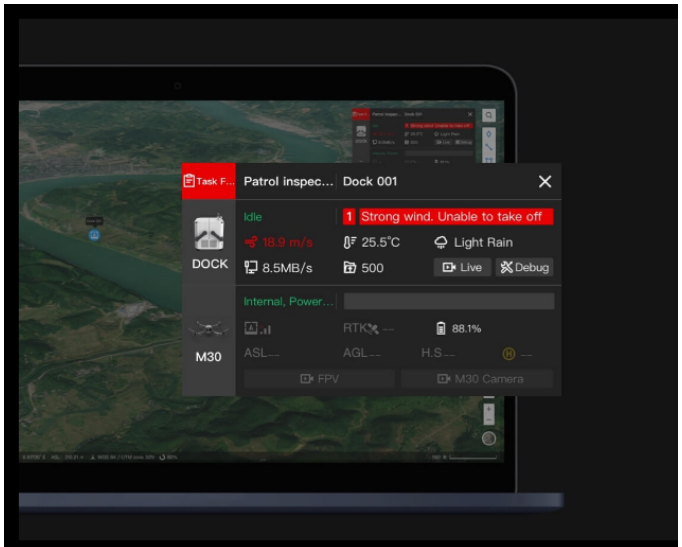
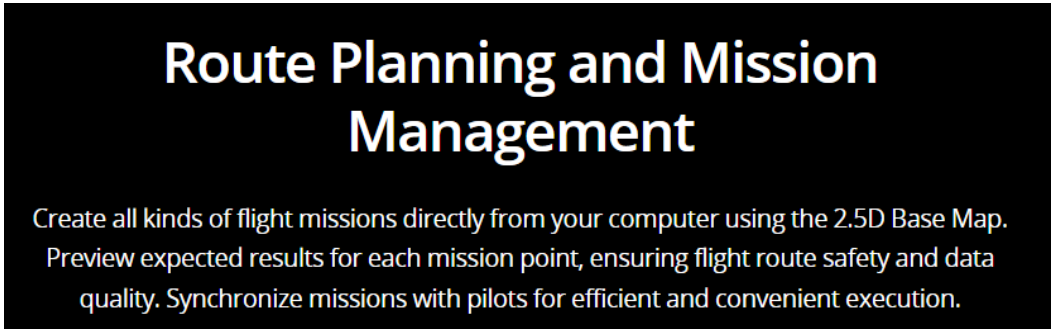
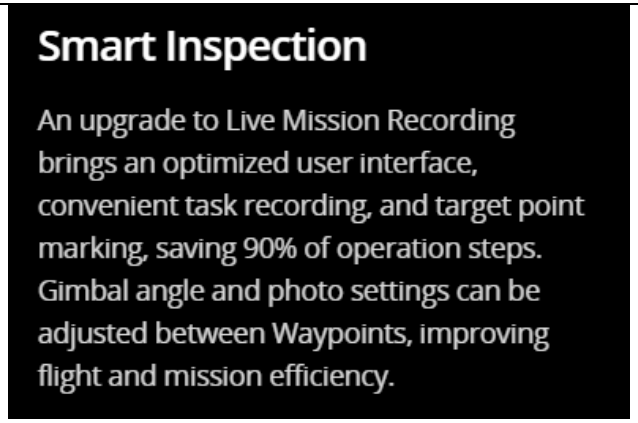


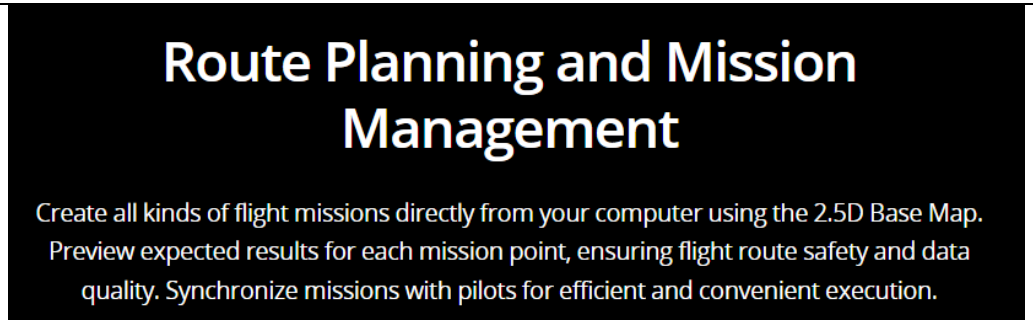
Alerts

In the case of abnormal conditions such as heavy rains, strong winds, or any other situation that could affect the flight mission or the integrity of the equipment, FlightHub 2 will automatically trigger alerts.

https://www.dji.com/flighthub-2

	2. Altitude, Ellipsoid Height (WGS84), Waypoint Type, Aircraft Yaw, and Flight Speed These parameters are consistent with the corresponding flight route settings by default. If the flight route settings are changed, the above parameters will also be updated. To change the altitude of a single waypoint, uncheck Follow Route and drag the waypoint directly to move the horizontal position of the waypoint while keeping the current altitude. Project members can also press and hold the ALT or Option key to drag the waypoint and adjust the altitude of the waypoint while maintaining the horizontal position of the waypoint. https://dl.djicdn.com/downloads/DJI_FlightHub_2/20221123/DJI_FlightHub_2_User_Guide_v2.0.pdf
[11b] wherein the program further includes instructions for: generating, in response to the mission parameters not being supported by the mission impact data, adjusted vehicle commands according to the mission impact data and the mission parameters; and	The Accused FlightHub 2 software includes instructions for generating, in response to the mission parameters not being supported by the mission impact data, adjusted vehicle commands according to the mission impact data and the mission parameters. For example, FlightHub 2 generates, in response to the mission parameters not being supported by mission impact data (including but not limited to abnormal condition data) adjusted vehicle commands according to the mission impact data and mission parameters. For example, FlightHub 2 generates alerts if conditions become abnormal during flight. FlightHub 2 may also adjust mission parameters of the flight (e.g., cause the drone to return home) in response to the mission impact data.  https://www.dji.com/flighthub-2

	 https://www.dji.com/matrice-30 **2. Altitude, Ellipsoid Height (WGS84), Waypoint Type, Aircraft Yaw, and Flight Speed** These parameters are consistent with the corresponding flight route settings by default. If the flight route settings are changed, the above parameters will also be updated. To change the altitude of a single waypoint, uncheck Follow Route and drag the waypoint directly to move the horizontal position of the waypoint while keeping the current altitude. Project members can also press and hold the ALT or Option key to drag the waypoint and adjust the altitude of the waypoint while maintaining the horizontal position of the waypoint. https://dl.djicdn.com/downloads/DJI_FlightHub_2/20221123/DJI_FlightHub_2_User_Guide_v2.0.pdf
[11c] sending the adjusted vehicle commands to the vehicle using the connection, the adjusted vehicle commands causing the vehicle to execute the mission under control of the fleet controller	The Accused FlightHub 2 software includes instructions for sending the adjusted vehicle commands to the vehicle using the connection, the adjusted vehicle commands causing the vehicle to execute the mission under control of the fleet controller according to the adjusted vehicle command. For example, FlightHub 2 generates alerts if conditions become abnormal during flight. FlightHub 2 may also adjust mission parameters of the flight (e.g., cause the drone to return home) in response to the mission impact data.

according to the adjusted vehicle command.	 https://www.dji.com/flighthub-2 2. **Altitude, Ellipsoid Height (WGS84), Waypoint Type, Aircraft Yaw, and Flight Speed** These parameters are consistent with the corresponding flight route settings by default. If the flight route settings are changed, the above parameters will also be updated. To change the altitude of a single waypoint, uncheck Follow Route and drag the waypoint directly to move the horizontal position of the waypoint while keeping the current altitude. Project members can also press and hold the ALT or Option key to drag the waypoint and adjust the altitude of the waypoint while maintaining the horizontal position of the waypoint. https://dl.djicdn.com/downloads/DJI_FlightHub_2/20221123/DJI_FlightHub_2_User_Guide_v2.0.pdf
[12] The fleet controller according to claim 11, wherein the mission impact data comprises at least one of received event messages, traffic management system data, or exterior condition data.	The Accused DJI FlightHub 2 software includes mission impact data comprising at least one of received event messages, traffic management system data, or exterior condition data. For example, FlightHub 2 software includes mission impact data that includes warning messages, traffic warnings, and abnormal conditions alerts (e.g., heavy winds or heavy rain). **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. https://dl.djicdn.com/downloads/DJI_FlightHub_2/20221123/DJI_FlightHub_2_User_Guide_v2.0.pdf

DJI AirSense

Airplanes with an ADS-B transceiver will actively broadcast flight information including locations, flight paths, speeds, and altitudes. DJI aircraft incorporated with the DJI AirSense technology are capable of receiving flight information broadcast from ADS-B transceivers that comply with 1090ES or UAT standards within a radius range of 10 kilometers. Based on the received flight information, DJI AirSense can analyze and obtain the location, altitude, orientation, and velocity of the surrounding manned airplanes, and compare such figures with the current position, altitude, orientation, and velocity of the DJI aircraft to calculate in real time the potential risk of collision with the surrounding manned airplanes. DJI AirSense will then display a warning message in DJI Pilot 2 according to the risk level.

DJI AirSense only issues warning messages on approaches by specific manned airplanes under special circumstances. Always fly the aircraft within your visual line of sight and be cautious at all times to ensure flight safety. Please be aware that DJI AirSense has the following limitations:

1. DJI AirSense can only receive messages sent by airplanes installed with an ADS-B Out device that is in compliance with 1090ES (RTCA DO-260) or UAT (RTCA DO-282) standards. DJI devices cannot receive broadcast messages from or display warnings on airplanes not equipped with properly functioning ADS-B Out devices.
2. If there is an obstacle between a manned aircraft and a DJI aircraft, DJI AirSense will not be able to receive ADS-B messages from the aircraft or send warnings to the user. Keenly observe your surroundings and fly with caution.
3. Warning prompts may be sent with delay if DJI AirSense experiences any interference from the surrounding environment. Keenly observe your surroundings and fly with caution.
4. Warning prompts may not be received if the DJI aircraft is unable to obtain information on its own location.
5. DJI AirSense cannot receive ADS-B messages from manned airplanes or send warnings to the user when it is disabled or misconfigured.

When a risk is detected by the DJI AirSense system, the AR projection display will appear on the current view in DJI Pilot 2, intuitively showing the distance between the DJI aircraft and the airplane, and issuing a warning alert. Users should follow the instructions in DJI Pilot 2 upon receiving the alert.

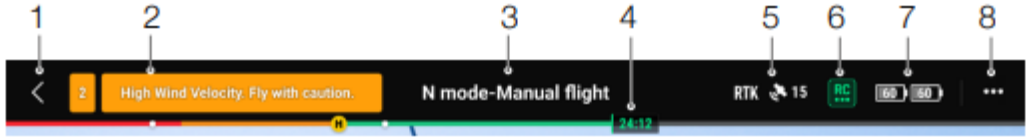
a. **Notice**: A blue airplane icon will appear on the map.

b. **Caution**: The app will display the message: "Manned aircraft detected nearby. Fly with caution." A small orange square icon with the distance information will appear on the camera view, and an orange airplane icon will appear on the map view.

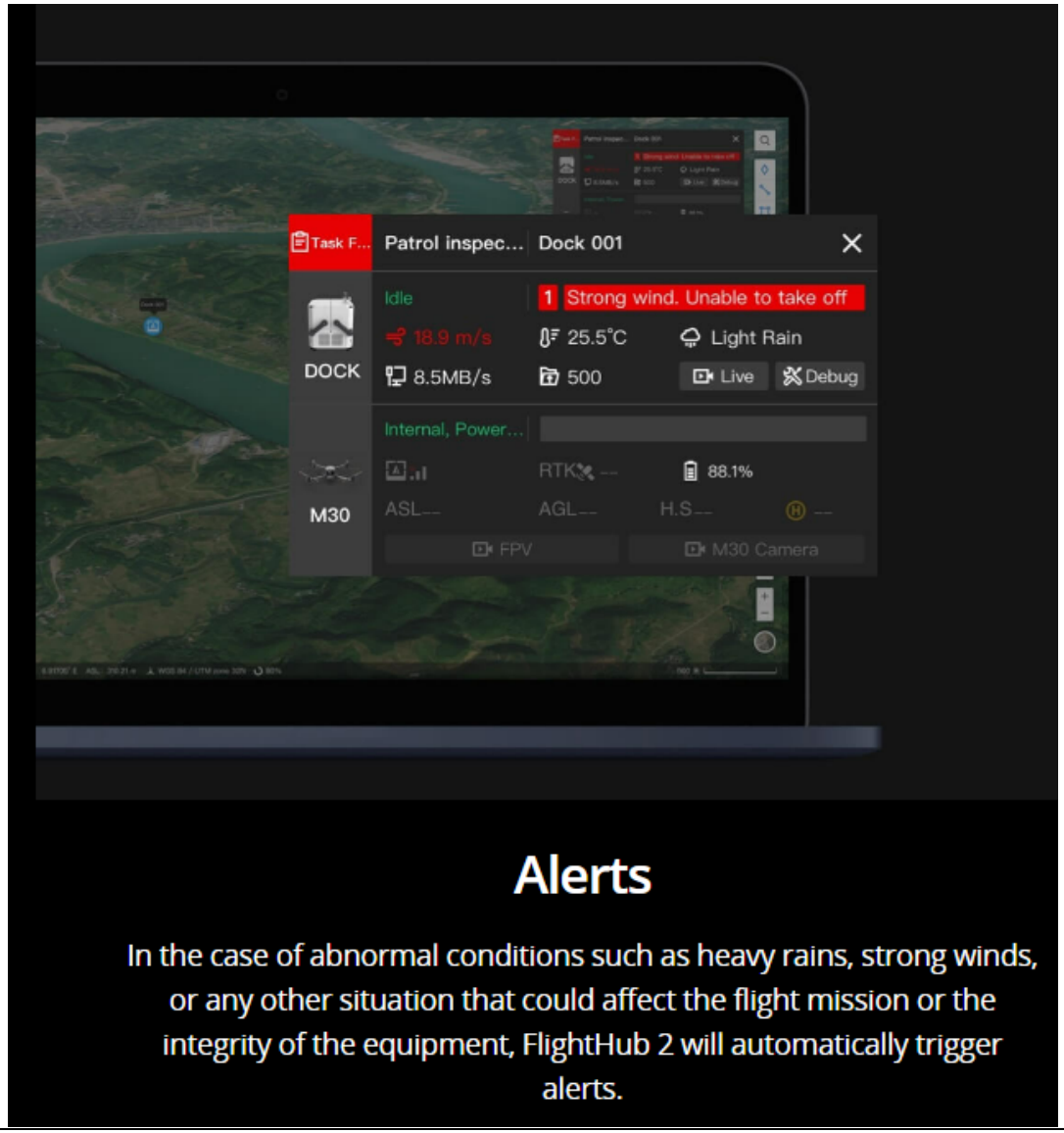
c. **Warning**: The app will display the message: "Collision risk. Descend or ascend immediately." If the user is not operating, the app will display: "Collision risk. Fly with caution." A small red square icon with the distance information will appear on the camera view, and a red airplane icon will appear on the map view. The remote controller will vibrate to alert.

https://dl.djicdn.com/downloads/matrice-30-series/20220830/Matrice30_Series_User_Manual_V1.2_EN1.pdf

Top Bar



1. Back: Tap to return to the homepage of the DJI Pilot 2 app.
2. System Status Bar: indicates the aircraft flight status and displays various warning messages. If a new alert appears during flight, it will also be displayed here and continue flashing. Tap to view the information and stop the flashing.

	https://dl.djicdn.com/downloads/matrice-30-series/20220830/Matrice30_Series_User_Manual_V1.2_EN1.pdf 

	https://www.dji.com/flighthub-2 5. RTH Altitude Relative to Dock The aircraft altitude relative to the dock when the aircraft is returning to the dock (Altitude range: 20 m - 1500 m). The RTH altitude should be set based on the actual flight condition, surrounding environment, and GEO https://dl.djicdn.com/downloads/DJI_FlightHub_2/20221123/DJI_FlightHub_2_User_Guide_v2.0.pdf DJI AEROSCOPE ENABLES REMOTE ID IN AN UNMANNED TRAFFIC MANAGEMENT SYSTEM Operation Zenith Shows Value of AeroScope in an Integrated UTM System

DJI AeroScope transmits basic telemetry and identification about airborne drones to authorities, providing critical information to help secure our skies

DJI's AeroScope is a Remote ID system that provides authorized users with the location, altitude, speed and direction of every DJI drone within radio range, as well as the location of the drone pilot and the serial number of the drone. Authorized users such as airports and police departments can see this information displayed on a computer map for every drone within the multi-mile range of AeroScope's antennae. This telemetry information is broadcast directly from the drone to the AeroScope receiver, allowing authorities to identify and track those drones, and take action if any of them raise concerns.

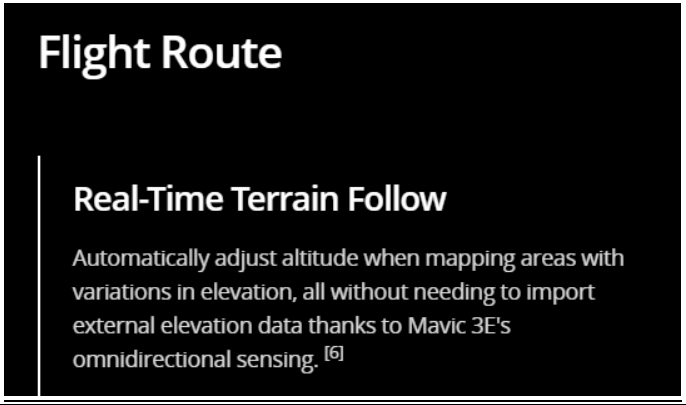
National aviation regulators understand that Remote ID will be a key component of future Unmanned Traffic Management (UTM) systems, which will simultaneously track drones and traditional aircraft in crowded airspace. Government agencies, academic centers and private companies are developing UTM prototypes to prevent conflicts and collisions, watch for unauthorized aircraft in restricted areas, and protect controlled airspace from unexpected intrusions.

Data from specific AeroScope deployments can be accessed remotely and integrated into larger systems through a Software Development Kit (SDK)

AeroScope played a key role in Operation Zenith, a recent large-scale test of UTM technology at Manchester Airport in the United Kingdom. Operation Zenith showed how AeroScope's easy, accessible Remote ID information could be integrated into a UTM system, providing airspace managers with a full picture of drone and traditional aircraft movements in the skies. As UTM systems move from the lab to the real world, AeroScope can be a key element in not only guarding against conflicts, but ensuring that all airspace users get fair and equitable access to the skies – unlocking the full potential for drones to help society.

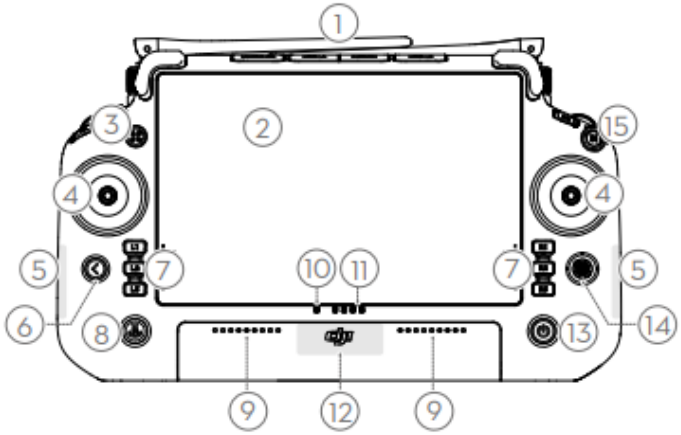
The video below spotlights how AeroScope was used as part of the Operation Zenith testing.

https://enterprise.dji.com/news/detail/aeroscope-enables-remote-id-in-utm-system



	https://www.dji.com/mavic-3-enterprise?site=brandsite&from=nav.
[13a] The fleet controller according to claim 8, wherein the instructions for the sending the vehicle commands to the vehicle comprises instructions for determining whether the vehicle is subject to single source control, wherein the determining whether the vehicle is subject to single source control comprises ensuring that the vehicle is subject to a single point of control at any one time; and	The Accused FlightHub 2 software includes instructions for determining whether the vehicle is subject to single source control, wherein the determining whether the vehicle is subject to single source control comprises ensuring that the vehicle is subject to a single point of control at any one time. *See* Claim 8. As discussed above, FlightHub 2 include software that provides a for control of vehicle commands, including the flight route library and task plan library. These commands include determining whether the vehicle is subject to single source control including ensuring the vehicle is subject to a single point of control at any one time. method getPipelines `Pipelines getPipelines()` *Package:* dji.sdk.payload *Description:* The pipelines to transmit data between DJI Payload device and DJI mobile SDK. This function does not support dual controllers scenarios. It's only supported by Matrice 300 RTK. https://developer.dji.com/api-reference/android-api/Components/Payload/DJIPayload.html?search=dual%20control&i=1&#djipayload_pipelines_inline

Remote Controller Overview



1. **External RC Antennas**
   Transmit control and video wireless signals between the remote controller and the aircraft.

2. **Touchscreen**
   Displays system and app views and supports up to 10 touch points. Make sure the touchscreen is clean, and completely dry before use. Otherwise, viewing and touch effects may be affected.

3. **Aircraft Authority Button**
   When flying with a M30 series aircraft, the aircraft authority button is used to take control of the aircraft and indicate the aircraft control status. Refer to Guide on the home screen for more information.

8. **Return to Home (RTH) Button**
   Press and hold to initiate RTH. Press again to cancel RTH.

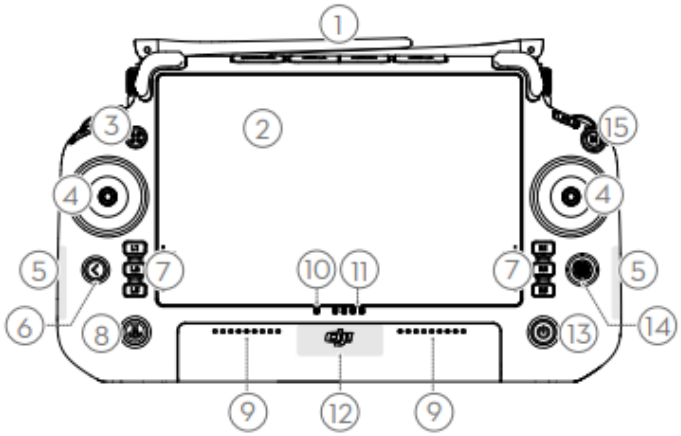
9. **Microphone**
   DO NOT block the microphones during usage.

10. **Status LED**
    Indicates the status of the remote controller. View detailed descriptions of the Status LED in the Remote Controller LEDs and Alert section or in Guide on the home screen of the remote controller.

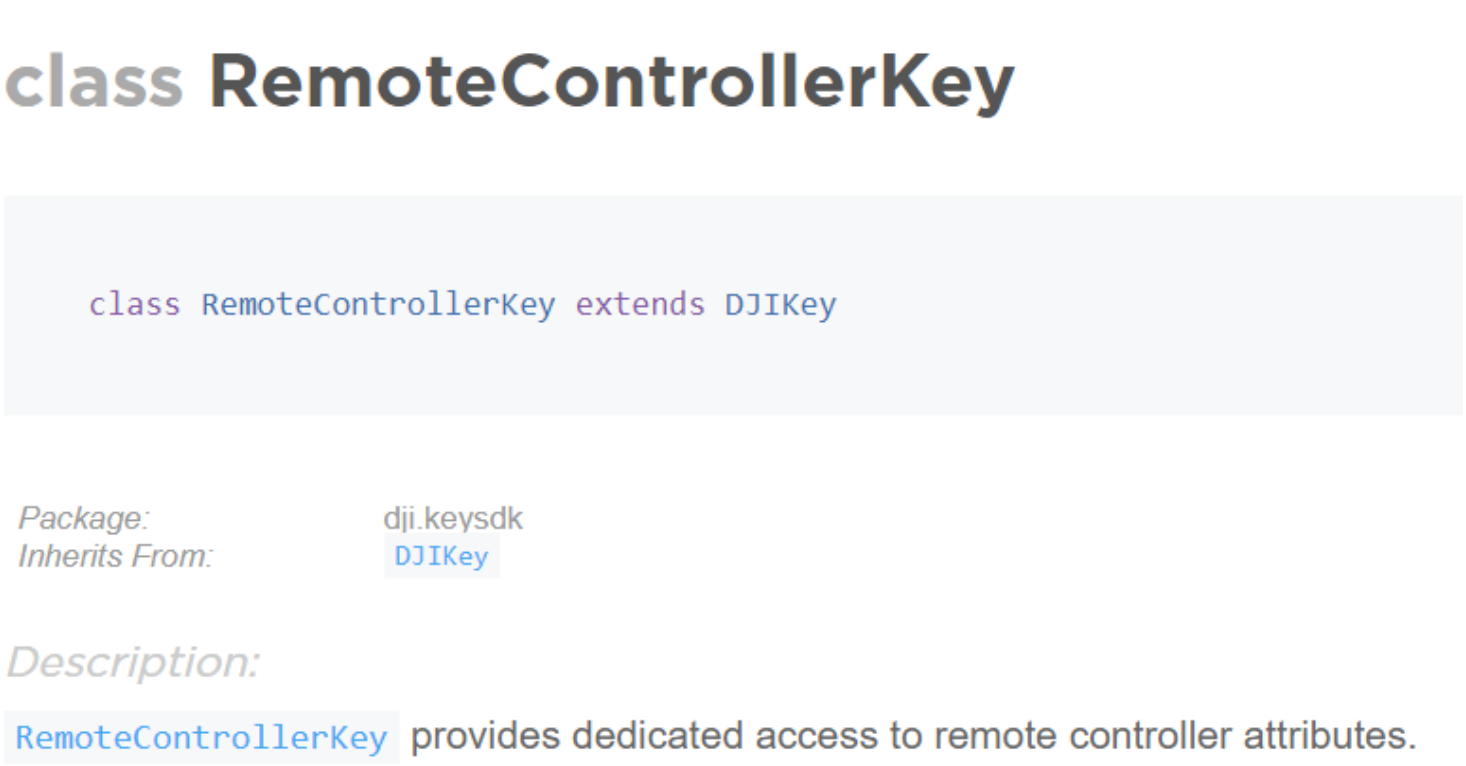
11. **Battery Level LEDs**
    Display the current battery level of the remote controller. View detailed descriptions of the Battery Level LEDs in the Remote Controller

	https://dl.djicdn.com/downloads/matrice-30-series/20220830/Matrice30_Series_User_Manual_V1.2_EN1.pdf class RemoteControllerKey `class RemoteControllerKey extends DJIKey` *Package:* dji.keysdk *Inherits From:* `DJIKey` *Description:* `RemoteControllerKey` provides dedicated access to remote controller attributes. https://developer.dji.com/api-reference/android-api/Components/KeyManager/DJIRemoteControllerKey.html?search=authority&i=0&#remotecontrollerkey_multi_rc_control_authority_surpass_key

	3. Either pilot can take over control of a device as needed. Press the aircraft control button to gain control of the aircraft. Tap on the upper right corner of the gimbal camera view in DJI Pilot 2 to gain control of the gimbal camera. After gaining aircraft control, the pilot can lock it by pressing and holding the aircraft authority button on the remote controller. The aircraft authority button will turn blue when the control is locked. The control sticks are used for operating the gimbal if the remote controller only has control over the gimbal camera. When the remote controller has full control, the control sticks are used for controlling the aircraft and the dials for adjusting gimbal movement. 4. In Advanced Dual Operator mode, a control transfer mechanism will be triggered if one of the remote controllers is disconnected from the aircraft. When this happens, control of the gimbal camera will shift from the disconnected remote controller to the other remote controller still connected with the aircraft. If the disconnected remote controller also has aircraft control, the other remote controller will receive a notification that the user may manually take over aircraft control. If the pilot of the connected remote controller chooses not to take over aircraft control, the aircraft will automatically perform the failsafe action. If the pilot of the connected remote controller does not choose either option within a specified time period, the aircraft will also activate the failsafe action. https://dl.djicdn.com/downloads/matrice-30-series/20220830/Matrice30_Series_User_Manual_V1.2_EN1.pdf
[13b] forwarding the vehicle commands to the vehicle in response the vehicle being subject to the single source control or a source of the vehicle commands being assigned an authority greater than any other set of vehicles	The Accused FlightHub 2 software includes instructions for forwarding the vehicle commands to the vehicle in response the vehicle being subject to the single source control or a source of the vehicle commands being assigned an authority greater than any other set of vehicles commands associated with the vehicle.

commands associated with the vehicle.	**Remote Controller Overview**  1. **External RC Antennas** Transmit control and video wireless signals between the remote controller and the aircraft. 2. **Touchscreen** Displays system and app views and supports up to 10 touch points. Make sure the touchscreen is clean, and completely dry before use. Otherwise, viewing and touch effects may be affected. 3. **Aircraft Authority Button** When flying with a M30 series aircraft, the aircraft authority button is used to take control of the aircraft and indicate the aircraft control status. Refer to Guide on the home screen for more information. 8. **Return to Home (RTH) Button** Press and hold to initiate RTH. Press again to cancel RTH. 9. **Microphone** DO NOT block the microphones during usage. 10. **Status LED** Indicates the status of the remote controller. View detailed descriptions of the Status LED in the Remote Controller LEDs and Alert section or in Guide on the home screen of the remote controller. 11. **Battery Level LEDs** Display the current battery level of the remote controller. View detailed descriptions of the Battery Level LEDs in the Remote Controller

https://dl.djicdn.com/downloads/matrice-30-series/20220830/Matrice30_Series_User_Manual_V1.2_EN1.pdf

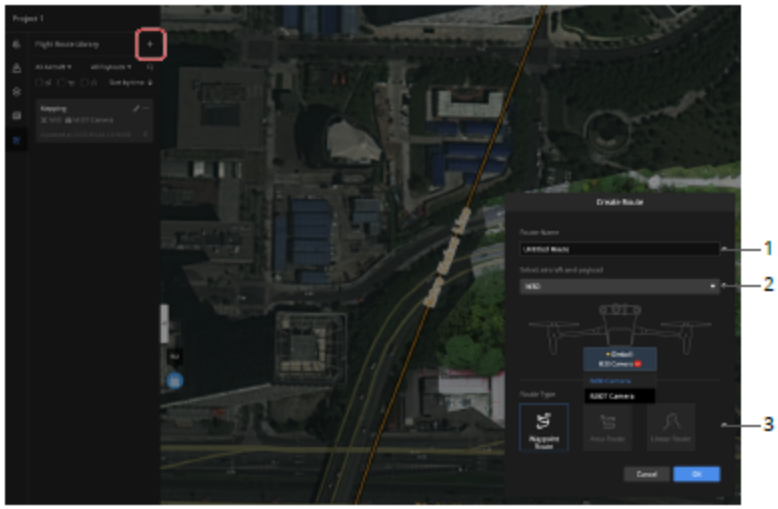


https://developer.dji.com/api-reference/android-api/Components/KeyManager/DJIRemoteControllerKey.html?search=authority&i=0&#remotecontrollerkey_multi_rc_control_authority_surpass_key

	3. Either pilot can take over control of a device as needed. Press the aircraft control button to gain control of the aircraft. Tap on the upper right corner of the gimbal camera view in DJI Pilot 2 to gain control of the gimbal camera. After gaining aircraft control, the pilot can lock it by pressing and holding the aircraft authority button on the remote controller. The aircraft authority button will turn blue when the control is locked. The control sticks are used for operating the gimbal if the remote controller only has control over the gimbal camera. When the remote controller has full control, the control sticks are used for controlling the aircraft and the dials for adjusting gimbal movement. 4. In Advanced Dual Operator mode, a control transfer mechanism will be triggered if one of the remote controllers is disconnected from the aircraft. When this happens, control of the gimbal camera will shift from the disconnected remote controller to the other remote controller still connected with the aircraft. If the disconnected remote controller also has aircraft control, the other remote controller will receive a notification that the user may manually take over aircraft control. If the pilot of the connected remote controller chooses not to take over aircraft control, the aircraft will automatically perform the failsafe action. If the pilot of the connected remote controller does not choose either option within a specified time period, the aircraft will also activate the failsafe action. https://dl.djicdn.com/downloads/matrice-30-series/20220830/Matrice30_Series_User_Manual_V1.2_EN1.pdf
[14] The fleet controller according to claim 8, wherein the requirements for use of the flight path comprise at least one of weight, size, minimum or maximum altitude, or airspeed.	The Accused FlightHub 2 software includes requirements for use of the flight path comprise at least one of weight, size, minimum or maximum altitude, or airspeed. For example, FlightHub 2 software includes requirements for use of the flight path that include payload weight, drone size, minimum and maximum altitude, and airspeed.

Create Flight Routes

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



1. Route Name
   The route name is required and should be within 60 characters.
2. Select aircraft and payload
   Only the Matrice 30 and Mavic 3 enterprise series are supported.
3. Route Type
   Only the Waypoint routes are supported.

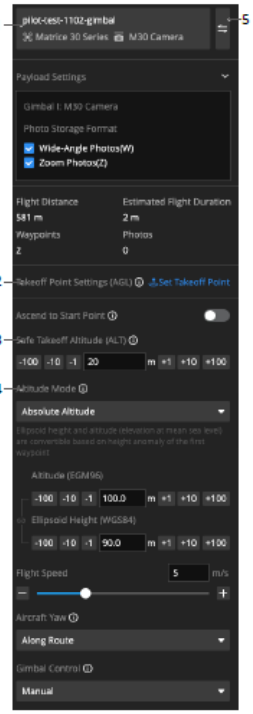
Click OK to create the flight route.

DJI FlightHub 2 User Guide

Edit Waypoint Routes

Users will be automatically directed to the flight route editor after creating a flight route. Members can also click to edit the flight route and waypoints.

Edit Flight Routes



Move the mouse over ⓘ to view setting descriptions.

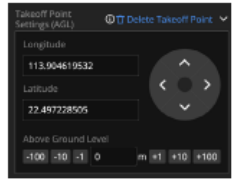
Pay attention to the settings below.

1. Basic Information
   Click to edit the flight route name and change the aircraft and payload.

   ⚠ Changing the payload will affect flight route settings.

2. Takeoff Point Settings (AGL)
   Click Set Takeoff Point and set the location where the aircraft will take off.

   a. Edit the longitude, latitude, and altitude above the ground level on the coordinate panel.



   b. Select and drag the takeoff point icon to move the takeoff point. Press and hold the Alt key and drag the icon up and down to adjust the altitude.

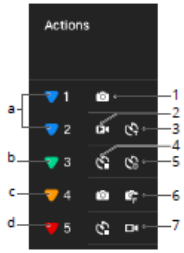
   c. Click Delete Takeoff Point to delete the takeoff point data.

• When the Altitude mode is set to Altitude Relative to Takeoff Point (ALT), the takeoff point will be a reference point used to plan the flight route. The actual takeoff point of an aircraft when performing a task may differ from the set takeoff point. The route altitude will be based on the altitude of the actual takeoff point during the flight.

3. Safe Takeoff Altitude (ALT)
   Safe Takeoff Altitude is the altitude relative to the takeoff point altitude. Aircraft will ascend to the safe takeoff altitude after takeoff and fly to the flight route start point.
4. Altitude Mode
   The Altitude mode is set to Absolute Altitude by default. Project members can also change it to Altitude Relative to Takeoff Point (ALT) or Above Ground Level.
5. Switch Between the Flight Route and Actions Panels
   Users can click to switch to the Actions panel.

Waypoint Action Icon Colors:

a. Blue: The waypoint parameters do not follow the flight route settings.
b. Green: The waypoint parameters follow the flight route settings.
c. Yellow: There are errors in the waypoint settings.
d. Red: There are severe errors in the waypoint settings, and the flight route cannot be performed.



Waypoint Action Icons:

1. Take a photo
2. Start recording
3. Start a timed interval shot
4. End the interval shot
5. Start a distance interval shot
6. Take a photo (Fixed angle)
7. End recording

https://dl.djicdn.com/downloads/DJI_FlightHub_2/20221123/DJI_FlightHub_2_User_Guide_v2.0.pdf

Maximum Altitude & Distance Restrictions

Maximum flight altitude restricts the aircraft flight altitude, while maximum flight distance restricts the aircraft flight radius around the Home Point. These limits can be set using the DJI Pilot 2 app for improved flight safety.

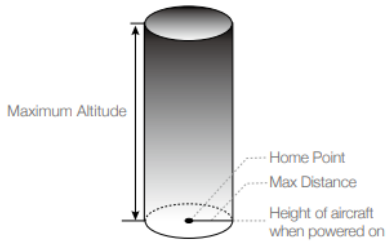
https://dl.djicdn.com/downloads/DJI_Mavic_3_Enterprise/20221212/DJI_Mavic_3E_3T_User_Manual_EN.pdf

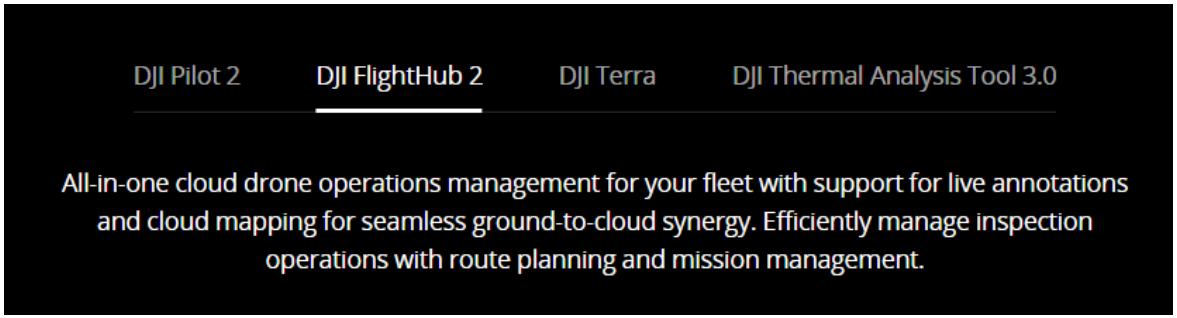
Strong GNSS Signal		
	Flight Restrictions	Prompt in DJI Pilot 2
Max Altitude	The altitude of the aircraft cannot exceed the value set in DJI Pilot 2.	Aircraft approaching max flight altitude. Fly with caution.
Max Distance	The straight-line distance from the aircraft to the Home Point cannot exceed the max flight distance set in DJI Pilot 2.	Aircraft approaching max flight distance. Fly with caution.

https://dl.djicdn.com/downloads/DJI_Mavic_3_Enterprise/20221212/DJI_Mavic_3E_3T_User_Manual_EN.pdf

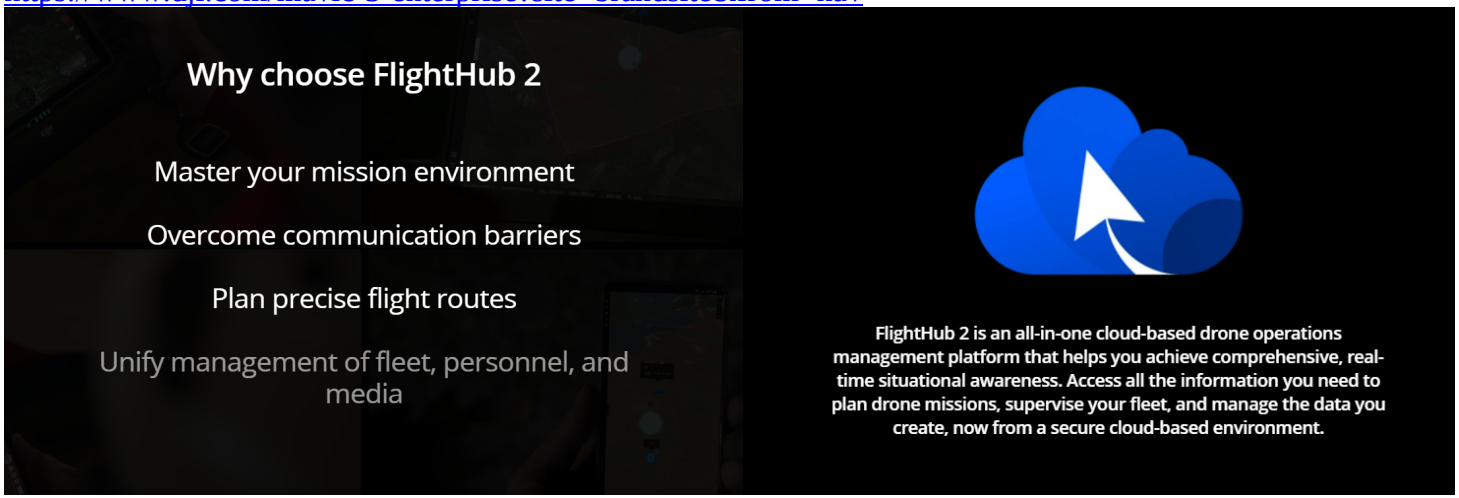
Annotation and Sync Map	✓	✓
Share Device Location	✓	✓
Real-time Mapping	Bind equipment with DJI FlightHub 2 for limited free trials of certain functions.	3,000 images/month [4] Unused number of mapping images will be rolled over into the following month only
Display Model	1 Includes 2D and 3D models. Only one model can be overlaid on the map at a time in a project	Unlimited
2.5D Map	✓	✓
Flight Path Planning	✓	✓

https://www.dji.com/flighthub-2

	MATRICE 30 SERIES User Manual **Maximum Altitude & Distance Restrictions** Maximum flight altitude restricts the aircraft flight altitude, while maximum flight distance restricts the aircraft flight radius around the Home Point. These limits can be set using the DJI Pilot 2 app for improved flight safety.  Home Point not manually updated during flight https://dl.djicdn.com/downloads/matrice-30-series/20220830/Matrice30_Series_User_Manual_V1.2_EN1.pdf 2. Set the return-to-home altitude, out-of-control action, maximum altitude and maximum flight distance, update the Home Point, select the control stick mode, and set the battery warning threshold, obstacle sensing switches and obstacle sensing distances. • It is recommended to carefully conduct the preflight check according to the operation scenario and requirements before takeoff. • Before executing a mission flight, conduct a preflight check and verify the basic parameter information of the mission flight. Refer to the Mission Flight section for details. https://dl.djicdn.com/downloads/matrice-30-series/20220830/Matrice30_Series_User_Manual_V1.2_EN1.pdf
[15a] An autonomous vehicle fleet control system, comprising: a vehicle; a communications network; and	If the preamble is limiting, the accused DJI's FlightHub 2 software includes a fleet control system comprising a vehicle and communications network. DJI's FlightHub2 is used by DJI and/or its customers to control a fleet comprising the Accused DJI Drones. For example, the DJI FlightHub2 functionality includes systems for fleet control including route planning, mission management, and fleet supervision as shown by the evidence below. DJI's autonomous vehicle fleet control system further includes a fleet of Accused DJI Drones and a communications network (e.g., WiFi, OcuSync, Lightbridge, and/or Auxiliary networks).



https://www.dji.com/mavic-3-enterprise?site=brandsite&from=nav



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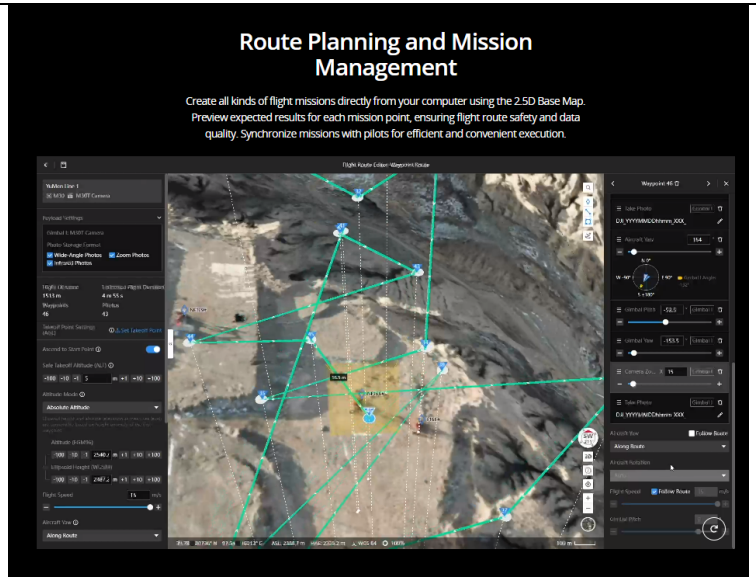
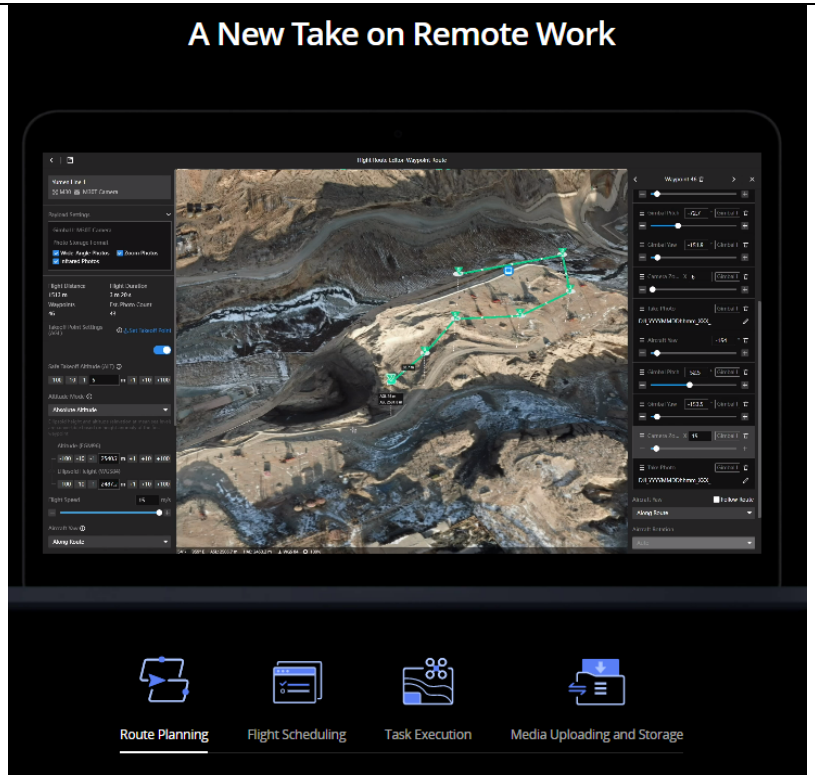
	 https://www.dji.com/flighthub-2



https://www.dji.com/flighthub-2

FlightHub 2 is DJI's complete ground-to-cloud drone operations management software, and it's packed with tools to help you plan missions, stream data, and collaborate with your team in real-time. From fast mapping to DJI Dock management, here are the top five features of FlightHub 2.

Full control of DJI Dock operations

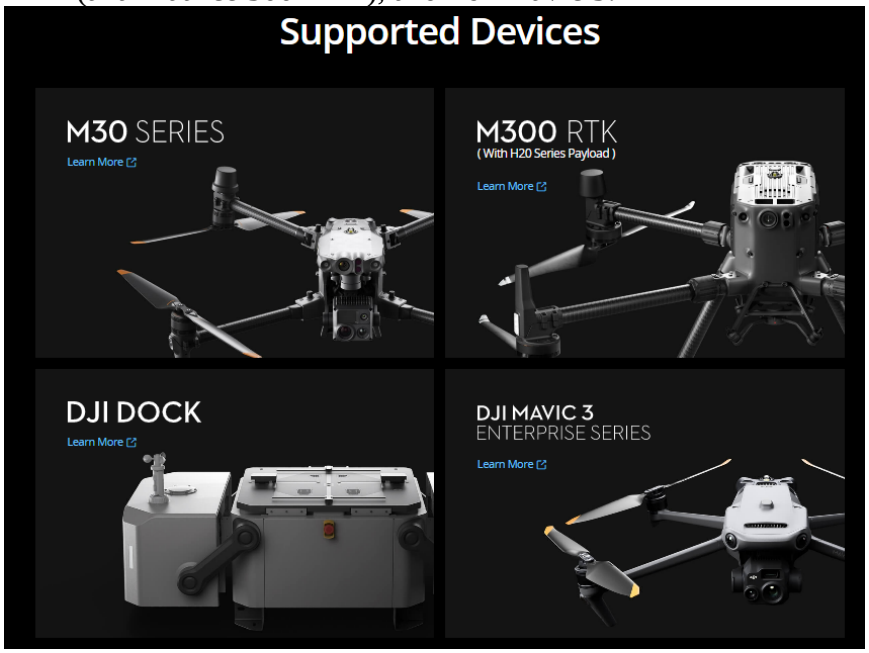
FlightHub 2 is also your hub for all DJI Dock operations. Within the app, you can monitor the status of your M30, plan and schedule missions, and coordinate everything required for round-the-clock, automated operations.

Cloud-based mission planning & collaboration

FlightHub 2 combines data storage and fleet management with intuitive tools that support public safety and inspection operations in real-time. It's packed with collaborative solutions that improve situational awareness for all team members. We've built an empowering application that enables better data sharing communication, giving mission commanders everything they need to make smarter decisions and deploy resources more effectively.

https://enterprise-insights.dji.com/blog/flighthub-2-top-features

The fleet of vehicles controlled via FlightHub 2 include at least the M30 Series (Matrice 30, Matrice 30 T), M300 RTK (aka Matrice 300 RTK), and DJI Mavic 3:



https://www.dji.com/flighthub-2

https://www.dji.com/mavic-3-enterprise?site=brandsite&from=nav

AirLink

2017-06-27

Introduction

AirLink describes the wireless link between aircraft, remote controllers, handheld cameras and mobile devices.

There are four types of wireless links used in DJI products:

- WiFi
- OcuSync
- Lightbridge
- Auxiliary

Wireless communication links provide great flexibility, but also have limitations. The link will degrade as obstacles come between the devices communicating wirelessly, as the separation between devices increases, and as interference with other communication links increases.

A table detailing the type of wireless link for all aircraft products can be found in the Product Introduction.

Osmo is not included in this table and uses the WiFi wireless link between itself and mobile device.

https://developer.dji.com/mobile-sdk/documentation/introduction/component-guide-airlink.html

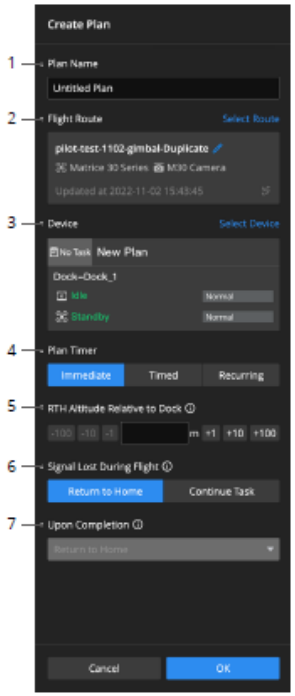
[15b] a fleet controller in communication with the vehicle by way of the communications network, the fleet controller configured to:	The Accused FlightHub 2 software includes a fleet controller in communication with the vehicle by way of the communications network and that is configured to perform the steps set forth below. For example, the Accused FlightHub 2 software comprises a fleet controller that communicates with the drones by way of one or more communications networks (e.g., WiFi, OcuSync, Lightbridge, and/or Auxiliary networks). AirLink 2017-06-27 Introduction AirLink describes the wireless link between aircraft, remote controllers, handheld cameras and mobile devices. There are four types of wireless links used in DJI products: • WiFi • OcuSync • Lightbridge • Auxiliary Wireless communication links provide great flexibility, but also have limitations. The link will degrade as obstacles come between the devices communicating wirelessly, as the separation between devices increases, and as interference with other communication links increases. A table detailing the type of wireless link for all aircraft products can be found in the Product Introduction. Osmo is not included in this table and uses the WiFi wireless link between itself and mobile device. https://developer.dji.com/mobile-sdk/documentation/introduction/component-guide-airlink.html

Task Plan Library

Project members can click to enter the task plan library to view task plans and the administrators can create and manage plans.

Create a Plan

Click Create Plan to create a task plan.



1. Plan Name

   The plan name is required and should be within 50 characters.

2. 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.

3. Device

   Only docks can be selected.

4. Plan Timer

   Users can select from Immediate, Timed, and Recurring.

   a. When the plan timer is set to Immediate, the aircraft will immediately perform the flight task once the plan is created.

   b. When the plan timer is set to Timed, the aircraft will perform the flight task when the set time is reached.

   c. When the plan timer is set to Recurring, the aircraft will perform repeated flight tasks when the set time is reached.

5. RTH Altitude Relative to Dock

   The aircraft altitude relative to the dock when the aircraft is returning to the dock (Altitude range: 20 m - 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.

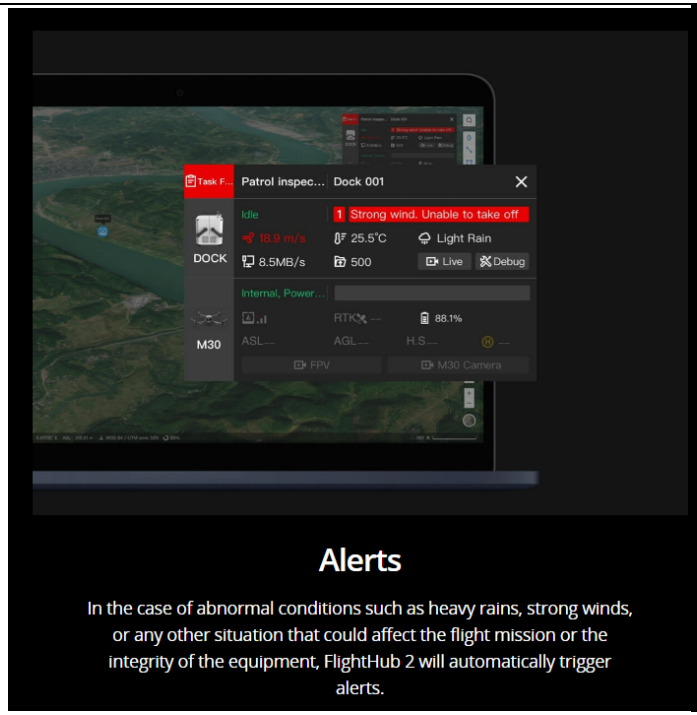
6. Signal Lost During Flight

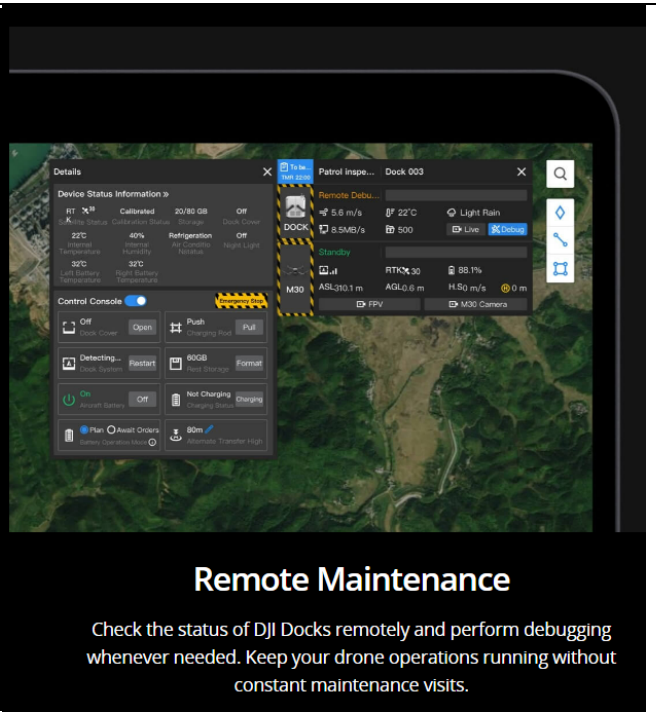
   The aircraft will return to home or continue the flight task when it is disconnected from the dock.

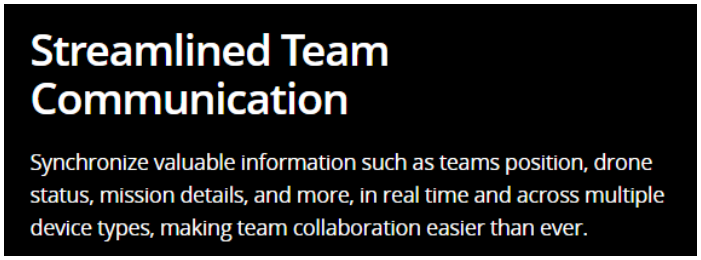
7. Upon Completion

   Only Return to Home is supported when creating a task plan.

https://dl.djicdn.com/downloads/DJI_FlightHub_2/DJI_FlightHub_2_User_Guide_v2.0.pdf


Task F...
Patrol inspec... Dock 001
Idle
Strong wind. Unable to take off
18.9 m/s
25.5°C
Light Rain
8.5MB/s
500
Live
Debug
DOCK
Internal, Power...
M30
RTK
88.1%
ASL---
AGL---
H.S---
FPV
M30 Camera
Alerts
In the case of abnormal conditions such as heavy rains, strong winds, or any other situation that could affect the flight mission or the integrity of the equipment, FlightHub 2 will automatically trigger alerts.


Details
Device Status Information
Control Console
Patrol inspe... Dock 003
Remote Debu...
5.6 m/s
22°C
Light Rain
8.5MB/s
500
Live
Debug
Standby
RTK
88.1%
FPV
M30 Camera
DOCK
M30
Remote Maintenance
Check the status of DJI Docks remotely and perform debugging whenever needed. Keep your drone operations running without constant maintenance visits.


Streamlined Team Communication
Synchronize valuable information such as teams position, drone status, mission details, and more, in real time and across multiple device types, making team collaboration easier than ever.

DJI takes the security of your data seriously. We use best-in-class measures to protect the integrity of your photos, videos, flight logs, and other user data, allowing you to confidently use the full power of a cloud-based fleet management system. FlightHub 2 is built to maintain integrity across multiple levels of the drone and data management process – from device connection and maintenance, to data upload and transmission, to cloud service storage and operational security.

DJI FlightHub 2 uploads, stores and manages data on cloud servers operated by Amazon Web Services, which are compliant to ISO/IEC 27001 security certifications.

https://www.dji.com/flighthub-2

Monitor and Maintain Devices

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

1. 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.

2. 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, and operating mode can be modified.

	Online Devices Project members can view online aircraft and its connected remote controller on the Online Devices panel. Device statuses include: a. When a device is online, its information will be displayed on the panel. b. When a device is offline for less than five minutes, its information will be displayed in gray. c. When a device is offline for more than five minutes, its information will not be displayed. https://dl.djicdn.com/downloads/DJI_FlightHub_2/20221123/DJI_FlightHub_2_User_Guide_v2.0.pdf

https://www.dji.com/flighthub-2

https://www.dji.com/flighthub-2

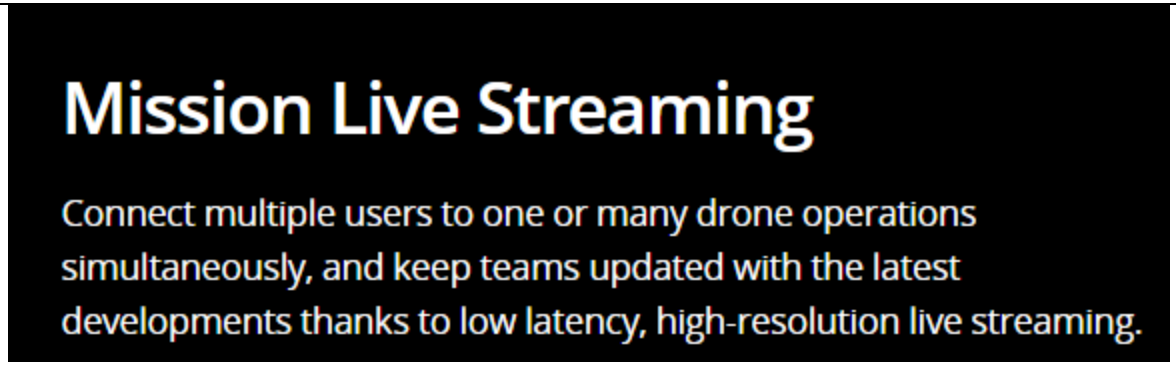
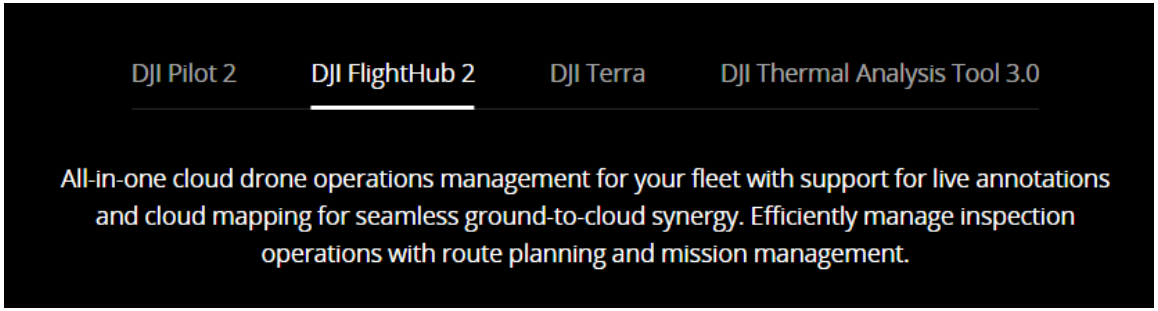
Dock Management

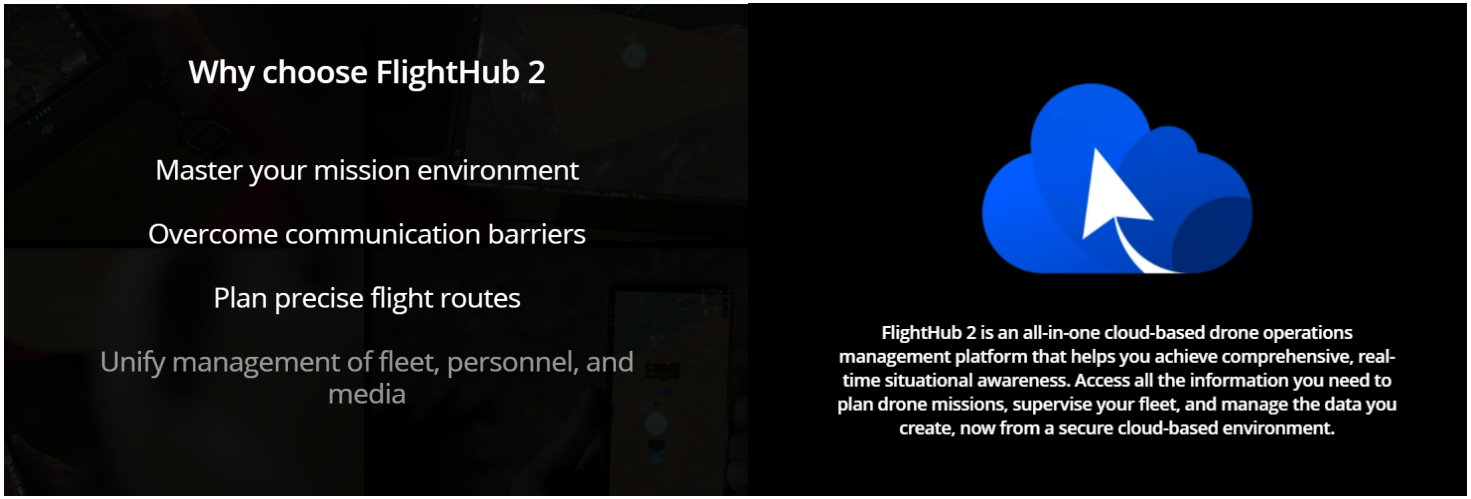
Bind to an Organization

The dock can be bound to a DJI FlightHub 2 organization in DJI Pilot 2. Make sure that the dock is connected to the cable or 4G network. Open DJI Pilot 2 and enter the home screen.

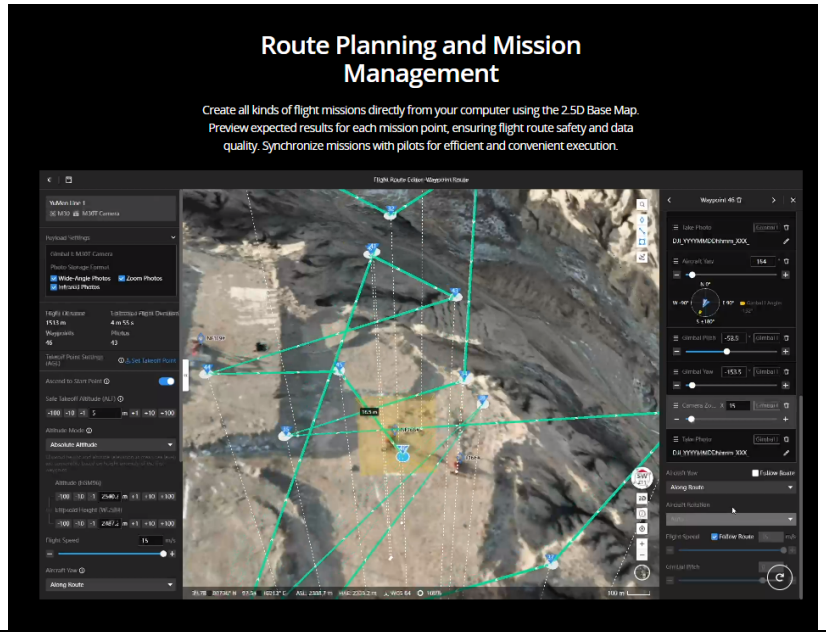
1. Connect the USB-A port on the dock to the USB-C port on the remote controller with a USB cable.
2. Follow the on-screen instructions to deploy the dock. Input the organization ID, device binding code, and dock and aircraft names on the Cloud Service Configuration screen.

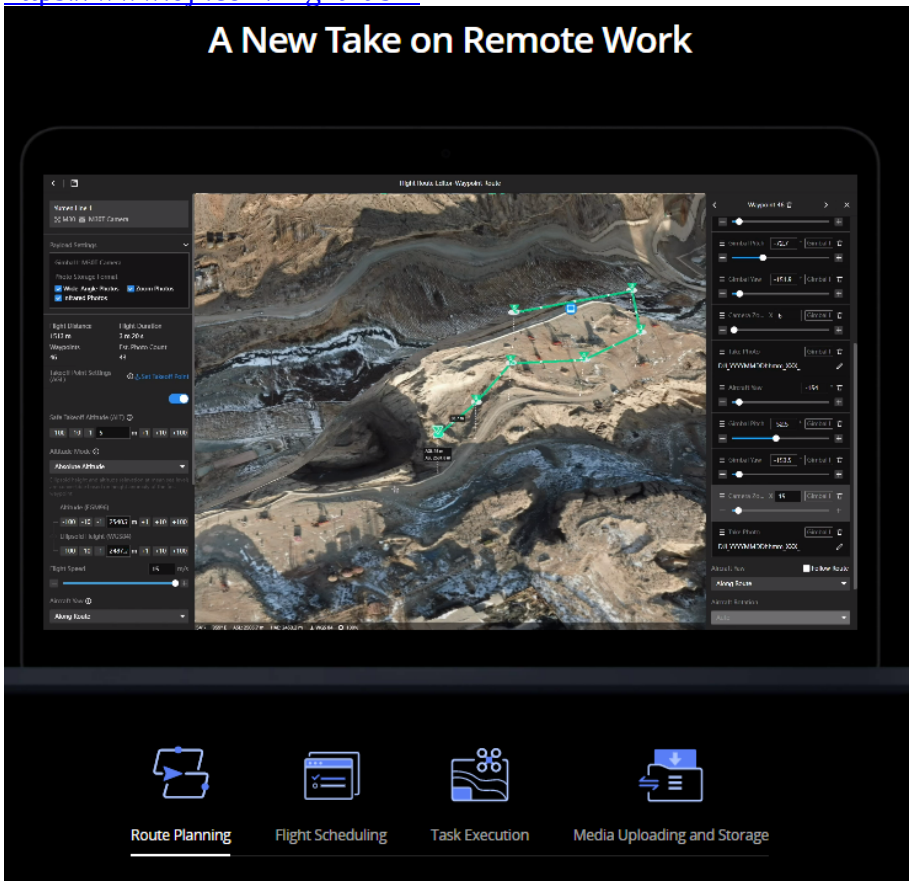
https://dl.djicdn.com/downloads/DJI_FlightHub_2/20221123/DJI_FlightHub_2_User_Guide_v2.0.pdf

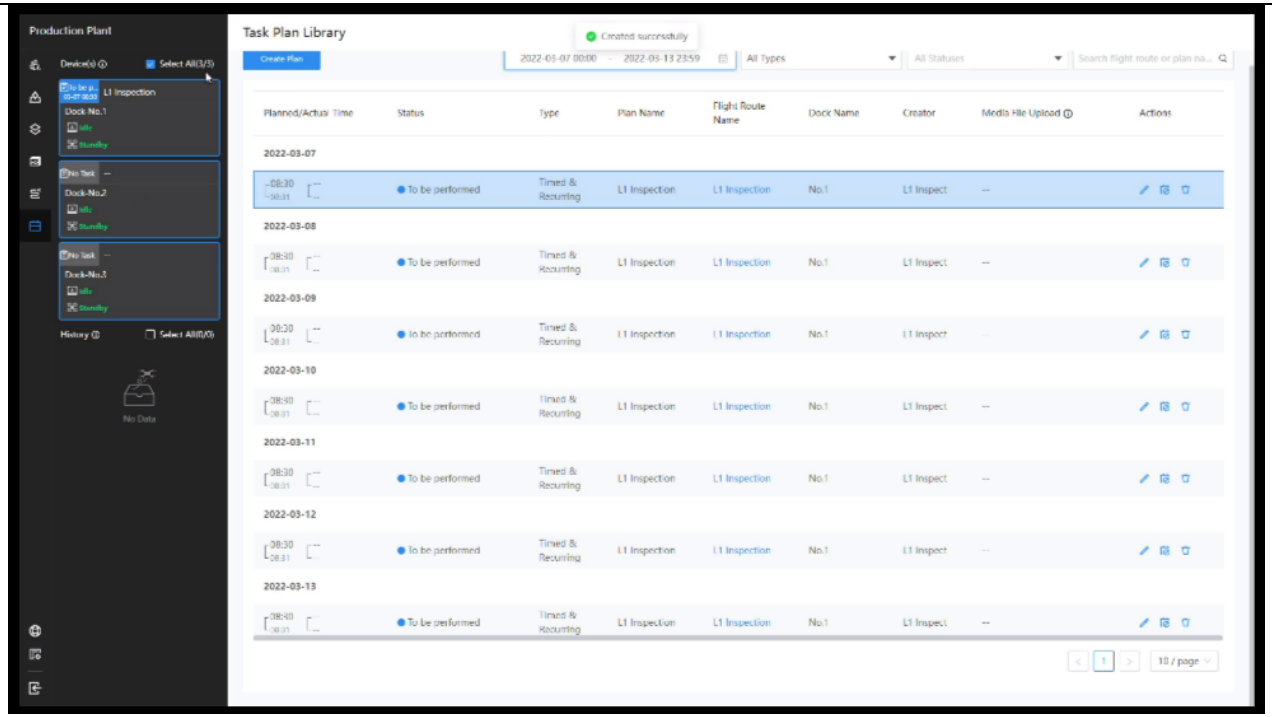
	 https://www.dji.com/flighthub-2
[15c] obtain, from a master schedule, a mission for a vehicle of a fleet of autonomous vehicles, wherein the mission is associated with a mission entry of the master schedule;	The accused DJI FlightHub 2 software includes a fleet controller configured to obtain, from a master schedule, a mission for a vehicle of a fleet of autonomous vehicles, wherein the mission is associated with a mission entry of the master schedule. For example, DJI describes that FlightHub 2 provides for planning, creating, managing, scheduling, and synchronizing missions and flight routes. FlightHub 2 includes, for example, a task plan library comprising a master schedule, from which a task can be obtained, where each task is associated with a mission entry of the master schedule. As another example, FlightHub 2 includes a flight route library comprising a master schedule, from which a mission for a drone can be obtained, where each mission is associated with an entry in the master schedule. Missions of the flight route library can be obtained, for example, via the creation and editing of flight routes from the master schedule.  https://www.dji.com/mavic-3-enterprise?site=brandsite&from=nav



https://www.dji.com/flighthub-2



	https://www.dji.com/flighthub-2  https://www.dji.com/flighthub-2



https://www.dji.com/flighthub-2

Flight Route Library

Project members can click to enter the flight route library to import, create, and edit flight routes.

Import Flight Routes

Click > Import KMZ File to select and import KMZ flight routes. The upload progress and status will be displayed during the flight route upload. Users can stop uploading files when the files are being or waiting to be uploaded.

• The KMZ file must include wpmz/template.kml and wpmz/waylines.wpml.

https://dl.djicdn.com/downloads/DJI_FlightHub_2/20221123/DJI_FlightHub_2_User_Guide_v2.0.pdf, 30.

FlightHub 2 is DJI's complete ground-to-cloud drone operations management software, and it's packed with tools to help you plan missions, stream data, and collaborate with your team in real-time. From fast mapping to DJI Dock management, here are the top five features of FlightHub 2.

Full control of DJI Dock operations

FlightHub 2 is also your hub for all DJI Dock operations. Within the app, you can monitor the status of your M30, plan and schedule missions, and coordinate everything required for round-the-clock, automated operations.

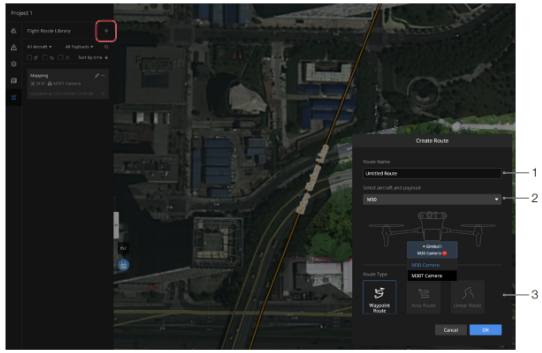
Cloud-based mission planning & collaboration

FlightHub 2 combines data storage and fleet management with intuitive tools that support public safety and inspection operations in real-time. It's packed with collaborative solutions that improve situational awareness for all team members. We've built an empowering application that enables better data sharing communication, giving mission commanders everything they need to make smarter decisions and deploy resources more effectively.

https://enterprise-insights.dji.com/blog/flighthub-2-top-features

Create Flight Routes

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



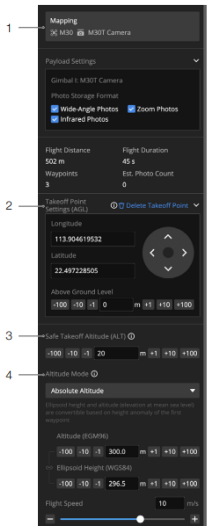
1. Route Name
   The route name is required and should be within 60 characters.
2. Select aircraft and payload
   Only Matrice 30 series are supported.
3. Route Type
   Only Waypoint routes are supported.

Click OK to create the flight route.

Edit Waypoint Routes

Edit Flight Routes

Enter the flight route editor and set flight route details.



Move the mouse over ⓘ to view setting descriptions.

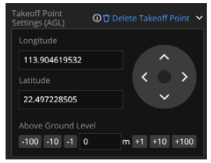
Pay attention to the settings below.

1. Basic Information
   Click to edit the flight route name and change the aircraft and payload.

   ⚠ Changing the payload will affect flight route settings.

2. Takeoff Point Settings (AGL)
   Click Set Takeoff Point and set the location where the aircraft will take off.

   A. Edit the longitude, latitude, and altitude above the ground level on the coordinate panel.

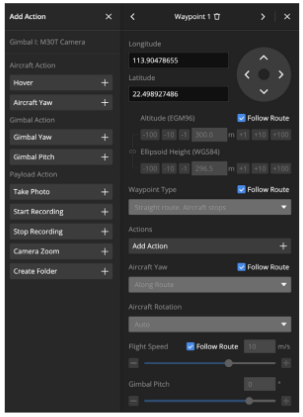


   B. Select and drag the takeoff point icon to move the takeoff point. Press and hold the Alt key and drag the icon up and down to adjust the altitude.

3. **Safe Takeoff Altitude (ALT)**
   Safe Takeoff Altitude is the altitude relative to the takeoff point altitude. Aircraft will ascend to the safe takeoff altitude after takeoff and fly to the flight route start point.
4. **Altitude Mode**
   The Altitude mode is set to Absolute Altitude by default. Project members can also change it to Altitude Relative to Takeoff Point (ALT) or Above Ground Level.
5. **Return-to-Home Altitude (ALT)**
   The return-to-home altitude should be set based on the actual flight condition, surrounding environment, and GEO information. It is recommended that the altitude be set higher than the highest geographical point in the flight area.

Edit Waypoints

Select and click on the map to add waypoints. Select a waypoint and set waypoint details.



1. **Longitude and Latitude**
   The longitude and latitude of an aircraft are obtained from its geographical location on the map.
2. **Altitude, Ellipsoid Height (WGS84), Waypoint Type, Aircraft Yaw, and Flight Speed**
   These parameters are consistent with the corresponding flight route settings by default. If the flight route settings are changed, the above parameters will also be updated.
3. **Actions**
   Click "+" to add actions for the aircraft, gimbal, and payload.
4. Click on the upper left corner to save the flight route settings.

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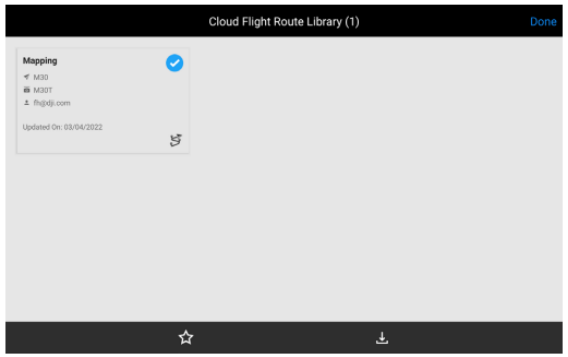
Perform Flight Tasks

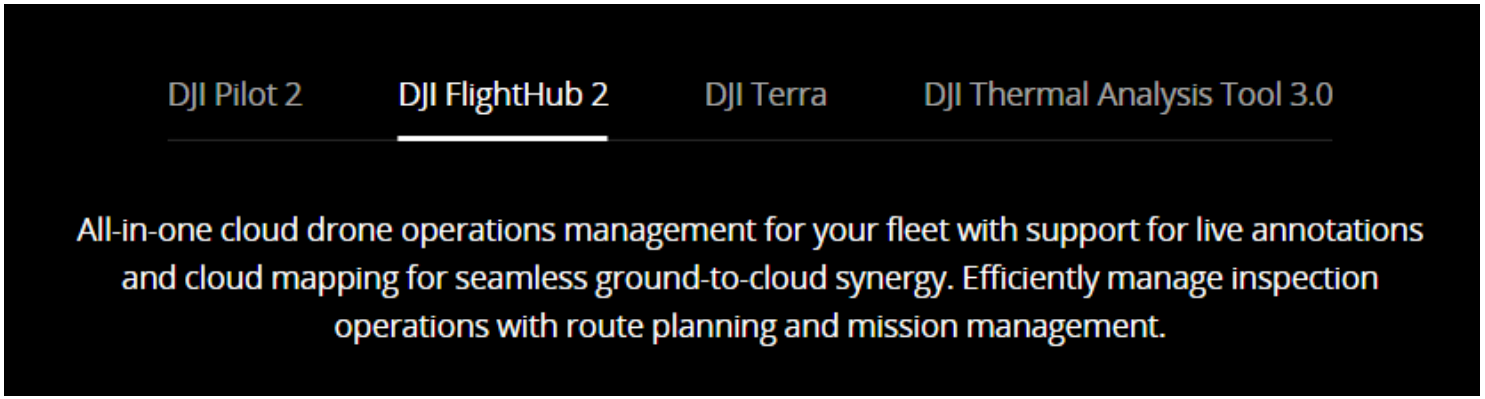
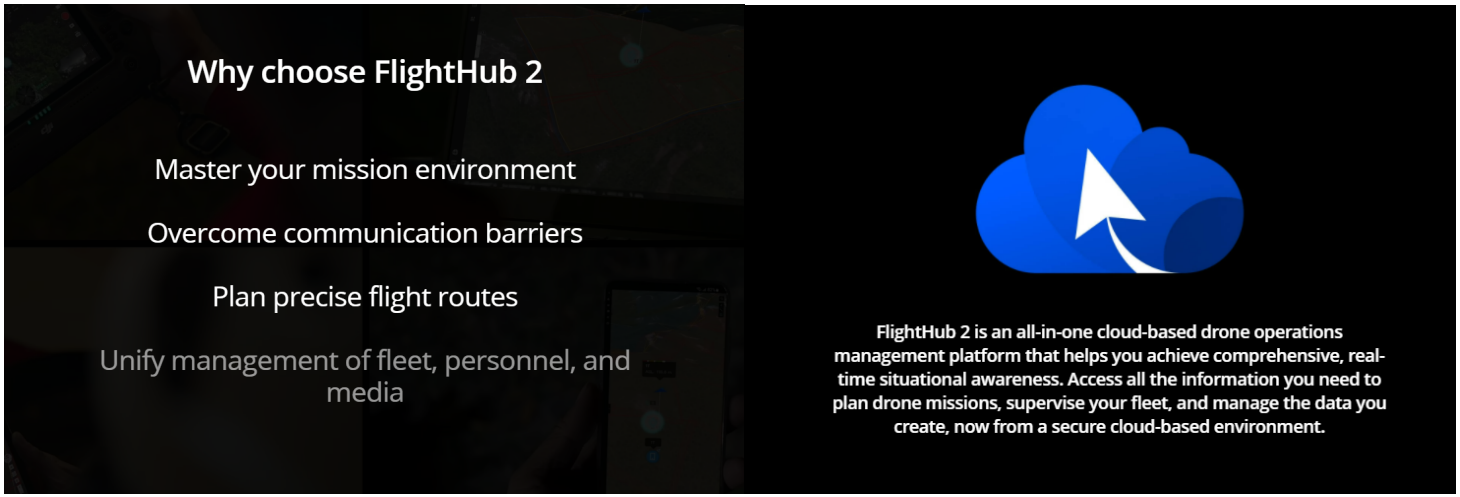
DJI Pilot users can log in to the DJI FlightHub 2 cloud service and perform cloud flight tasks.

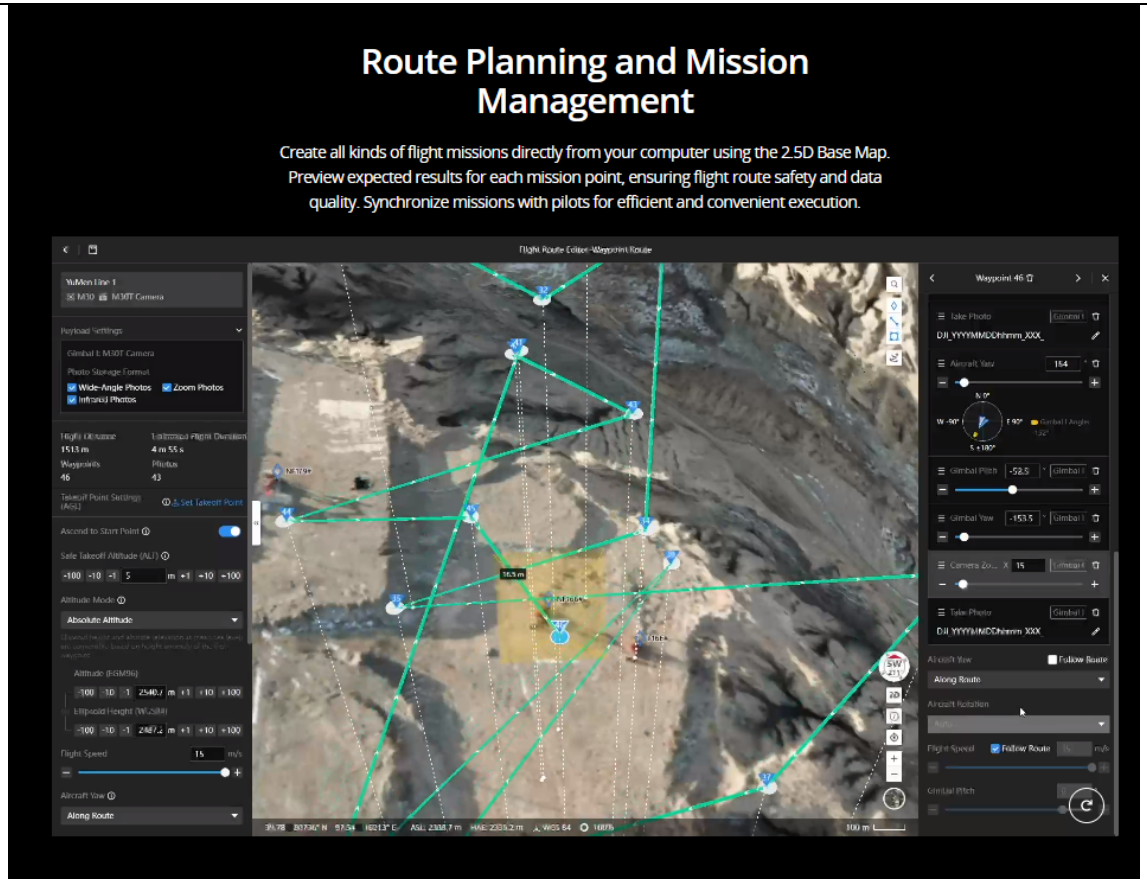
1. Enter the home screen of DJI Pilot, tap Flight Route, select Cloud to view flight routes created on DJI FlightHub 2.
2. Select the flight route and tap , the flight route will be downloaded to Flight Route Library.



3. Select and enter flight route settings. Tap to perform the flight task.

https://dl.djicdn.com/downloads/DJI_FlightHub_2/DJI_FlightHub_2_User_Guide.pdf

[15d] identify a flight path associated with the mission;	The accused DJI FlightHub 2 software includes a fleet controller configured to identify a flight path associated with the mission. For example, the DJI FlightHub 2 functionality provides functions to create, plan, and edit flight paths associated with each mission.  https://www.dji.com/mavic-3-enterprise?site=brandsite&from=nav  https://www.dji.com/flighthub-2



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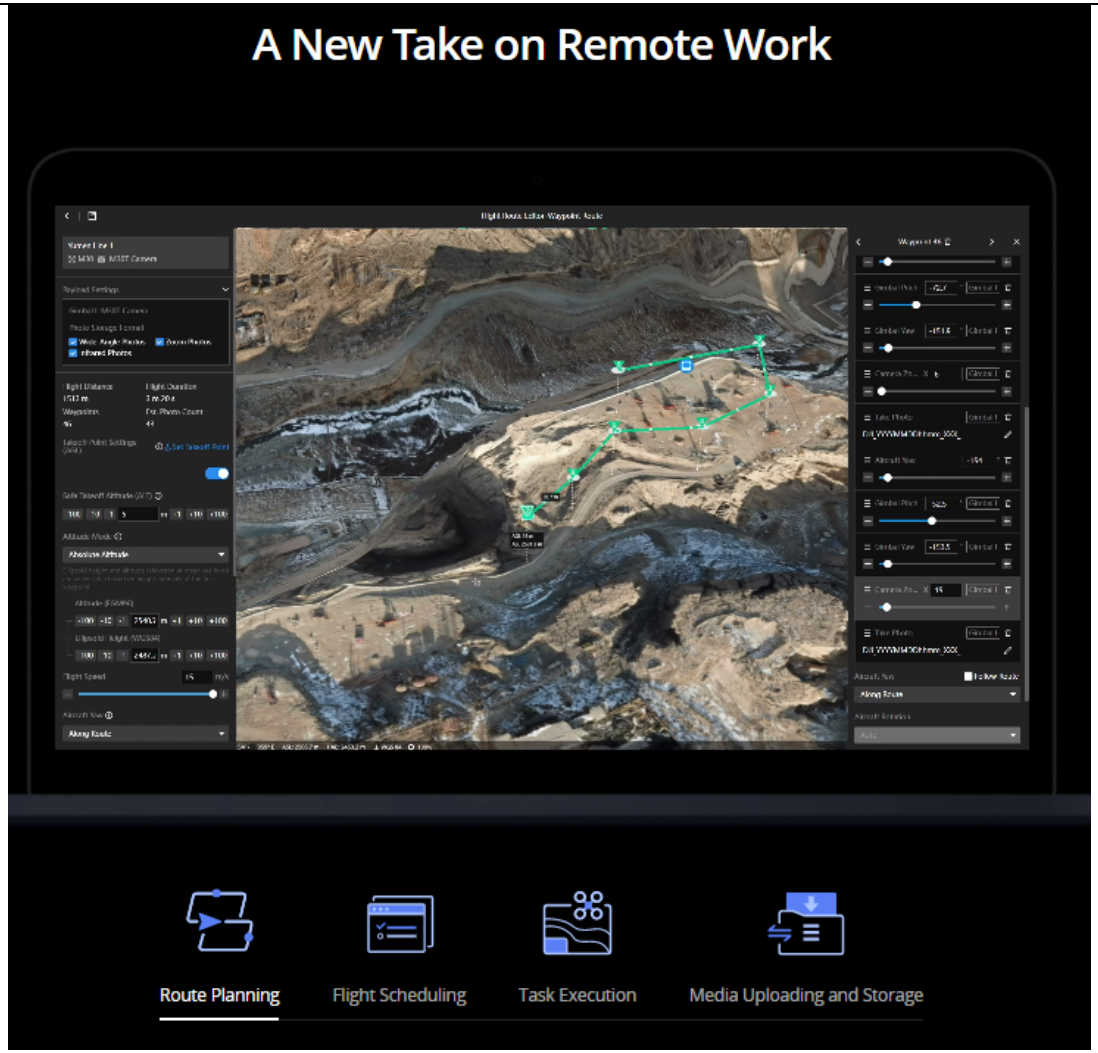

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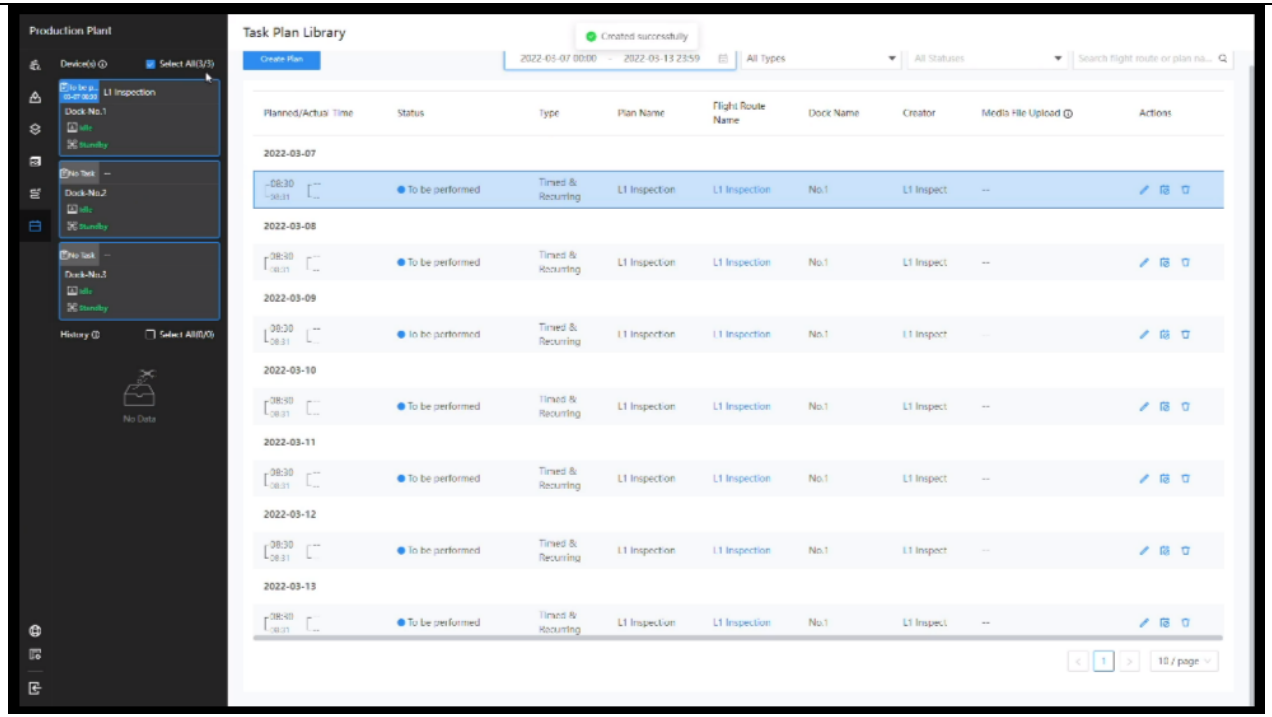

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https://dl.djicdn.com/downloads/DJI_FlightHub_2/20221123/DJI_FlightHub_2_User_Guide_v2.0.pdf, 30.

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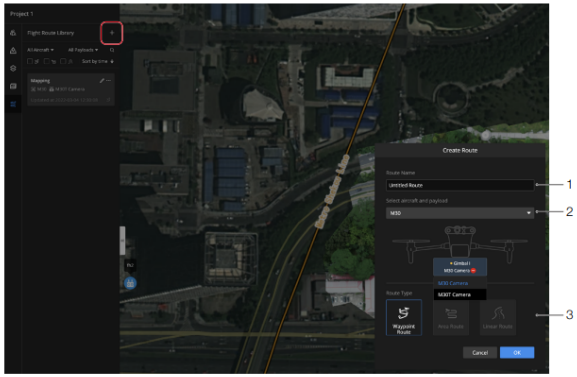

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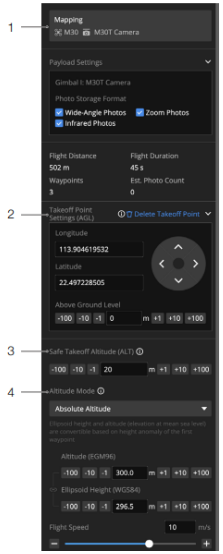

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1. Basic Information
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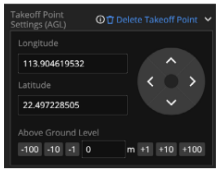
2. Takeoff Point Settings (AGL)
   Click Set Takeoff Point and set the location where the aircraft will take off.

   A. Edit the longitude, latitude, and altitude above the ground level on the coordinate panel.



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DJI FlightHub 2 User Guide

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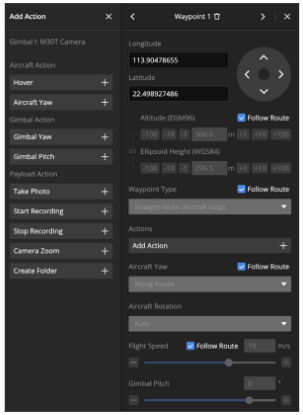
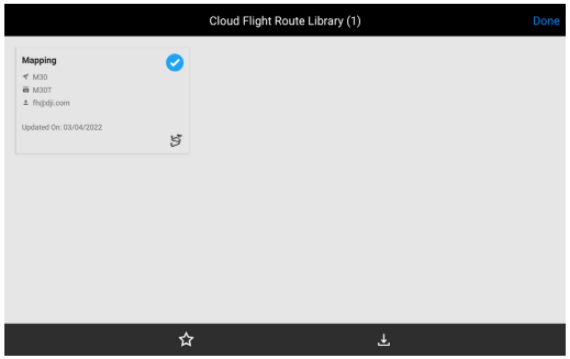
   The return-to-home altitude should be set based on the actual flight condition, surrounding environment, and GEO information. It is recommended that the altitude be set higher than the highest geographical point in the flight area.

	Edit Waypoints Select and click on the map to add waypoints. Select a waypoint and set waypoint details.  1. Longitude and Latitude The longitude and latitude of an aircraft are obtained from its geographical location on the map. 2. Altitude, Ellipsoid Height (WGS84), Waypoint Type, Aircraft Yaw, and Flight Speed These parameters are consistent with the corresponding flight route settings by default. If the flight route settings are changed, the above parameters will also be updated. 3. Actions Click "+" to add actions for the aircraft, gimbal, and payload. 4. Click on the upper left corner to save the flight route settings. 22 © 2022 DJI All Rights Reserved. **DJI FlightHub 2** User Guide **Perform Flight Tasks** DJI Pilot users can log in to the DJI FlightHub 2 cloud service and perform cloud flight tasks. 1. Enter the home screen of DJI Pilot, tap Flight Route, select Cloud to view flight routes created on DJI FlightHub 2. 2. Select the flight route and tap , the flight route will be downloaded to Flight Route Library.  3. Select and enter flight route settings. Tap to perform the flight task. https://dl.djicdn.com/downloads/DJI_FlightHub_2/DJI_FlightHub_2_User_Guide.pdf
[15e] verify a usability of the flight path with a unmanned aircraft system (UAS) traffic management (UTM), wherein the UTM performs checking on the flight path for traffic in the flight path, availability of the flight path due to flight	The accused DJI FlightHub 2 software includes a fleet controller configured to verify a usability of the flight path with a unmanned aircraft system (UAS) traffic management (UTM), wherein the UTM performs checking on the flight path for traffic in the flight path, availability of the flight path due to flight restrictions and requirements for use of the flight path. For example, the FlightHub 2 software's flight route creation and editing software includes functions to ensure the flight route is compliant with flight safety and restriction updates set by the GEO system and prevents drones from flying routes into restricted airspace (e.g., implements restricted zones and altitude restrictions). The FlightHub 2 software also "synchronizes" routes and checks the planned route for traffic in the flight path (e.g., prevents drone route collisions).

restrictions and requirements for use of the flight path;

Flight Restrictions

GEO (Geospatial Environment Online) System

DJI's Geospatial Environment Online (GEO) system is a global information system that provides real-time information on flight safety and restriction updates and prevents UAVs from flying in restricted airspace. Under exceptional circumstances, restricted areas can be unlocked to allow flight. Prior to that, the user must submit an unlocking request based on the current restriction level in the intended flight area. The GEO system may not fully comply with local laws and regulations. Users shall be responsible for their own flight safety and must consult with the local authorities on the relevant legal and regulatory requirements before requesting to unlock a flight in a restricted area.

https://dl.djicdn.com/downloads/DJI_Mavic_3_Enterprise/20221212/DJI_Mavic_3E_3T_User_Manual_EN.pdf

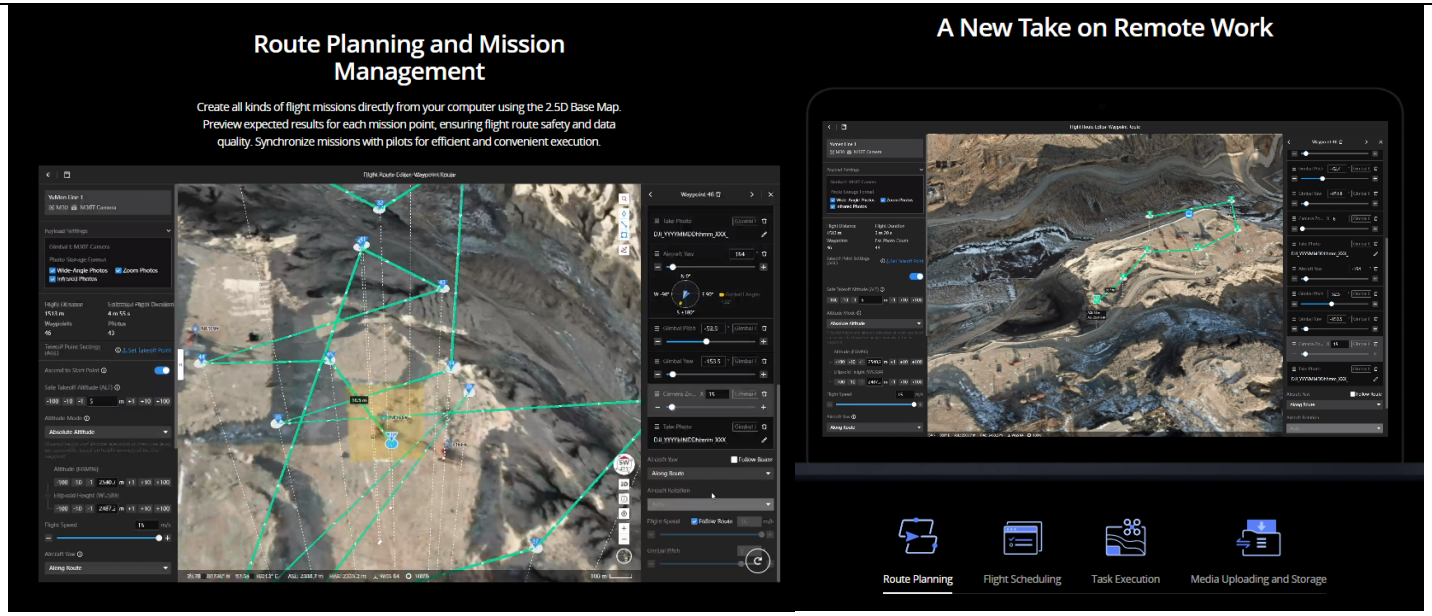
Flight Restrictions in GEO Zones

The following section describes in detail the flight restrictions for the above mentioned GEO Zones.

GEO Zone	Flight Restriction	Scenario
Restricted Zones (Red)	UAVs are prohibited from flying in Restricted Zones. If you have obtained permission to fly in a Restricted Zone, please visit https://www.dji.com/flysafe or contact flysafe@dji.com to unlock the zone.	Takeoff: the aircraft motors cannot be started in Restricted Zones.
		In Flight: when the aircraft flies inside a Restricted Zone, a 100-second countdown will commence in DJI Pilot 2. When the countdown is finished, the aircraft will land immediately in semi-automatic descent mode and turn off its motors after landing.
		In Flight: when the aircraft approaches the boundary of a Restricted Zone, the aircraft will automatically decelerate and hover.

Authorization Zones (Blue)	The aircraft will not be able to take off in an Authorization Zone unless it obtains a permission to fly in the area.	Takeoff: the aircraft motors cannot be started in Authorization Zones. To fly in an Authorization Zone, the user is required to submit an unlocking request registered with a DJI-verified phone number.
		In Flight: when the aircraft flies inside an Authorization Zone, a100-second countdown will commence in DJI Pilot 2. When the countdown is finished, the aircraft will land immediately in semi-automatic descent mode and turn off its motors after landing.
Warning Zones (Yellow)	A warning will be displayed when the aircraft flies inside a Warning Zone.	The aircraft can fly in the zone but the user is required to understand the warning.
Enhanced Warning Zones (Orange)	When the aircraft flies in an Enhanced Warning Zone, a warning will be displayed prompting the user to confirm the flight path.	The aircraft can continue to fly once the warning is confirmed.
Altitude Zones (Gray)	The aircraft altitude is limited when flying inside an Altitude Zone.	When the GNSS signal is strong, the aircraft cannot fly above the altitude limit. In Flight: when the GNSS signal changes from weak to strong, a 100-second countdown will commence in DJI Pilot 2 if the aircraft exceeds the altitude limit. When the countdown is finished, the aircraft will descend below the altitude limit and hover.
		When the aircraft approaches the boundary of an Altitude Zone and the GNSS signal is strong, the aircraft will decelerate automatically and hover if the aircraft is above the altitude limit.

https://dl.djicdn.com/downloads/DJI_Mavic_3_Enterprise/20221212/DJI_Mavic_3E_3T_User_Manual_EN.pdf



https://www.dji.com/flighthub-2

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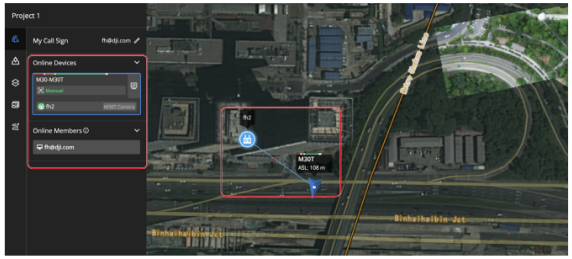

Project members can also perform the following actions on the map.

1. Click Q to search geographic locations. The location will be displayed in the middle of the web page.
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 and the project point of interest will be displayed in the middle of the web page.

DJI FlightHub 2 User Guide

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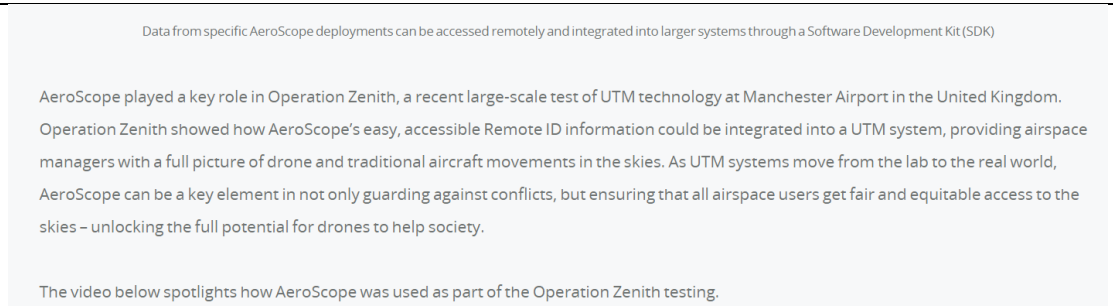
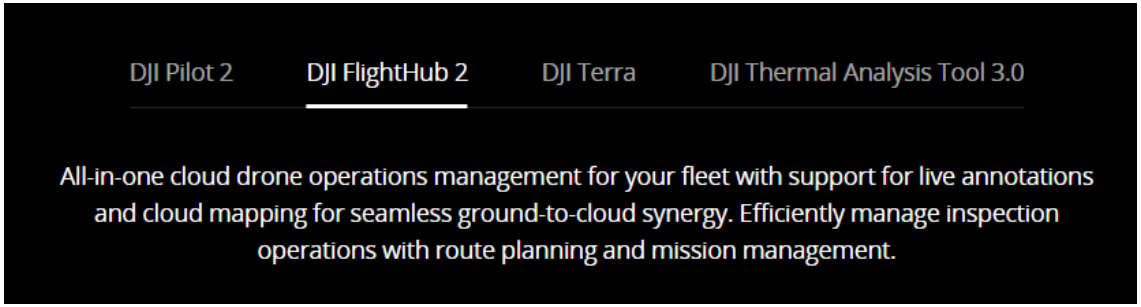
DJI AEROSCOPE ENABLES REMOTE ID IN AN UNMANNED TRAFFIC MANAGEMENT SYSTEM

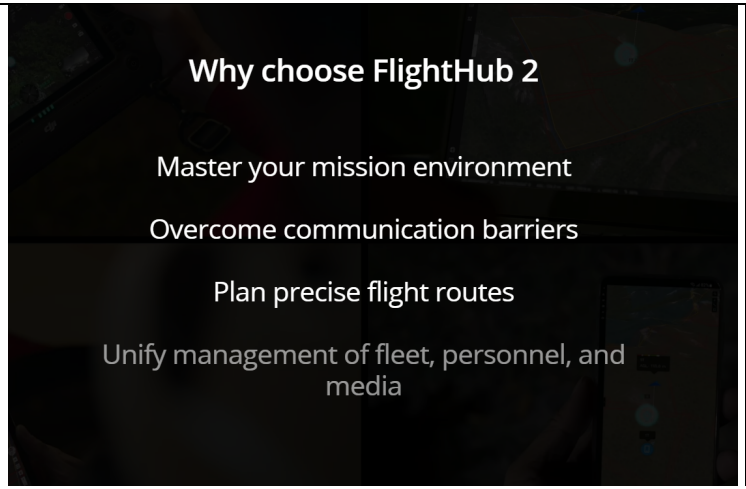
Operation Zenith Shows Value of AeroScope in an Integrated UTM System

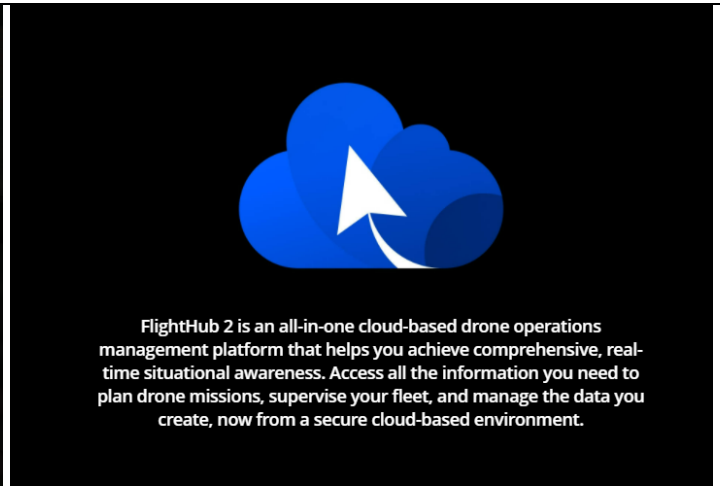
DJI AeroScope transmits basic telemetry and identification about airborne drones to authorities, providing critical information to help secure our skies

DJI's AeroScope is a Remote ID system that provides authorized users with the location, altitude, speed and direction of every DJI drone within radio range, as well as the location of the drone pilot and the serial number of the drone. Authorized users such as airports and police departments can see this information displayed on a computer map for every drone within the multi-mile range of AeroScope's antennae. This telemetry information is broadcast directly from the drone to the AeroScope receiver, allowing authorities to identify and track those drones, and take action if any of them raise concerns.

National aviation regulators understand that Remote ID will be a key component of future Unmanned Traffic Management (UTM) systems, which will simultaneously track drones and traditional aircraft in crowded airspace. Government agencies, academic centers and private companies are developing UTM prototypes to prevent conflicts and collisions, watch for unauthorized aircraft in restricted areas, and protect controlled airspace from unexpected intrusions.

	 https://enterprise.dji.com/news/detail/aeroscope-enables-remote-id-in-utm-system
[15f] modify the flight path according to data from the UTM in response to the UTM indicating that the usability of the flight path is not verified;	The accused DJI FlightHub 2 software includes a fleet controller configured to modify the flight path according to data from the UTM in response to the UTM indicating that the usability of the flight path is not verified. For example, the FlightHub 2 software's flight route creation and editing software includes functions to modify the flight route according to flight safety and restriction updates set by the GEO system in response to the UTM indicating that the usability of the flight is not verified (e.g., the path traverses one or more Restricted/Warning Zones).  https://www.dji.com/mavic-3-enterprise?site=brandsite&from=nav





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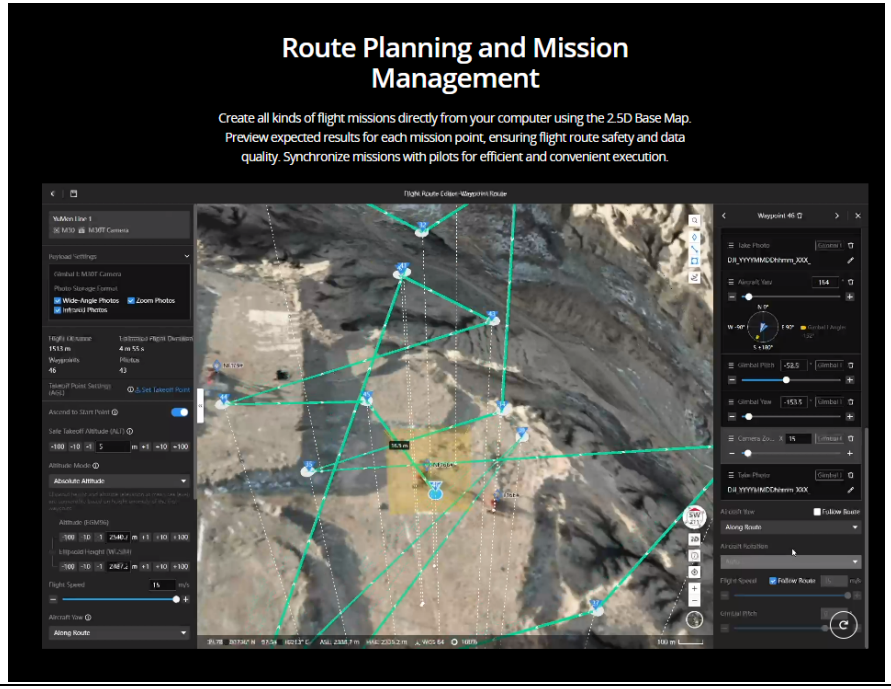

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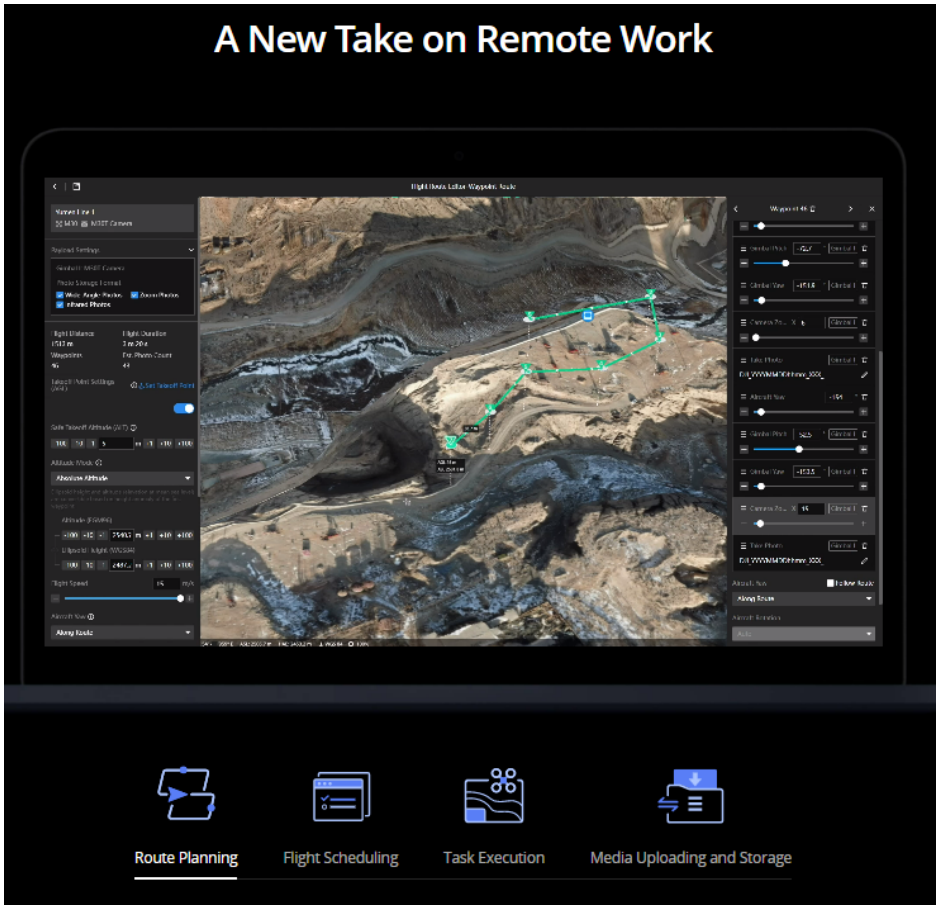

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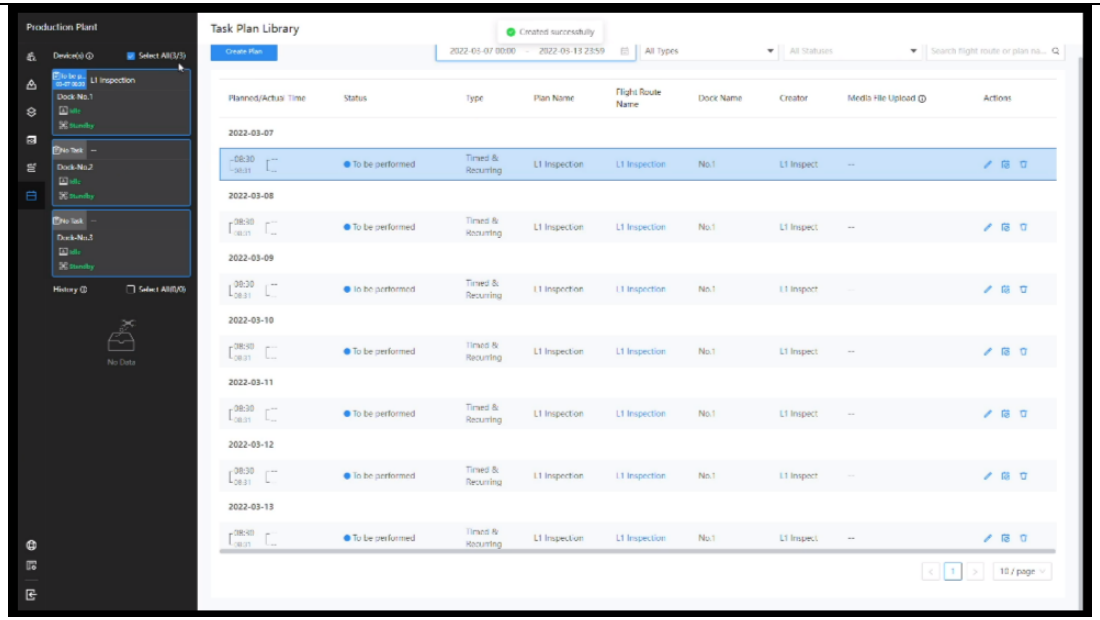

https://www.dji.com/flighthub-2

Flight Route Library

Project members can click to enter the flight route library to import, create, and edit flight routes.

Import Flight Routes

Click > Import KMZ File to select and import KMZ flight routes. The upload progress and status will be displayed during the flight route upload. Users can stop uploading files when the files are being or waiting to be uploaded.

• The KMZ file must include wpmz/template.kml and wpmz/waylines.wpml.

https://dl.djicdn.com/downloads/DJI_FlightHub_2/20221123/DJI_FlightHub_2_User_Guide_v2.0.pdf, 30.

FlightHub 2 is DJI's complete ground-to-cloud drone operations management software, and it's packed with tools to help you plan missions, stream data, and collaborate with your team in real-time. From fast mapping to DJI Dock management, here are the top five features of FlightHub 2.

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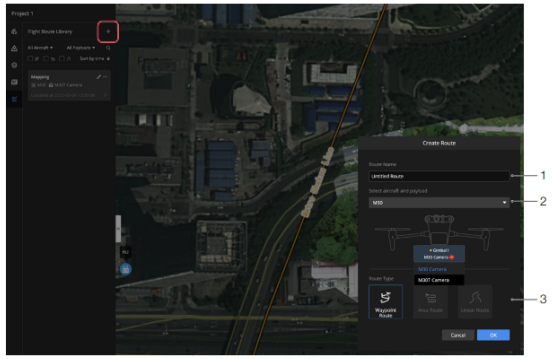
https://enterprise-insights.dji.com/blog/flighthub-2-top-features

Create Flight Routes

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



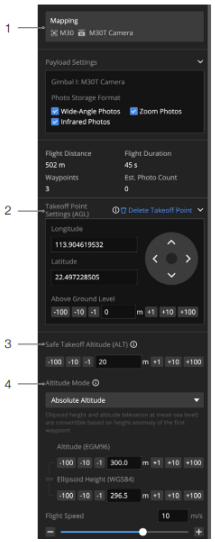
1. **Route Name**
   The route name is required and should be within 60 characters.
2. **Select aircraft and payload**
   Only Matrice 30 series are supported.
3. **Route Type**
   Only Waypoint routes are supported.

Click OK to create the flight route.

Edit Waypoint Routes

Edit Flight Routes

Enter the flight route editor and set flight route details.



Move the mouse over ⓘ to view setting descriptions.

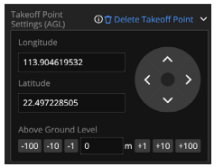
Pay attention to the settings below.

1. **Basic Information**
   Click to edit the flight route name and change the aircraft and payload.

   ⚠ Changing the payload will affect flight route settings.

2. **Takeoff Point Settings (AGL)**
   Click Set Takeoff Point and set the location where the aircraft will take off.

   A. Edit the longitude, latitude, and altitude above the ground level on the coordinate panel.



   B. Select and drag the takeoff point icon to move the takeoff point. Press and hold the Alt key and drag the icon up and down to adjust the altitude.

3. **Safe Takeoff Altitude (ALT)**
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4. **Altitude Mode**
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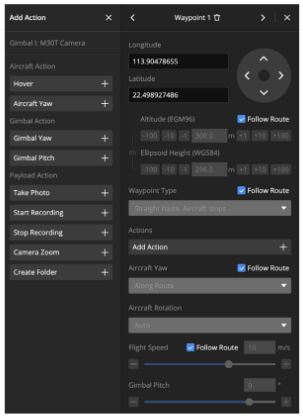

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   These parameters are consistent with the corresponding flight route settings by default. If the flight route settings are changed, the above parameters will also be updated.
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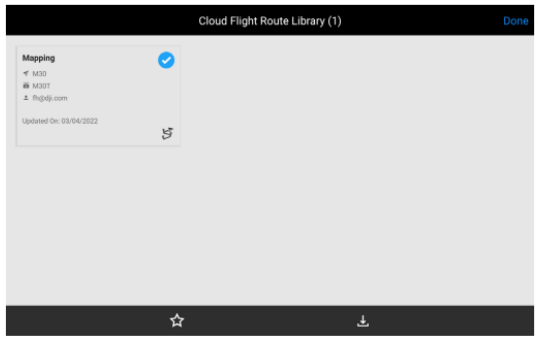

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		In Flight: when the aircraft flies inside a Restricted Zone, a 100-second countdown will commence in DJI Pilot 2. When the countdown is finished, the aircraft will land immediately in semi-automatic descent mode and turn off its motors after landing.
		In Flight: when the aircraft approaches the boundary of a Restricted Zone, the aircraft will automatically decelerate and hover.

Authorization Zones (Blue)	The aircraft will not be able to take off in an Authorization Zone unless it obtains a permission to fly in the area.	Takeoff: the aircraft motors cannot be started in Authorization Zones. To fly in an Authorization Zone, the user is required to submit an unlocking request registered with a DJI-verified phone number.
		In Flight: when the aircraft flies inside an Authorization Zone, a100-second countdown will commence in DJI Pilot 2. When the countdown is finished, the aircraft will land immediately in semi-automatic descent mode and turn off its motors after landing.
Warning Zones (Yellow)	A warning will be displayed when the aircraft flies inside a Warning Zone.	The aircraft can fly in the zone but the user is required to understand the warning.
Enhanced Warning Zones (Orange)	When the aircraft flies in an Enhanced Warning Zone, a warning will be displayed prompting the user to confirm the flight path.	The aircraft can continue to fly once the warning is confirmed.
Altitude Zones (Gray)	The aircraft altitude is limited when flying inside an Altitude Zone.	When the GNSS signal is strong, the aircraft cannot fly above the altitude limit. In Flight: when the GNSS signal changes from weak to strong, a 100-second countdown will commence in DJI Pilot 2 if the aircraft exceeds the altitude limit. When the countdown is finished, the aircraft will descend below the altitude limit and hover.
		When the aircraft approaches the boundary of an Altitude Zone and the GNSS signal is strong, the aircraft will decelerate automatically and hover if the aircraft is above the altitude limit.

https://dl.djicdn.com/downloads/DJI_Mavic_3_Enterprise/20221212/DJI_Mavic_3E_3T_User_Manual_EN.pdf

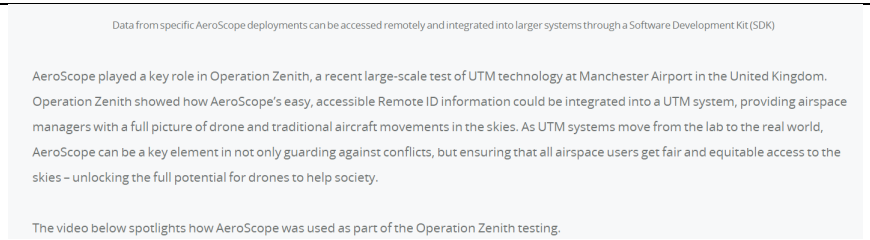
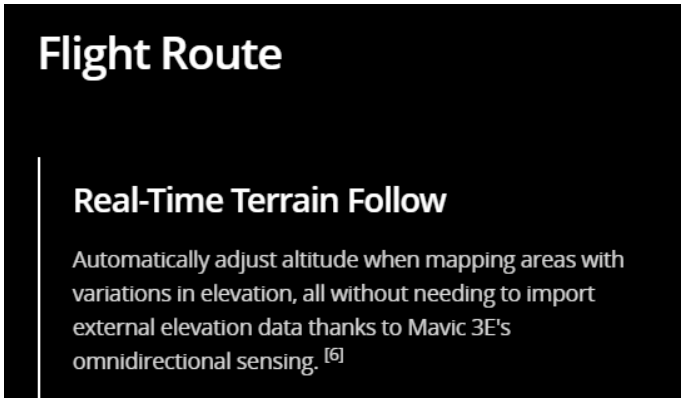
DJI AEROSCOPE ENABLES REMOTE ID IN AN UNMANNED TRAFFIC MANAGEMENT SYSTEM

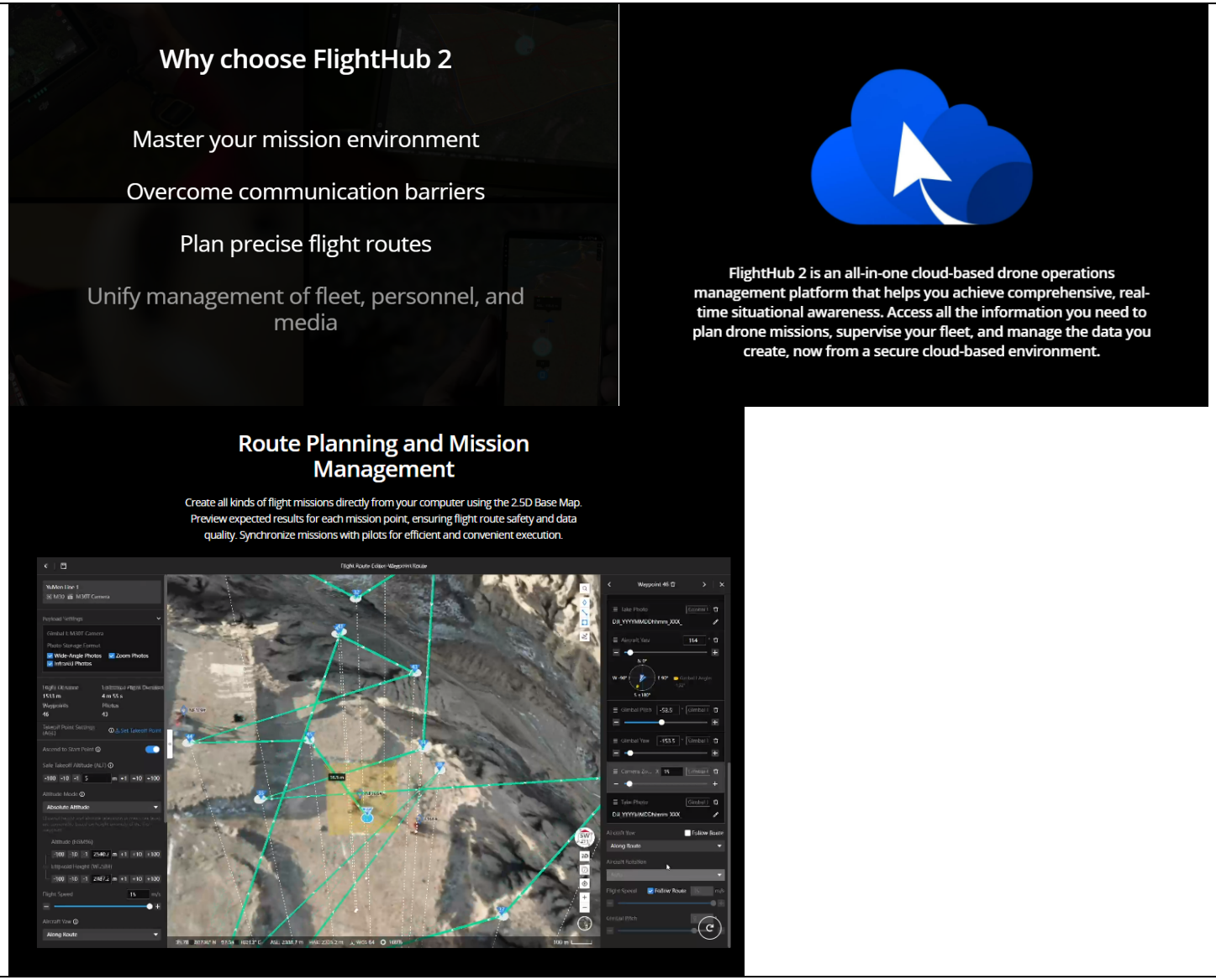
Operation Zenith Shows Value of AeroScope in an Integrated UTM System

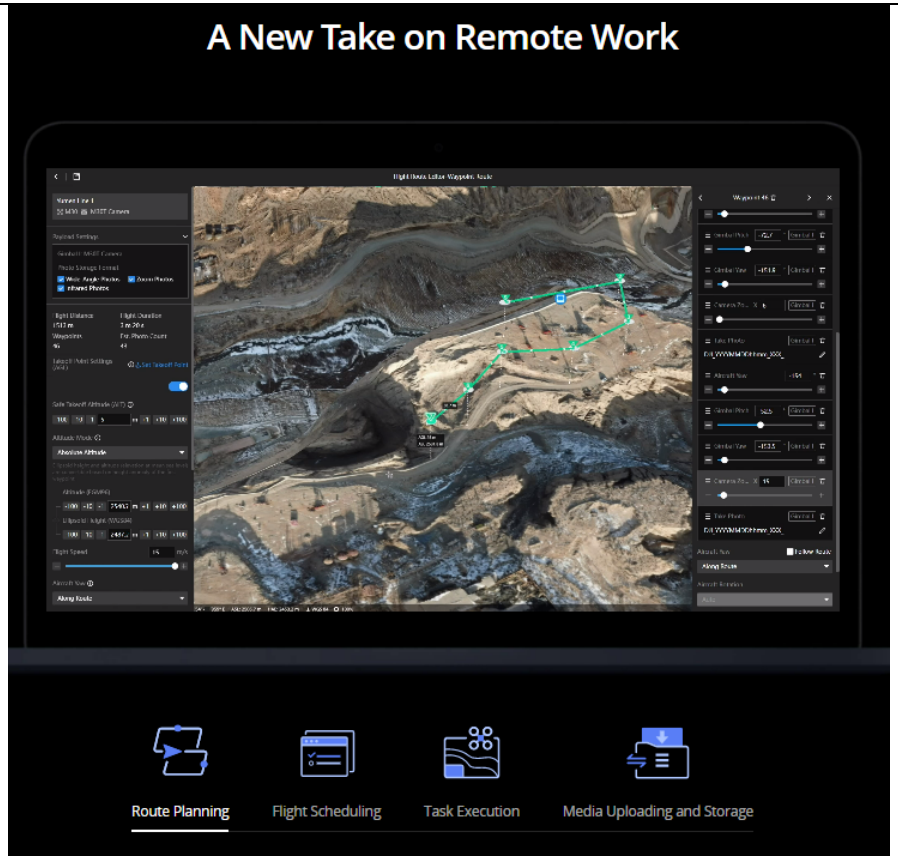
DJI AeroScope transmits basic telemetry and identification about airborne drones to authorities, providing critical information to help secure our skies

DJI's AeroScope is a Remote ID system that provides authorized users with the location, altitude, speed and direction of every DJI drone within radio range, as well as the location of the drone pilot and the serial number of the drone. Authorized users such as airports and police departments can see this information displayed on a computer map for every drone within the multi-mile range of AeroScope's antennae. This telemetry information is broadcast directly from the drone to the AeroScope receiver, allowing authorities to identify and track those drones, and take action if any of them raise concerns.

National aviation regulators understand that Remote ID will be a key component of future Unmanned Traffic Management (UTM) systems, which will simultaneously track drones and traditional aircraft in crowded airspace. Government agencies, academic centers and private companies are developing UTM prototypes to prevent conflicts and collisions, watch for unauthorized aircraft in restricted areas, and protect controlled airspace from unexpected intrusions.

	 https://enterprise.dji.com/news/detail/aeroscope-enables-remote-id-in-utm-system  https://www.dji.com/mavic-3-enterprise?site=brandsite&from=nav.
[15g] generate vehicle commands according to mission parameters associated with the mission based on the flight path;	The accused DJI FlightHub 2 software includes a fleet controller configured to generate vehicle commands according to mission parameters associated with the mission based on the flight path. For example, FlightHub 2 generates vehicle commands to cause the Accused DJI Drones to operate according to the mission parameters stored by the flight route library and/or task plan library. The Accused DJI Drones follow the parameters set according to the flight route, including traveling along the flight path according to the waypoints set for the route, using the altitude, speed, camera settings, schedule, time, and other mission parameters set by FlightHub 2 flight path.


Why choose FlightHub 2
Master your mission environment
Overcome communication barriers
Plan precise flight routes
Unify management of fleet, personnel, and media
FlightHub 2 is an all-in-one cloud-based drone operations management platform that helps you achieve comprehensive, real-time situational awareness. Access all the information you need to plan drone missions, supervise your fleet, and manage the data you create, now from a secure cloud-based environment.
Route Planning and Mission Management
Create all kinds of flight missions directly from your computer using the 2.5D Base Map. Preview expected results for each mission point, ensuring flight route safety and data quality. Synchronize missions with pilots for efficient and convenient execution.



https://www.dji.com/flighthub-2

FlightHub 2 is DJI's complete ground-to-cloud drone operations management software, and it's packed with tools to help you plan missions, stream data, and collaborate with your team in real-time. From fast mapping to DJI Dock management, here are the top five features of FlightHub 2.

Full control of DJI Dock operations

FlightHub 2 is also your hub for all DJI Dock operations. Within the app, you can monitor the status of your M30, plan and schedule missions, and coordinate everything required for round-the-clock, automated operations.

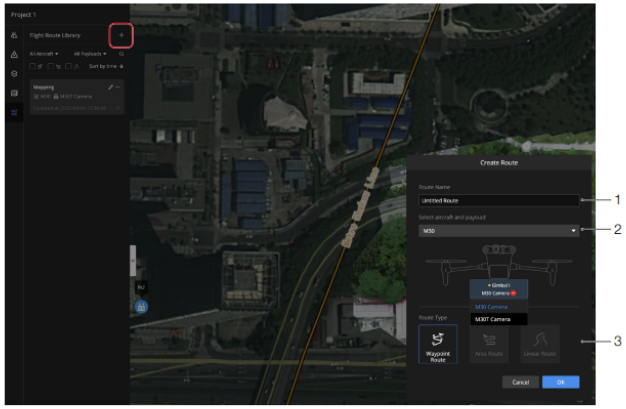
Cloud-based mission planning & collaboration

FlightHub 2 combines data storage and fleet management with intuitive tools that support public safety and inspection operations in real-time. It's packed with collaborative solutions that improve situational awareness for all team members. We've built an empowering application that enables better data sharing communication, giving mission commanders everything they need to make smarter decisions and deploy resources more effectively.

https://enterprise-insights.dji.com/blog/flighthub-2-top-features

Create Flight Routes

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



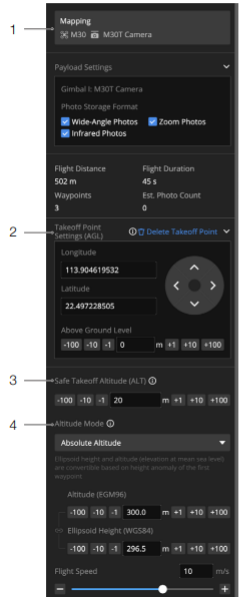
1. **Route Name**
   The route name is required and should be within 60 characters.
2. **Select aircraft and payload**
   Only Matrice 30 series are supported.
3. **Route Type**
   Only Waypoint routes are supported.

Click OK to create the flight route.

Edit Waypoint Routes

Edit Flight Routes

Enter the flight route editor and set flight route details.



Move the mouse over ⓘ to view setting descriptions.

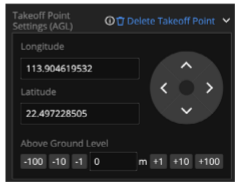
Pay attention to the settings below.

1. **Basic Information**
   Click to edit the flight route name and change the aircraft and payload.

   ⚠ Changing the payload will affect flight route settings.

2. **Takeoff Point Settings (AGL)**
   Click Set Takeoff Point and set the location where the aircraft will take off.

   A. Edit the longitude, latitude, and altitude above the ground level on the coordinate panel.

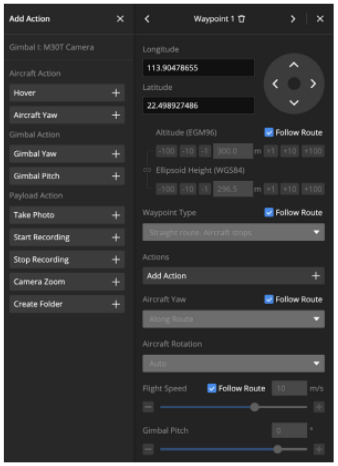


   B. Select and drag the takeoff point icon to move the takeoff point. Press and hold the Alt key and drag the icon up and down to adjust the altitude.

3. Safe Takeoff Altitude (ALT)
   Safe Takeoff Altitude is the altitude relative to the takeoff point altitude. Aircraft will ascend to the safe takeoff altitude after takeoff and fly to the flight route start point.
4. Altitude Mode
   The Altitude mode is set to Absolute Altitude by default. Project members can also change it to Altitude Relative to Takeoff Point (ALT) or Above Ground Level.
5. Return-to-Home Altitude (ALT)
   The return-to-home altitude should be set based on the actual flight condition, surrounding environment, and GEO information. It is recommended that the altitude be set higher than the highest geographical point in the flight area.

Edit Waypoints

Select and click on the map to add waypoints. Select a waypoint and set waypoint details.



1. Longitude and Latitude
   The longitude and latitude of an aircraft are obtained from its geographical location on the map.
2. Altitude, Ellipsoid Height (WGS84), Waypoint Type, Aircraft Yaw, and Flight Speed
   These parameters are consistent with the corresponding flight route settings by default. If the flight route settings are changed, the above parameters will also be updated.
3. Actions
   Click "+" to add actions for the aircraft, gimbal, and payload.
4. Click on the upper left corner to save the flight route settings.

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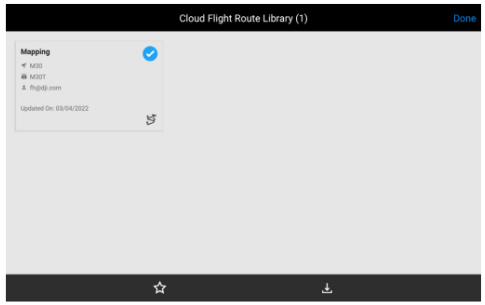
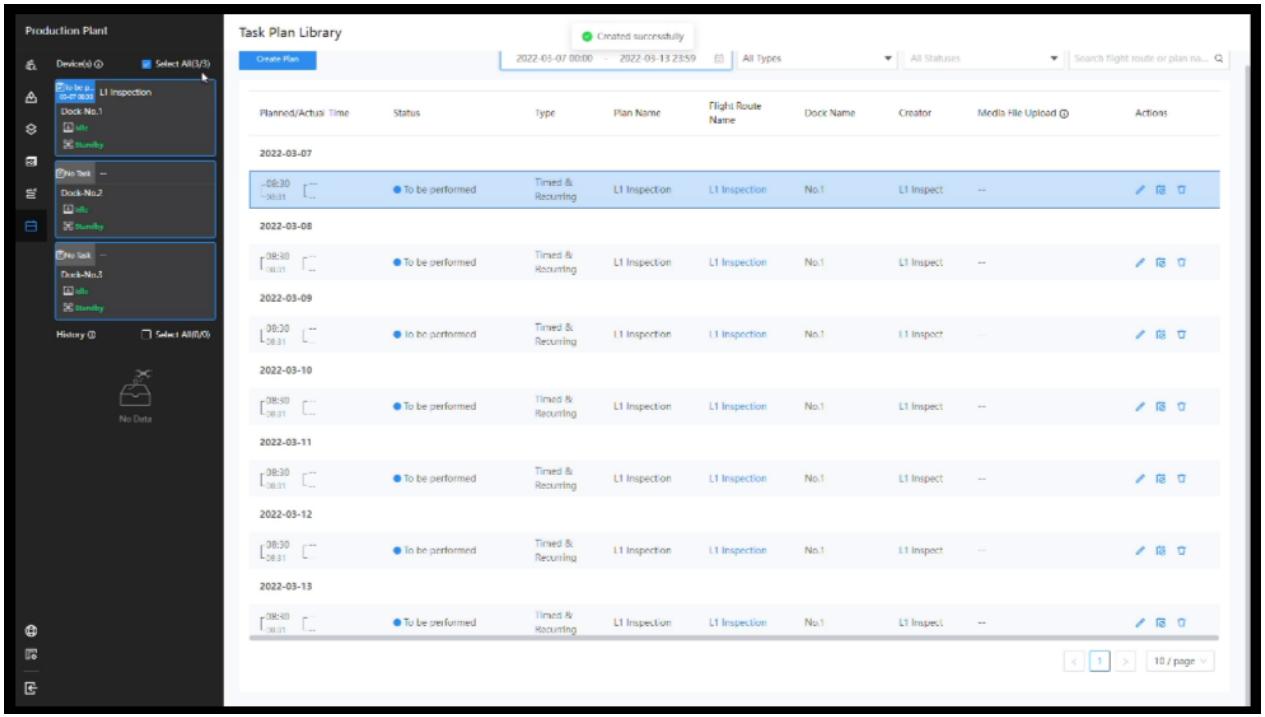
Perform Flight Tasks

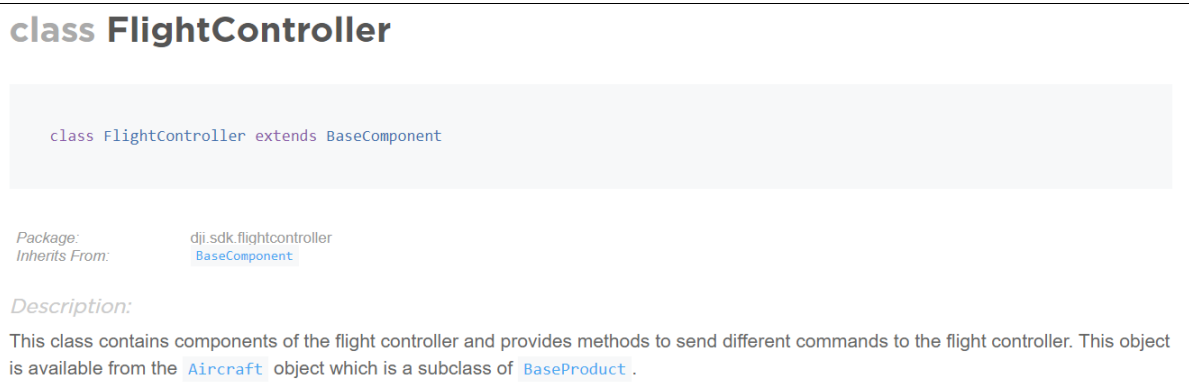
DJI Pilot users can log in to the DJI FlightHub 2 cloud service and perform cloud flight tasks.

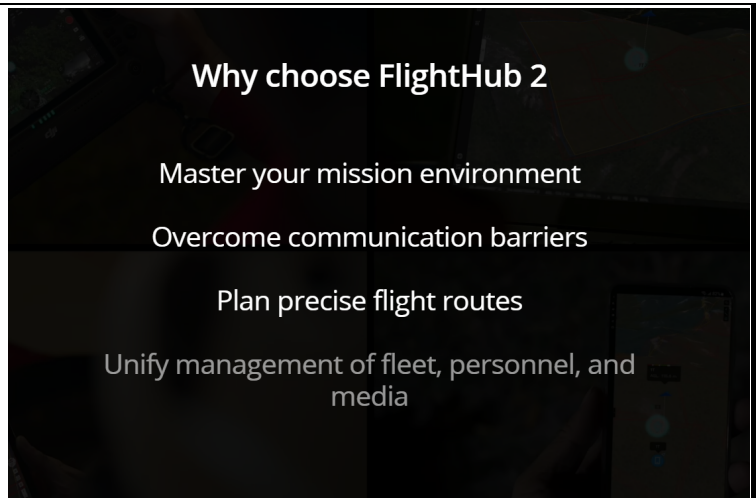
1. Enter the home screen of DJI Pilot, tap Flight Route, select Cloud to view flight routes created on DJI FlightHub 2.
2. Select the flight route and tap , the flight route will be downloaded to Flight Route Library.

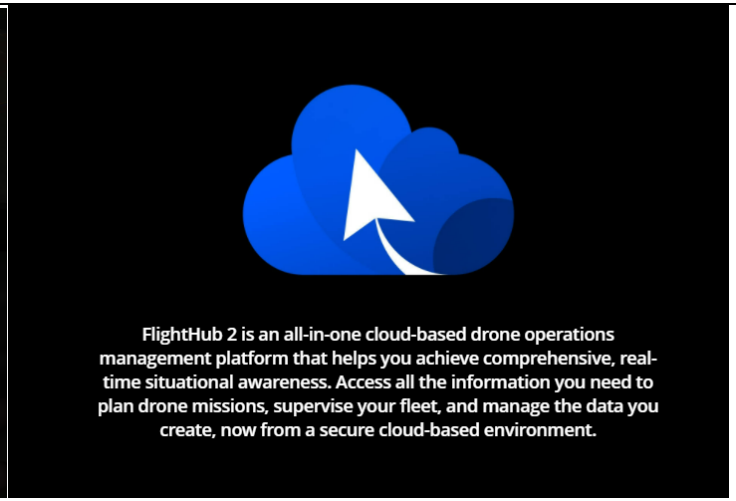


3. Select and enter flight route settings. Tap to perform the flight task.

	https://dl.djicdn.com/downloads/DJI_FlightHub_2/DJI_FlightHub_2_User_Guide.pdf  https://www.dji.com/flighthub-2

	 https://developer.dji.com/api-reference/android-api/Components/FlightController/DJIFlightController.html?search=commands&i=0&
[15h] maintain a persistent connection with the vehicle through the communications network;	The accused DJI FlightHub 2 software includes a fleet controller configured to maintain a persistent connection with the vehicle through the communications network. For example, the DJI FlightHub 2 software provides for "real-time situational awareness," mission live streaming, synchronization of mission details, live annotations. all of which utilize a persistent connection with the vehicle. As another example, the DJI FlightHub 2 software permits the pilot of the drone to access FlightHub 2 software from the drone's RC controller thus providing a persistent connection with the vehicle through the communications network.


Why choose FlightHub 2
Master your mission environment
Overcome communication barriers
Plan precise flight routes
Unify management of fleet, personnel, and media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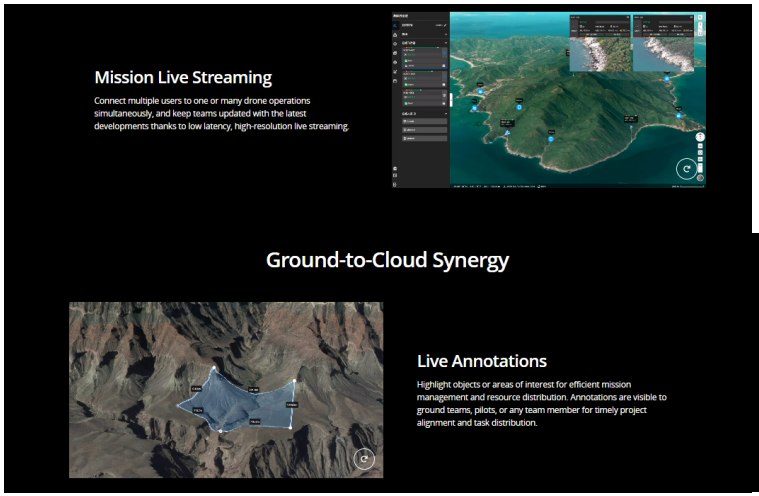
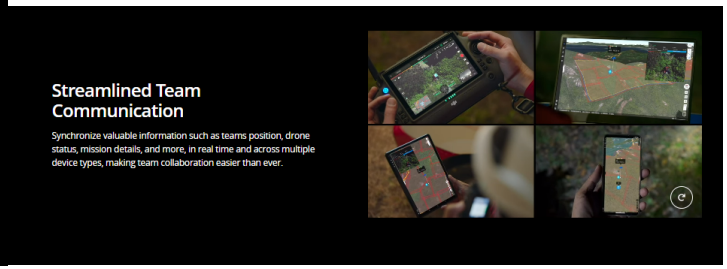
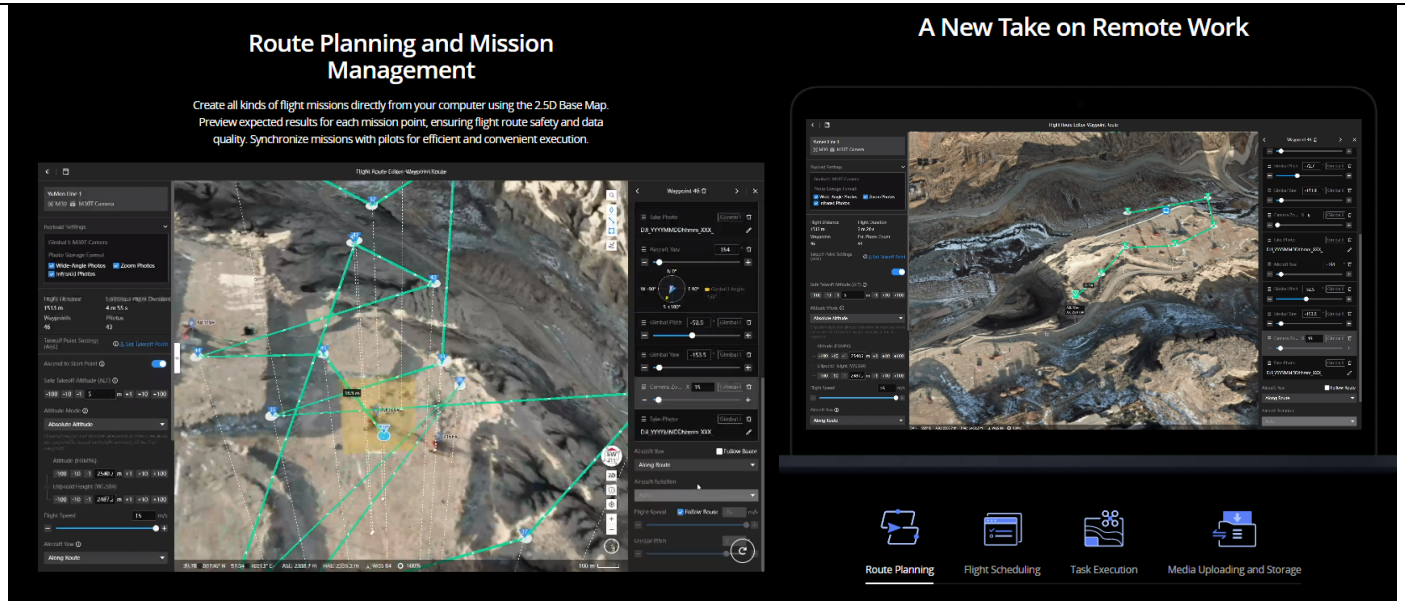

Mission Live Streaming
Connect multiple users to one or many drone operations simultaneously, and keep teams updated with the latest developments thanks to low latency, high-resolution live streaming.
Ground-to-Cloud Synergy
Live Annotations
Highlight objects or areas of interest for efficient mission management and resource distribution. Annotations are visible to ground teams, pilots, or any team member for timely project alignment and task distribution.


Streamlined Team Communication
Synchronize valuable information such as teams position, drone status, mission details, and more, in real time and across multiple device types, making team collaboration easier than ever.



https://www.dji.com/flighthub-2

March 21, 2022

It's safe to say that drones have already been established as critical tools for emergency teams and inspection crews, and the insights drones deliver from above are invaluable. But as teams bring in more drones, more payloads, more pilots, and more data, the emphasis is now on how this all fits into the big picture.

To make the most of UAV technology, incident commanders and drone program managers need a software solution to help synchronize ground teams with what the drones pick up.

The situational awareness drones provide is most powerful when it's available to the right people at the right time. That's where DJI FlightHub 2 enters the scene.

FlightHub 2 is DJI's complete ground-to-cloud drone operations management software, and it's packed with tools to help you plan missions, stream data, and collaborate with your team in real-time. From fast mapping to DJI Dock management, here are the top five features of FlightHub 2.

> FlightHub 2 is entirely cloud-based, which means it's accessible, not only to pilots with remote controllers but also to everyone else on the team who has a device with a web browser.
>
> This includes laptops and computers, tablets, and cell phones. All you have to do is log in to your team's FlightHub 2 mission, or "Project," and you will have access to the same intelligence gathered by the drones.
>
> Every team member that's logged in can see and add updates as the mission unfolds. The command center computer, the drone pilots' RC, the cell phones of the team on the ground - everyone shares a single interactive map that enables active collaboration.

Advanced media management

FlightHub 2 was built for more than just search and rescue teams and emergency first responders, but also any job, like surveying and inspection, that uses drones and needs to keep organized.

FlightHub 2 has powerful mission planning functions, so flight routes or tasks can be created, saved, and shared to other pilots. It also has everything you need to effectively store and manage your aerial data. On top of embedding information in real-time onto 2.5D cloud maps, all of your photos and videos can be automatically uploaded to the cloud for later analysis.

Crew members can be assigned varying levels of access and tasks can be assigned in the cloud.

Full control of DJI Dock operations

FlightHub 2 is also your hub for all DJI Dock operations. Within the app, you can monitor the status of your M30, plan and schedule missions, and coordinate everything required for round-the-clock, automated operations.

Cloud-based mission planning & collaboration

FlightHub 2 combines data storage and fleet management with intuitive tools that support public safety and inspection operations in real-time. It's packed with collaborative solutions that improve situational awareness for all team members. We've built an empowering application that enables better data sharing communication, giving mission commanders everything they need to make smarter decisions and deploy resources more effectively.

https://enterprise-insights.dji.com/blog/flighthub-2-top-features

Real-Time Project Information

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

Online Project Information

After joining a project, project members can view team information, such as device statuses and online members on the left panel. Device statuses include:

A. When a device is online, its information will be displayed on the left panel.

B. When a device is offline for less than five minutes, its information will be displayed in gray.

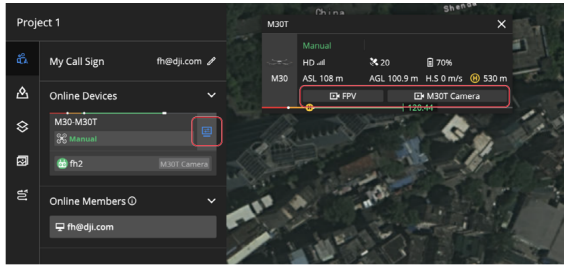
C. When a device is offline for more than five minutes, its information will not be displayed.

Aircraft and remote controller locations will be displayed on the map. Click the aircraft or the remote controller icon and a line connecting the aircraft to its linked remote controller will be displayed. A window above the aircraft shows the aircraft call sign and its altitude above the sea level. Click the window to open the Device Details and Livestreams panel.

DJI FlightHub 2 User Guide

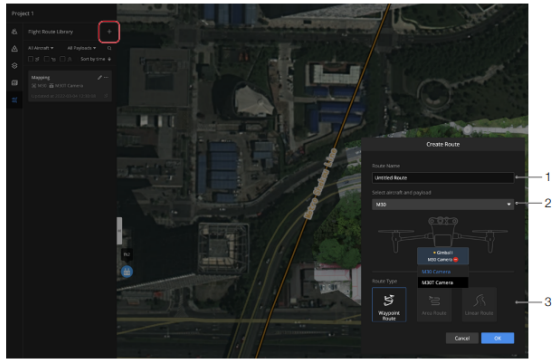
Device Details and Livestreams

When a device is online, project members can click to view device details, such as the transmission signal strength, satellite connection status, and aircraft altitude. Click camera buttons to view livestreams from the aircraft camera or payload. During a livestream, click to start recording, and the recorded video will be stored to Media Files automatically.



Create Flight Routes

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



1. Route Name
   The route name is required and should be within 60 characters.
2. Select aircraft and payload
   Only Matrice 30 series are supported.
3. Route Type
   Only Waypoint routes are supported.

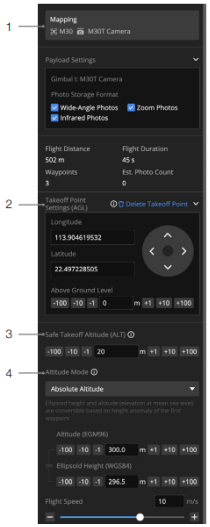
Click OK to create the flight route.

3. Safe Takeoff Altitude (ALT)
   Safe Takeoff Altitude is the altitude relative to the takeoff point altitude. Aircraft will ascend to the safe takeoff altitude after takeoff and fly to the flight route start point.
4. Altitude Mode
   The Altitude mode is set to Absolute Altitude by default. Project members can also change it to Altitude Relative to Takeoff Point (ALT) or Above Ground Level.
5. Return-to-Home Altitude (ALT)
   The return-to-home altitude should be set based on the actual flight condition, surrounding environment, and GEO information. It is recommended that the altitude be set higher than the highest geographical point in the flight area.

Edit Waypoint Routes

Edit Flight Routes

Enter the flight route editor and set flight route details.



Move the mouse over ⓘ to view setting descriptions.

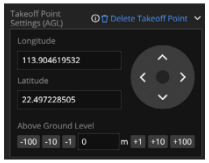
Pay attention to the settings below.

1. Basic Information
   Click to edit the flight route name and change the aircraft and payload.

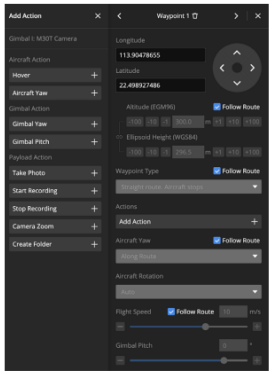
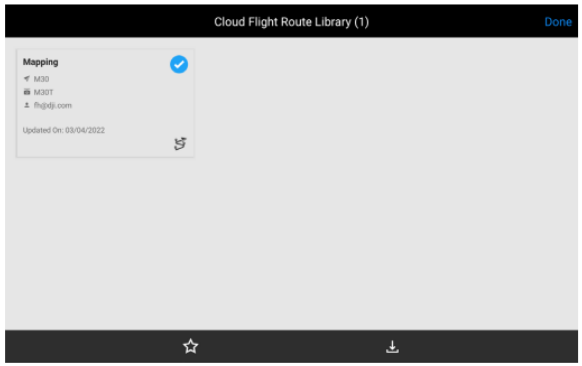
   ⚠ Changing the payload will affect flight route settings.

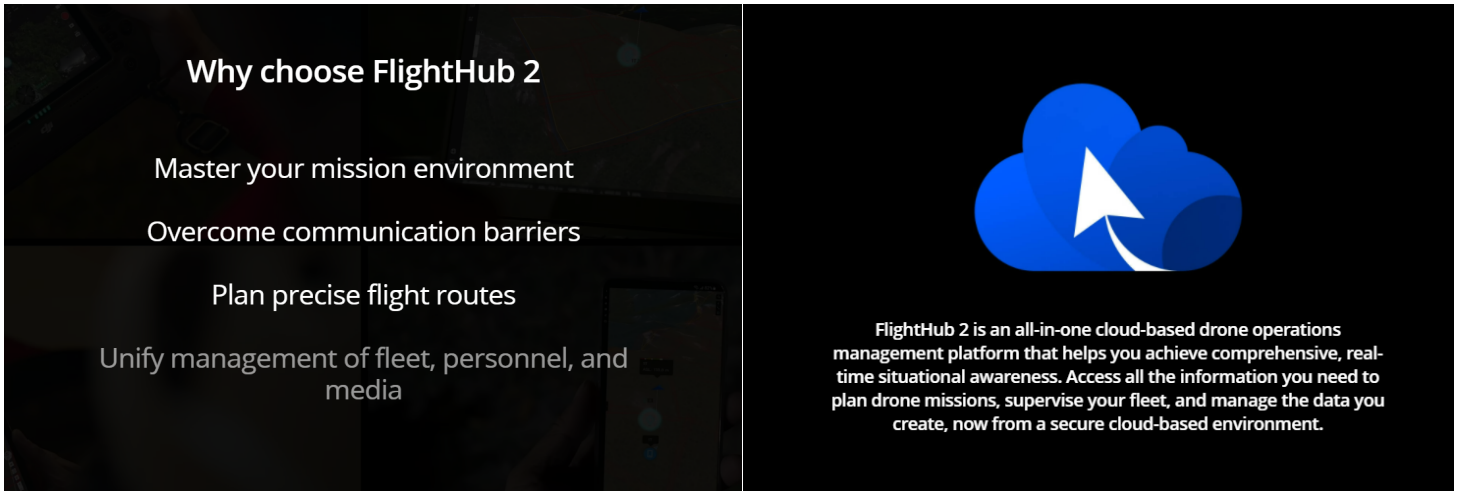
2. Takeoff Point Settings (AGL)
   Click Set Takeoff Point and set the location where the aircraft will take off.

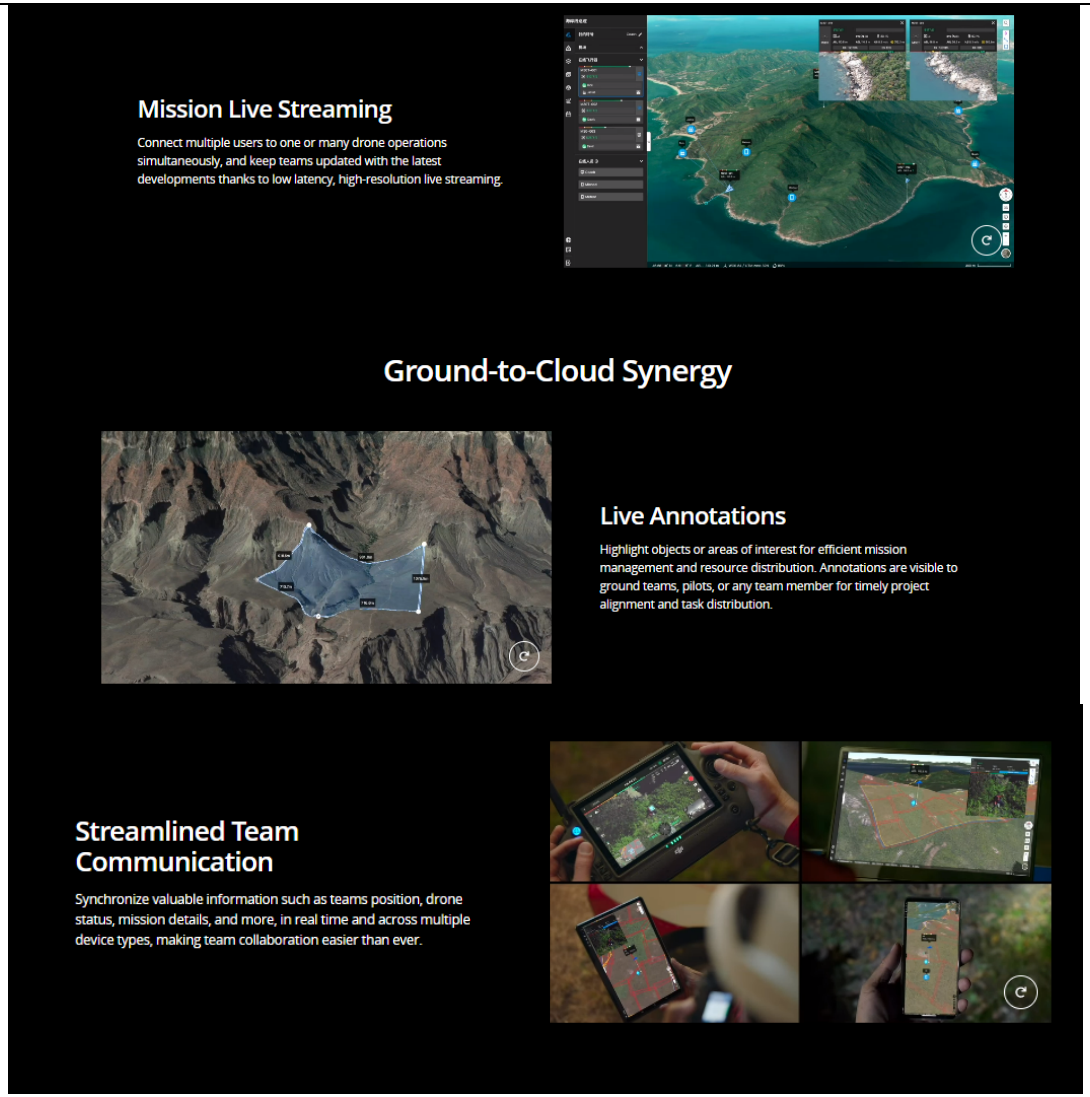
   A. Edit the longitude, latitude, and altitude above the ground level on the coordinate panel.



   B. Select and drag the takeoff point icon to move the takeoff point. Press and hold the Alt key and drag the icon up and down to adjust the altitude.

	Edit Waypoints Select and click on the map to add waypoints. Select a waypoint and set waypoint details.  1. **Longitude and Latitude** The longitude and latitude of an aircraft are obtained from its geographical location on the map. 2. **Altitude, Ellipsoid Height (WGS84), Waypoint Type, Aircraft Yaw, and Flight Speed** These parameters are consistent with the corresponding flight route settings by default. If the flight route settings are changed, the above parameters will also be updated. 3. **Actions** Click "+" to add actions for the aircraft, gimbal, and payload. 4. Click on the upper left corner to save the flight route settings. 22 © 2022 DJI All Rights Reserved. **DJI FlightHub 2** User Guide **Perform Flight Tasks** DJI Pilot users can log in to the DJI FlightHub 2 cloud service and perform cloud flight tasks. 1. Enter the home screen of DJI Pilot, tap Flight Route, select Cloud to view flight routes created on DJI FlightHub 2. 2. Select the flight route and tap , the flight route will be downloaded to Flight Route Library.  3. Select and enter flight route settings. Tap to perform the flight task. https://dl.djicdn.com/downloads/DJI_FlightHub_2/DJI_FlightHub_2_User_Guide.pdf **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. https://dl.djicdn.com/downloads/DJI_FlightHub_2/20221123/DJI_FlightHub_2_User_Guide_v2.0.pdf
[15i] send the vehicle commands to the vehicle using the connection, wherein the vehicle is configured to	The accused DJI FlightHub 2 software includes a fleet controller configured to send the vehicle commands to the vehicle using the connection, the vehicle commands causing the vehicle to execute the mission under control of the fleet controller.

receive the vehicle command and execute the mission according to the vehicle commands; and	For example, the DJI FlightHub2 functionality transmits flight routes and mission parameters to one or more of the Accused DJI Drones in the fleet, which cause the drone to execute the mission under control of the DJI FlightHub 2 flight controller. 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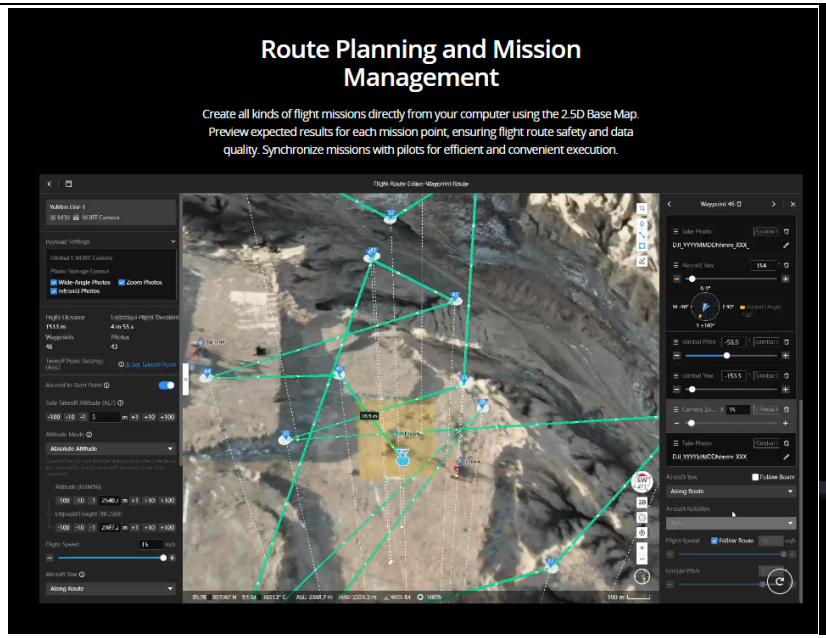
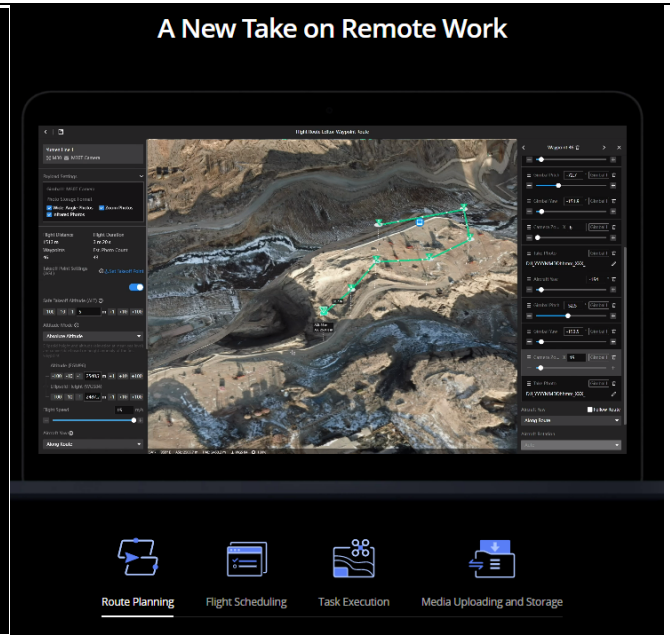
Synchronize valuable information such as teams position, drone status, mission details, and more, in real time and across multiple device types, making team collaboration easier than ever.





https://www.dji.com/flighthub-2

March 21, 2022

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To make the most of UAV technology, incident commanders and drone program managers need a software solution to help synchronize ground teams with what the drones pick up.

The situational awareness drones provide is most powerful when it's available to the right people at the right time. That's where DJI FlightHub 2 enters the scene.

FlightHub 2 is DJI's complete ground-to-cloud drone operations management software, and it's packed with tools to help you plan missions, stream data, and collaborate with your team in real-time. From fast mapping to DJI Dock management, here are the top five features of FlightHub 2.

FlightHub 2 is entirely cloud-based, which means it's accessible, not only to pilots with remote controllers but also to everyone else on the team who has a device with a web browser.

This includes laptops and computers, tablets, and cell phones. All you have to do is log in to your team's FlightHub 2 mission, or "Project," and you will have access to the same intelligence gathered by the drones.

Every team member that's logged in can see and add updates as the mission unfolds. The command center computer, the drone pilots' RC, the cell phones of the team on the ground - everyone shares a single interactive map that enables active collaboration.

Advanced media management

FlightHub 2 was built for more than just search and rescue teams and emergency first responders, but also any job, like surveying and inspection, that uses drones and needs to keep organized.

FlightHub 2 has powerful mission planning functions, so flight routes or tasks can be created, saved, and shared to other pilots. It also has everything you need to effectively store and manage your aerial data. On top of embedding information in real-time onto 2.5D cloud maps, all of your photos and videos can be automatically uploaded to the cloud for later analysis.

Crew members can be assigned varying levels of access and tasks can be assigned in the cloud.

Full control of DJI Dock operations

FlightHub 2 is also your hub for all DJI Dock operations. Within the app, you can monitor the status of your M30, plan and schedule missions, and coordinate everything required for round-the-clock, automated operations.

Cloud-based mission planning & collaboration

FlightHub 2 combines data storage and fleet management with intuitive tools that support public safety and inspection operations in real-time. It's packed with collaborative solutions that improve situational awareness for all team members. We've built an empowering application that enables better data sharing communication, giving mission commanders everything they need to make smarter decisions and deploy resources more effectively.

https://enterprise-insights.dji.com/blog/flighthub-2-top-features

Real-Time Project Information

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

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After joining a project, project members can view team information, such as device statuses and online members on the left panel. Device statuses include:

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C. When a device is offline for more than five minutes, its information will not be displayed.

Aircraft and remote controller locations will be displayed on the map. Click the aircraft or the remote controller icon and a line connecting the aircraft to its linked remote controller will be displayed. A window above the aircraft shows the aircraft call sign and its altitude above the sea level. Click the window to open the Device Details and Livestreams panel.

DJI FlightHub 2 User Guide

3. **Safe Takeoff Altitude (ALT)**
   Safe Takeoff Altitude is the altitude relative to the takeoff point altitude. Aircraft will ascend to the safe takeoff altitude after takeoff and fly to the flight route start point.
4. **Altitude Mode**
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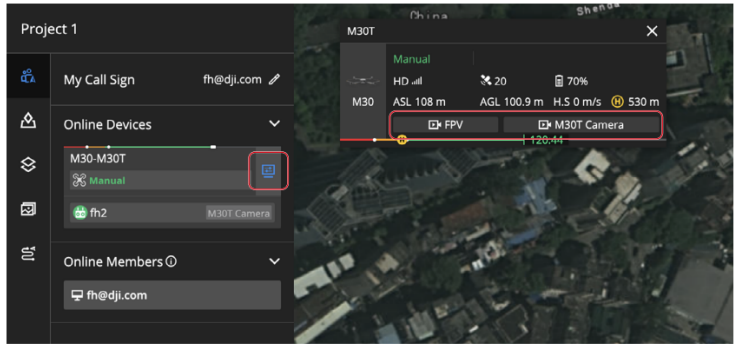
   The return-to-home altitude should be set based on the actual flight condition, surrounding environment, and GEO information. It is recommended that the altitude be set higher than the highest geographical point in the flight area.

DJI FlightHub 2 User Guide

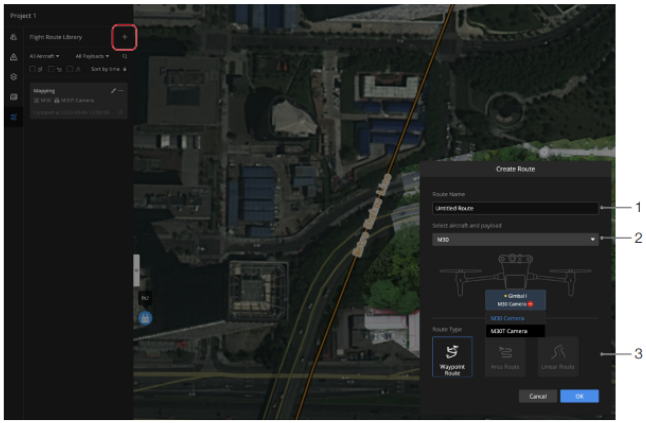
Device Details and Livestreams

When a device is online, project members can click to view device details, such as the transmission signal strength, satellite connection status, and aircraft altitude. Click camera buttons to view livestreams from the aircraft camera or payload. During a livestream, click to start recording, and the recorded video will be stored to Media Files automatically.



Create Flight Routes

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



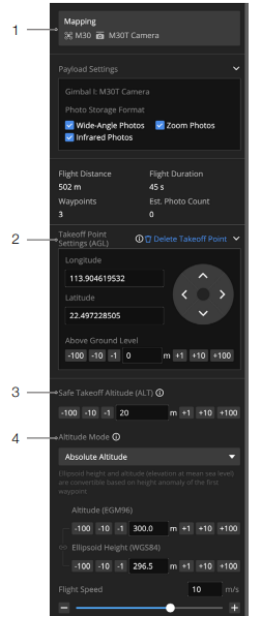
1. **Route Name**
   The route name is required and should be within 60 characters.
2. **Select aircraft and payload**
   Only Matrice 30 series are supported.
3. **Route Type**
   Only Waypoint routes are supported.

Click OK to create the flight route.

Edit Waypoint Routes

Edit Flight Routes

Enter the flight route editor and set flight route details.



Move the mouse over ⓘ to view setting descriptions.

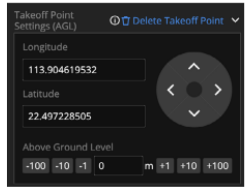
Pay attention to the settings below.

1. **Basic Information**
   Click to edit the flight route name and change the aircraft and payload.

   ⚠ Changing the payload will affect flight route settings.

2. **Takeoff Point Settings (AGL)**
   Click Set Takeoff Point and set the location where the aircraft will take off.

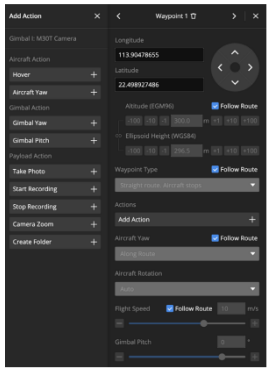
   A. Edit the longitude, latitude, and altitude above the ground level on the coordinate panel.



   B. Select and drag the takeoff point icon to move the takeoff point. Press and hold the Alt key and drag the icon up and down to adjust the altitude.

Edit Waypoints

Select and click on the map to add waypoints. Select a waypoint and set waypoint details.



1. **Longitude and Latitude**
   The longitude and latitude of an aircraft are obtained from its geographical location on the map.
2. **Altitude, Ellipsoid Height (WGS84), Waypoint Type, Aircraft Yaw, and Flight Speed**
   These parameters are consistent with the corresponding flight route settings by default. If the flight route settings are changed, the above parameters will also be updated.
3. **Actions**
   Click "+" to add actions for the aircraft, gimbal, and payload.
4. Click on the upper left corner to save the flight route settings.

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Perform Flight Tasks

DJI Pilot users can log in to the DJI FlightHub 2 cloud service and perform cloud flight tasks.

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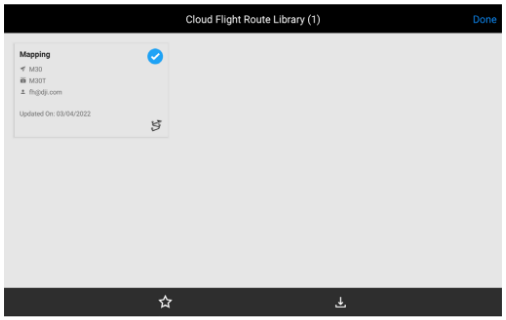
2. Select the flight route and tap , the flight route will be downloaded to Flight Route Library.



3. Select and enter flight route settings. Tap to perform the flight task.

https://dl.djicdn.com/downloads/DJI_FlightHub_2/DJI_FlightHub_2_User_Guide.pdf

Description:

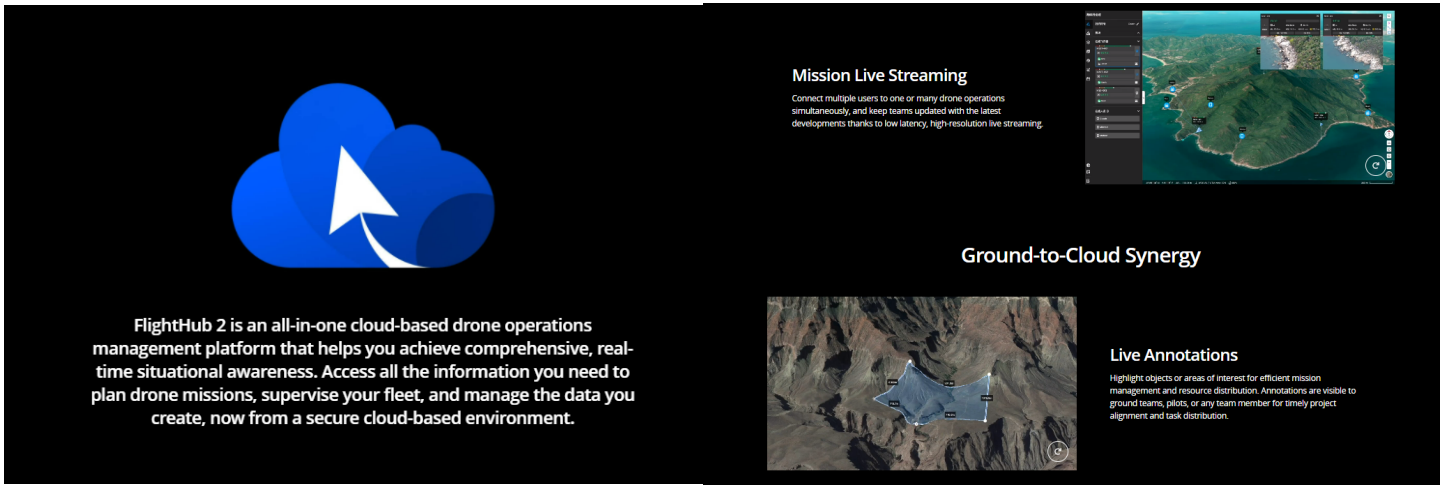
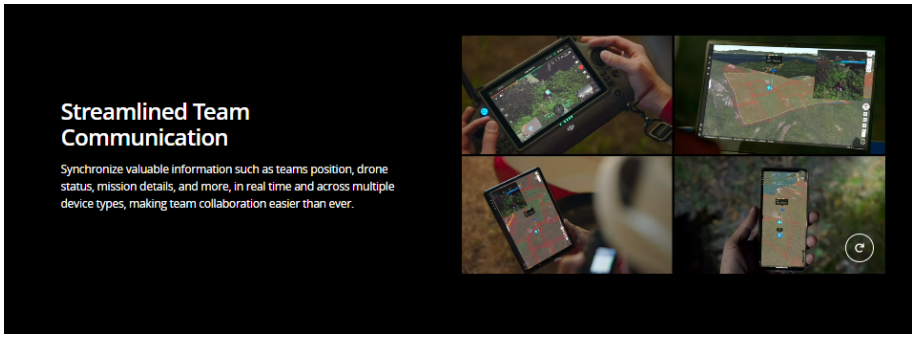
Mission Control handles execution of missions. Either single missions can be run through dedicated mission operators, or a series of missions and actions can be run serially using the Timeline.

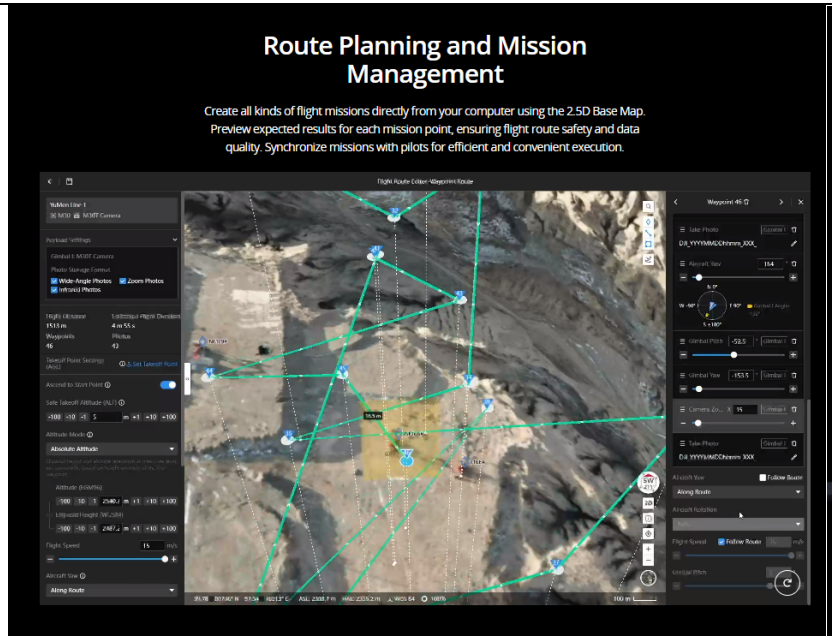
Mission operators look after execution of a single mission. A mission operator has APIs to control the mission (e.g. start, stop, pause etc.) and provides mission state through listeners.

Mission Control's Timeline is made up of a series of Timeline elements which can be Waypoint missions, Hotpoint missions (through the Hotpoint action `HotpointAction`) or objects that follow the `TimelineElement` protocol. `MissionAction` is a Timeline element, with `AircraftYawAction` and `GimbalAttitudeAction` subclasses being examples of specific actions. If a mission is being executed in a Timeline, the mission operator can still be used to get state information of the mission as well as change mission execution parameters.

Timeline elements can also have triggers (`Trigger`) associated with them. Triggers are separate objects that are run in parallel with a Timeline element. The trigger object is used to initiate actions if a set of criteria are met. For example, a trigger could be used to monitor battery level, and then initiate an action once a threshold is passed. Mission Control's Timeline is only supported by aircrafts. Handheld devices (e.g. OSMO) do not support this feature.

> Mission Control is accessed from `getMissionControl` in `DJISDKManager`.

	https://developer.dji.com/api-reference/android-api/Components/Missions/DJIMissionControl.html?search=mission&i=0&
[15j] monitor operation of the vehicle during performance of the mission.	The Accused FlightHub 2 software includes a fleet controller configured to monitor operation of the vehicle during performance of the mission. For example, the Accused FlightHub 2 software provides "real-time situational awareness," supervise the fleet, live stream missions, synchronize mission status, device status, and mission details.  



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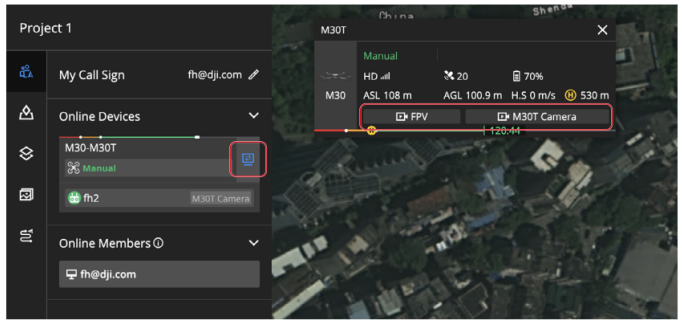

DJI FlightHub 2 User Guide

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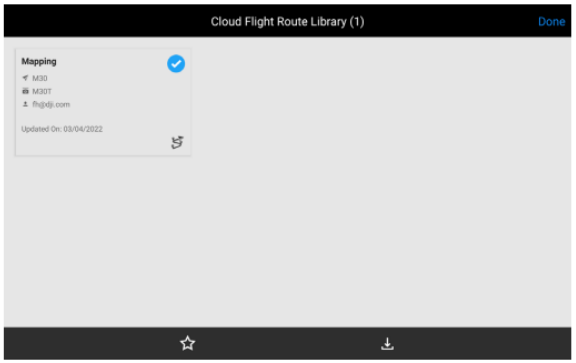
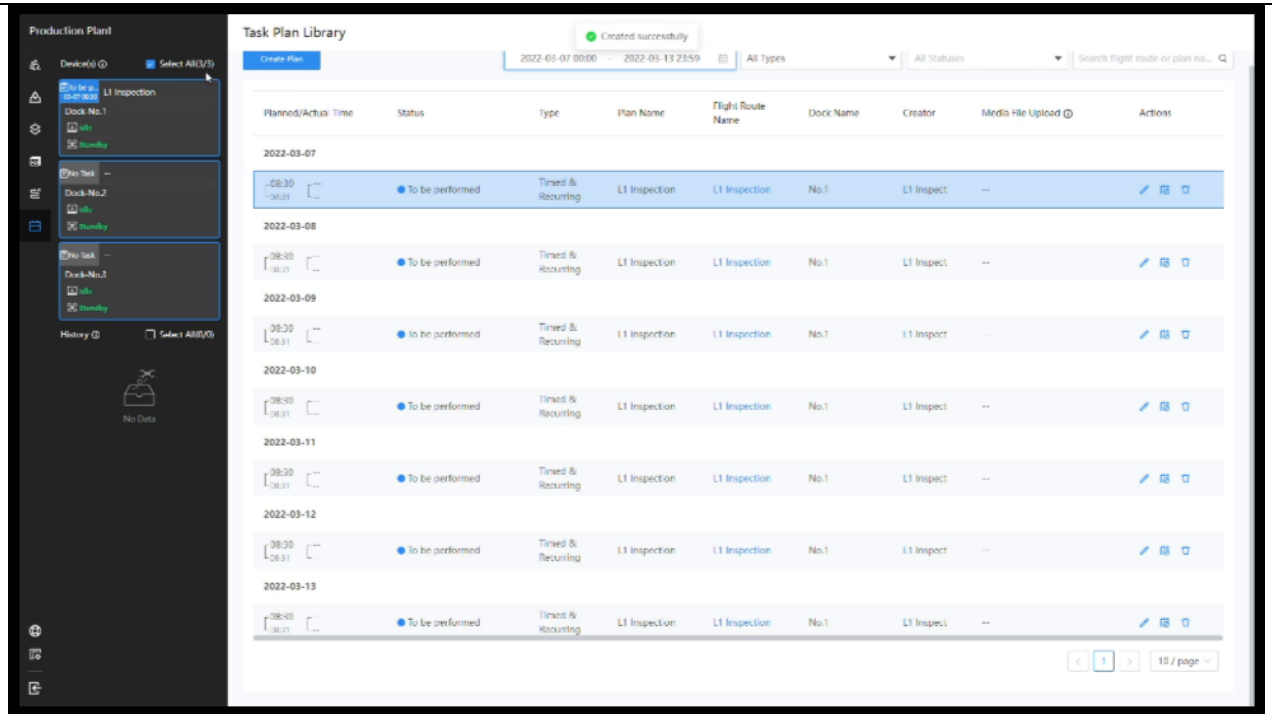
	DJI FlightHub 2 User Guide **Perform Flight Tasks** DJI Pilot users can log in to the DJI FlightHub 2 cloud service and perform cloud flight tasks. 1. Enter the home screen of DJI Pilot, tap Flight Route, select Cloud to view flight routes created on DJI FlightHub 2. 2. Select the flight route and tap , the flight route will be downloaded to Flight Route Library.  3. Select and enter flight route settings. Tap to perform the flight task. https://dl.djicdn.com/downloads/DJI_FlightHub_2/DJI_FlightHub_2_User_Guide.pdf
[16] The system according to claim 15, wherein the fleet controller is configured to obtain the mission from the master schedule according to a priority of mission entries in the master schedule.	The Accused FlightHub 2 software includes a fleet controller configured to obtain the mission from the master schedule according to a priority of mission entries in the master schedule. For example, the Accused FlightHub 2 software includes the ability to plan and execute high priority missions. As another example, the Accused FlightHub 2 software has the ability to execute missions according to the priority set by the task plan library.



https://www.dji.com/flighthub-2

final HIGH_PRIORITY_MISSION_EXECUTING

```
static final DJIMissionError HIGH_PRIORITY_MISSION_EXECUTING =
        new DJIMissionError("A higher priority mission is executing", 0xD7)
```

Package: dji.common.error

Description:

A higher priority mission is executing.

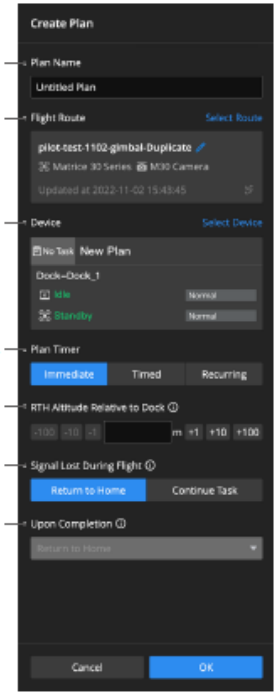
https://developer.dji.com/api-reference/android-api/Components/SDKError/DJIError_DJIMissionManagerError.html?search=priority&i=0&#djierror_djimissionmanagererror_mission_result_high_priority_mission_executing_inline

Task Plan Library

Project members can click to enter the task plan library to view task plans and the administrators can create and manage plans.

Create a Plan

Click Create Plan to create a task plan.



1. Plan Name
   The plan name is required and should be within 50 characters.
2. 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.

3. Device
   Only docks can be selected.
4. Plan Timer
   Users can select from Immediate, Timed, and Recurring.
   a. When the plan timer is set to Immediate, the aircraft will immediately perform the flight task once the plan is created.
   b. When the plan timer is set to Timed, the aircraft will perform the flight task when the set time is reached.
   c. When the plan timer is set to Recurring, the aircraft will perform repeated flight tasks when the set time is reached.
5. RTH Altitude Relative to Dock
   The aircraft altitude relative to the dock when the aircraft is returning to the dock (Altitude range: 20 m - 1500 m). The RTH altitude should be set based on the actual flight condition, surrounding environment, and GEO

DJI FlightHub 2 User Guide

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.

6. Signal Lost During Flight
   The aircraft will return to home or continue the flight task when it is disconnected from the dock.
7. Upon Completion
   Only Return to Home is supported when creating a task plan.

https://dl.djicdn.com/downloads/DJI_FlightHub_2/DJI_FlightHub_2_User_Guide_v2.0.pdf

DJI FlightHub 2 User Guide

Manage Task Plans

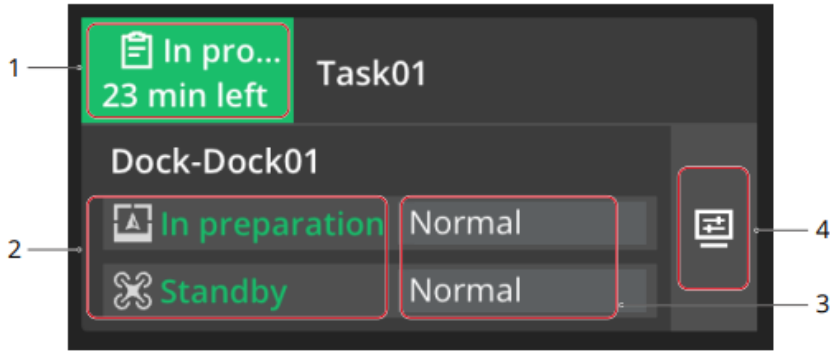
Users can view the task plan details and media file upload status, as well as perform actions on the task plan.

1. Planned/Actual Time: Displays the planned time of the task plan and the actual time when the task is performed. The planned time is estimated and can only be used as a reference.
2. Status: Includes To be performed, In progress, Task completed, Task failed, Task ended, and Suspended.
3. Type: Includes Immediate, Timed, and Recurring.
4. Route Name: Displays the flight route duplicate name. Click to view the duplicate in the editor. Editing and saving the duplicate are not supported.
5. 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:
   a. 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.
   b. Users can click Upload Now to prioritize the upload of the selected media files.
6. Actions:
   a. 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.
   b. For the flight tasks that are performed, users can click to copy the flight task, enter the flight route editor, and edit to create a new task plan.

https://dl.djicdn.com/downloads/DJI_FlightHub_2/DJI_FlightHub_2_User_Guide_v2.0.pdf

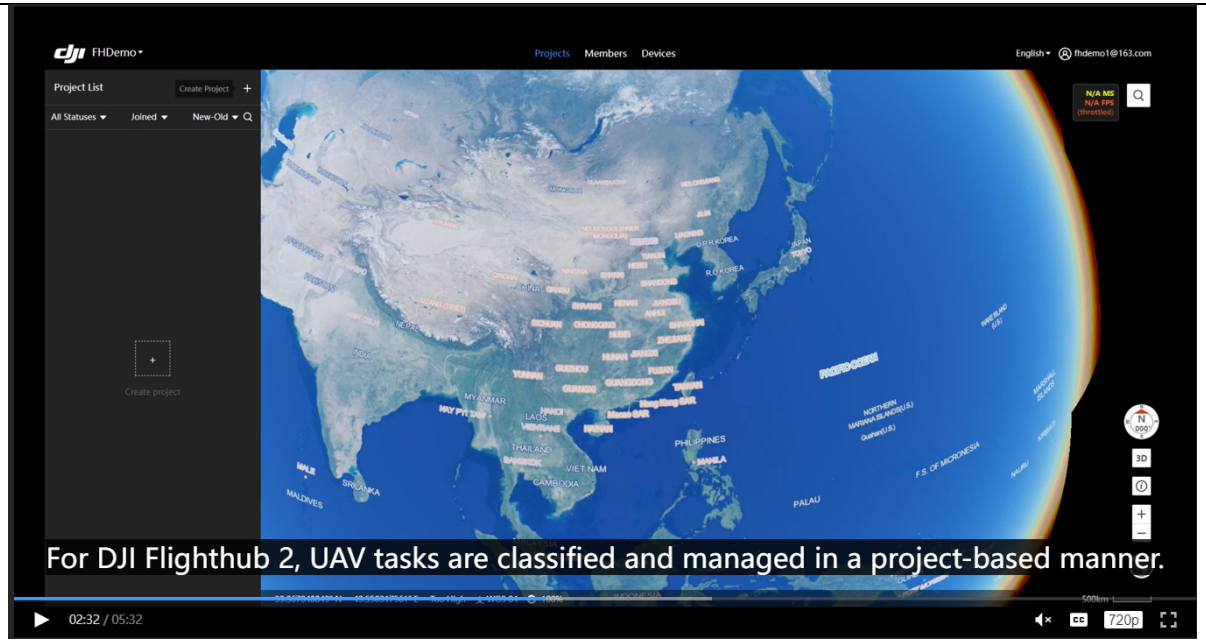
Dock

Users can view the flight task status, the dock and connected aircraft statuses, and the warning messages and open the device status window.



1. Flight task statuses include No task, To be performed, In progress, Task failed, Task ended, and Task completed. 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.

	 https://www.dji.com/flighthub-2/video
[17] The system according to claim 15, wherein the fleet controller is configured to receive, from an access point of the communications network, a last vehicle status in response to loss of a connection between the vehicle and the access point hosting	The Accused FlightHub 2 software includes a fleet controller configured to receive, from an access point of the communications network, a last vehicle status in response to loss of a connection between the vehicle and the access point hosting the persistent connection. For example, FlightHub 2 includes monitoring of the connection between the vehicle and the flight controller by monitoring the connection between the dock and/or pilot RC controller. The FlightHub 2 software also records the last vehicle status to the fleet controller (e.g., such that when the drone is disconnected, the last recorded time and coordinates of the drone are displayed).

the persistent connection.	

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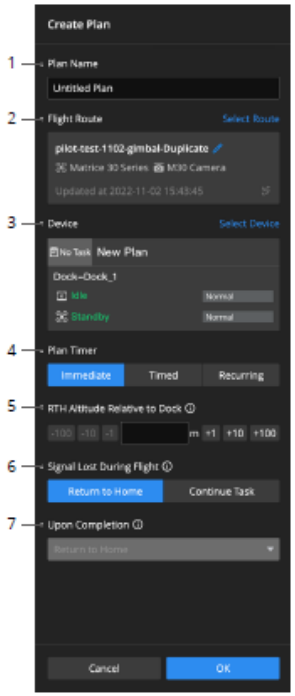

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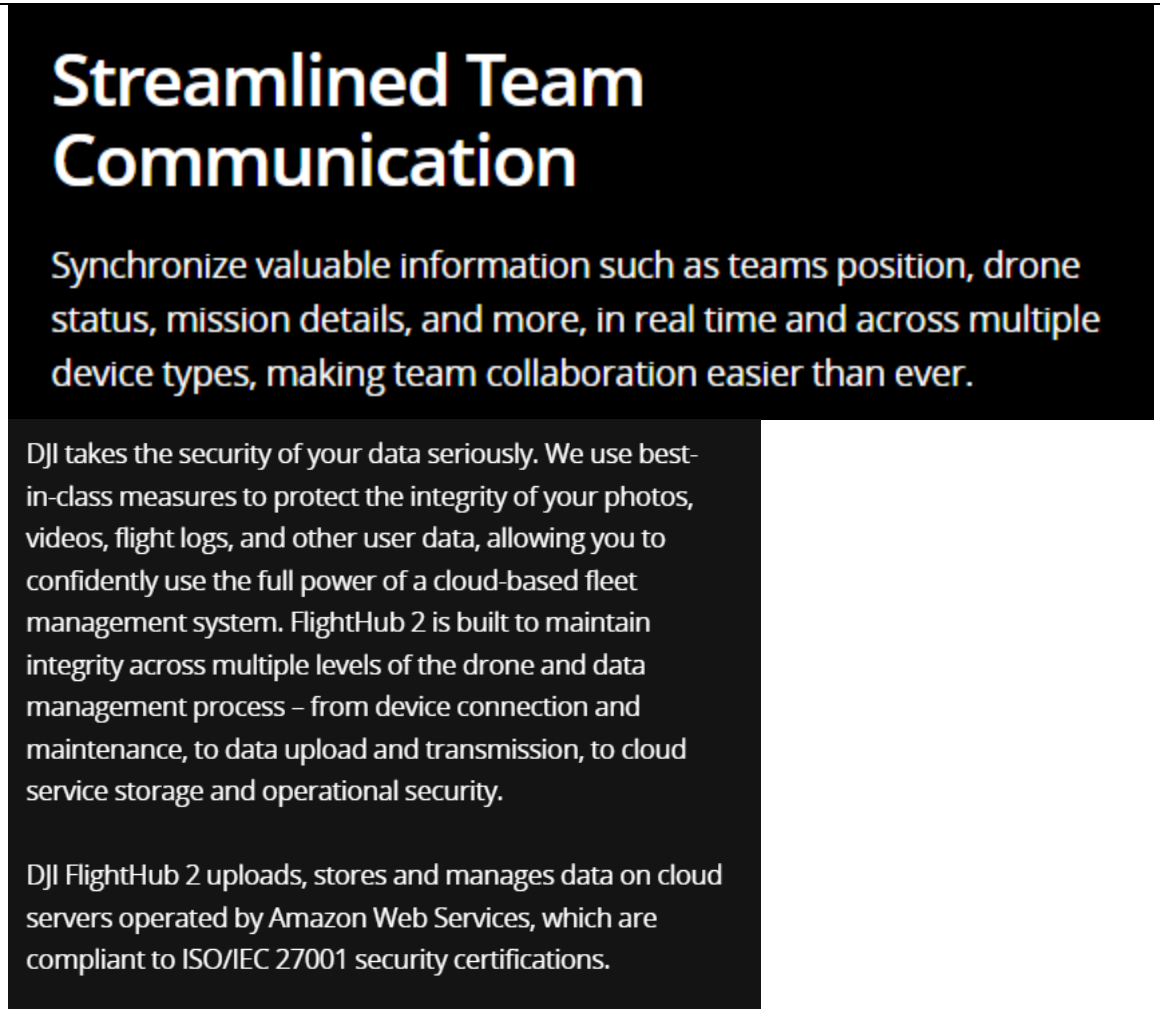


https://www.dji.com/flighthub-2

Monitor and Maintain Devices

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

1. 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.

2. 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, and operating mode can be modified.

Online Devices

Project members can view online aircraft and its connected remote controller on the Online Devices panel. Device statuses include:

a. When a device is online, its information will be displayed on the panel.

b. When a device is offline for less than five minutes, its information will be displayed in gray.

c. When a device is offline for more than five minutes, its information will not be displayed.

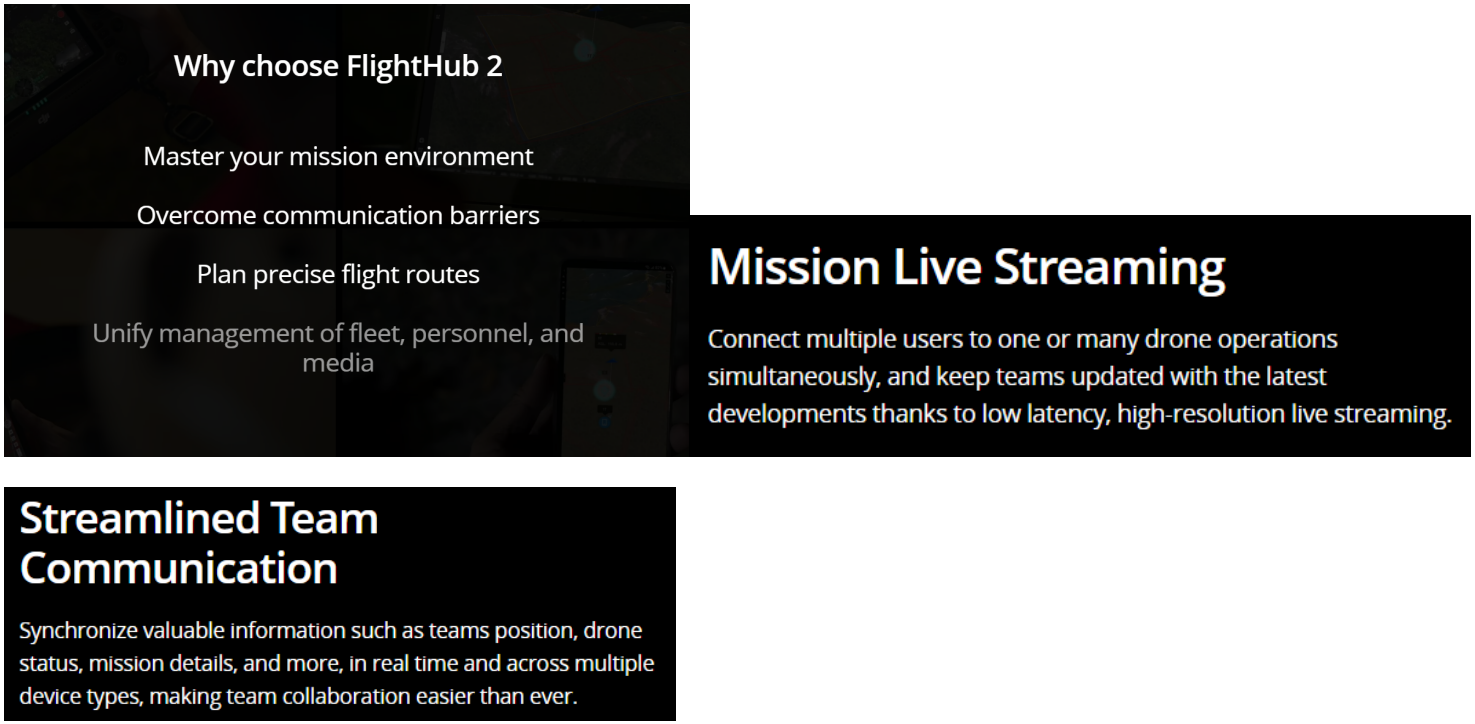
When the aircraft is disconnected, the last recorded time and coordinates of the aircraft will be displayed. Users can click the information to center the aircraft location at the middle of the map and then right-click to create a PinPoint to help locate the aircraft during searching.

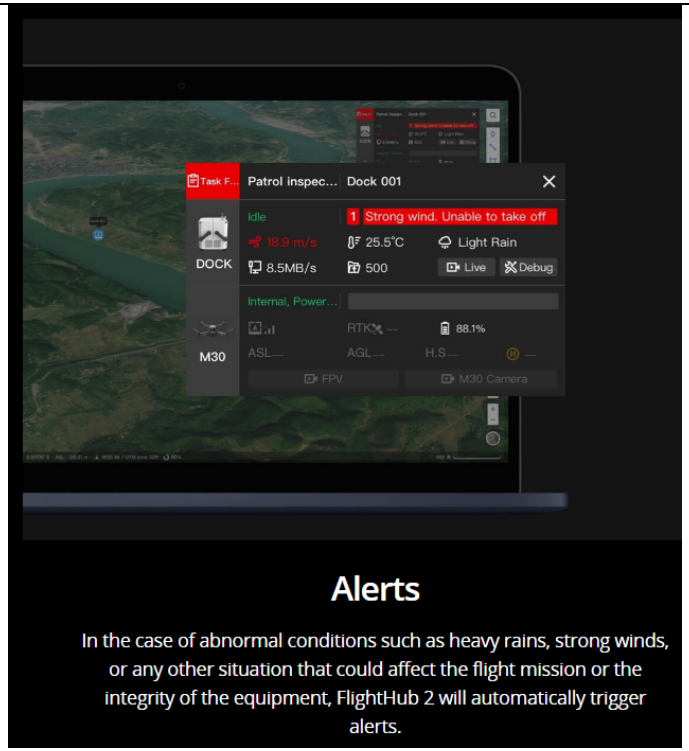
https://dl.djicdn.com/downloads/DJI_FlightHub_2/20221123/DJI_FlightHub_2_User_Guide_v2.0.pdf

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.

https://dl.djicdn.com/downloads/DJI_FlightHub_2/20221123/DJI_FlightHub_2_User_Guide_v2.0.pdf

[18a] The system according to claim 15, wherein the fleet controller is configured to: determine, during performance of the mission, whether the mission parameters associated with the mission are supported by mission impact data received at the fleet controller;	The Accused FlightHub 2 software includes a fleet controller configured to determine, during performance of the mission, whether the mission parameters associated with the mission are supported by mission impact data received at the fleet controller. For example, FlightHub 2 determines during performance of a mission whether mission parameters are supported by mission impact data (including but not limited to abnormal condition data) received at the fleet controller. 

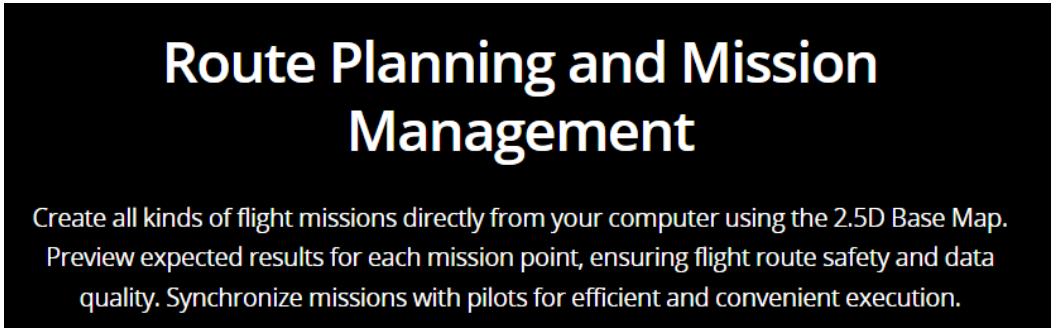
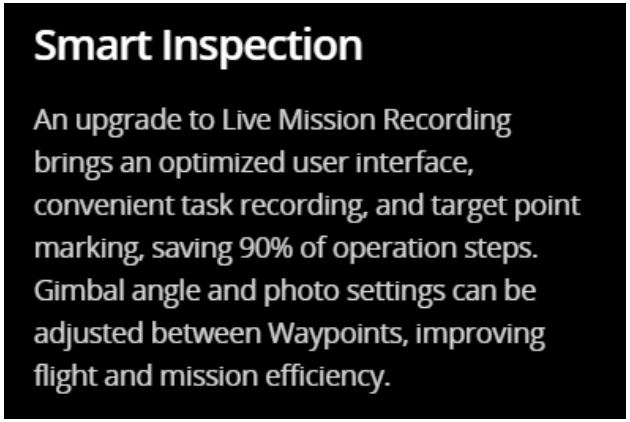


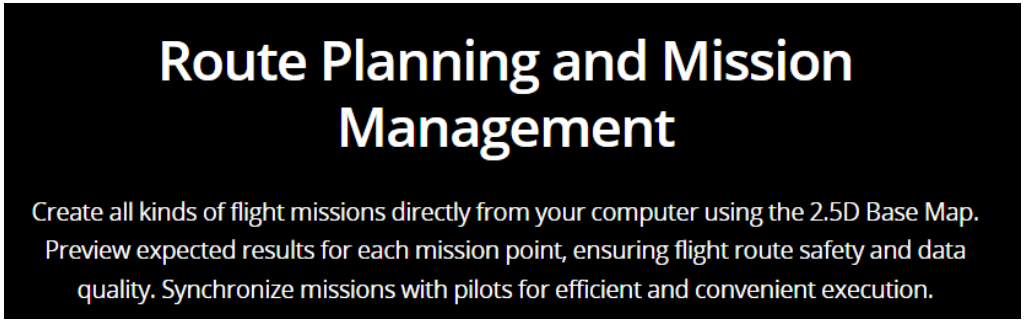
https://www.dji.com/flighthub-2

2. **Altitude, Ellipsoid Height (WGS84), Waypoint Type, Aircraft Yaw, and Flight Speed**
   These parameters are consistent with the corresponding flight route settings by default. If the flight route settings are changed, the above parameters will also be updated.

   To change the altitude of a single waypoint, uncheck Follow Route and drag the waypoint directly to move the horizontal position of the waypoint while keeping the current altitude. Project members can also press and hold the ALT or Option key to drag the waypoint and adjust the altitude of the waypoint while maintaining the horizontal position of the waypoint.

https://dl.djicdn.com/downloads/DJI_FlightHub_2/20221123/DJI_FlightHub_2_User_Guide_v2.0.pdf

[18b] generate, in response to the mission parameters not being supported by the mission impact data, adjusted vehicle commands according to the mission impact data and the mission parameters; and	The Accused FlightHub 2 software includes a fleet controller configured to generate, in response to the mission parameters not being supported by the mission impact data, adjusted vehicle commands according to the mission impact data and the mission parameters. For example, FlightHub 2 generates, in response to the mission parameters not being supported by mission impact data (including but not limited to abnormal condition data) adjusted vehicle commands according to the mission impact data and mission parameters. For example, FlightHub 2 generates alerts if conditions become abnormal during flight. FlightHub 2 may also adjust mission parameters of the flight (e.g., cause the drone to return home) in response to the mission impact data.  https://www.dji.com/flighthub-2  https://www.dji.com/matrice-30

	2. Altitude, Ellipsoid Height (WGS84), Waypoint Type, Aircraft Yaw, and Flight Speed These parameters are consistent with the corresponding flight route settings by default. If the flight route settings are changed, the above parameters will also be updated. To change the altitude of a single waypoint, uncheck Follow Route and drag the waypoint directly to move the horizontal position of the waypoint while keeping the current altitude. Project members can also press and hold the ALT or Option key to drag the waypoint and adjust the altitude of the waypoint while maintaining the horizontal position of the waypoint. https://dl.djicdn.com/downloads/DJI_FlightHub_2/20221123/DJI_FlightHub_2_User_Guide_v2.0.pdf
[18c] send the adjusted vehicle commands to the vehicle using the connection, and wherein the vehicle is configured to execute the mission according to the adjusted vehicle command.	The Accused FlightHub 2 software includes a fleet controller configured to send the adjusted vehicle commands to the vehicle using the connection, the adjusted vehicle commands causing the vehicle to execute the mission under control of the fleet controller according to the adjusted vehicle command. For example, FlightHub 2 generates alerts if conditions become abnormal during flight. FlightHub 2 may also adjust mission parameters of the flight (e.g., cause the drone to return home) in response to the mission impact data.  https://www.dji.com/flighthub-2

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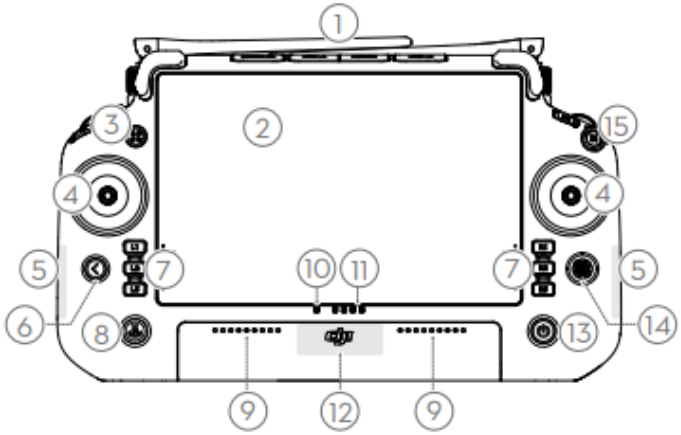
[19] The system according to claim 15, further comprising a control arbitrator configured to: determine whether the vehicle is subject to single source control, wherein determining whether the vehicle is subject to single source control comprises ensuring that the vehicle is subject to a single point of control at any one time; and	The Accused FlightHub 2 software includes a fleet controller configured to determine whether the vehicle is subject to single source control, wherein the determining whether the vehicle is subject to single source control comprises ensuring that the vehicle is subject to a single point of control at any one time. See Claim 15. As discussed above, FlightHub 2 include software that provides a for control of vehicle commands, including the flight route library and task plan library. These commands include determining whether the vehicle is subject to single source control including ensuring the vehicle is subject to a single point of control at any one time. method getPipelines `Pipelines getPipelines()` *Package:* dji.sdk.payload *Description:* The pipelines to transmit data between DJI Payload device and DJI mobile SDK. This function does not support dual controllers scenarios. It's only supported by Matrice 300 RTK. https://developer.dji.com/api-reference/android-api/Components/Payload/DJIPayload.html?search=dual%20control&i=1&#djipayload_pipelines_inline

Remote Controller Overview



1. **External RC Antennas**
   Transmit control and video wireless signals between the remote controller and the aircraft.

2. **Touchscreen**
   Displays system and app views and supports up to 10 touch points. Make sure the touchscreen is clean, and completely dry before use. Otherwise, viewing and touch effects may be affected.

3. **Aircraft Authority Button**
   When flying with a M30 series aircraft, the aircraft authority button is used to take control of the aircraft and indicate the aircraft control status. Refer to Guide on the home screen for more information.

8. **Return to Home (RTH) Button**
   Press and hold to initiate RTH. Press again to cancel RTH.

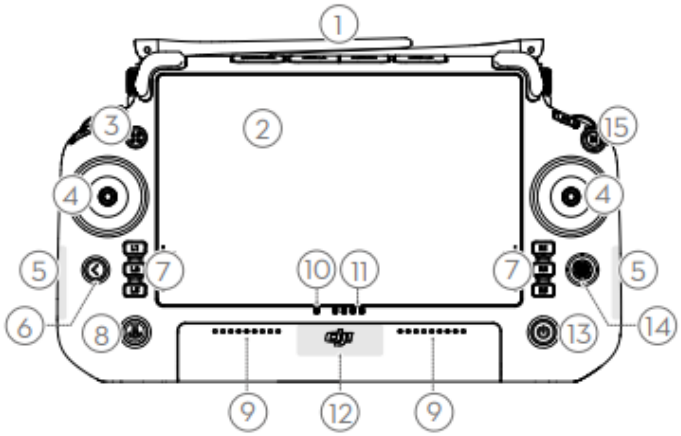
9. **Microphone**
   DO NOT block the microphones during usage.

10. **Status LED**
    Indicates the status of the remote controller. View detailed descriptions of the Status LED in the Remote Controller LEDs and Alert section or in Guide on the home screen of the remote controller.

11. **Battery Level LEDs**
    Display the current battery level of the remote controller. View detailed descriptions of the Battery Level LEDs in the Remote Controller

	https://dl.djicdn.com/downloads/matrice-30-series/20220830/Matrice30_Series_User_Manual_V1.2_EN1.pdf class RemoteControllerKey `class RemoteControllerKey extends DJIKey` *Package:* dji.keysdk *Inherits From:* `DJIKey` *Description:* `RemoteControllerKey` provides dedicated access to remote controller attributes. https://developer.dji.com/api-reference/android-api/Components/KeyManager/DJIRemoteControllerKey.html?search=authority&i=0&#remotecontrollerkey_multi_rc_control_authority_surpass_key

	3. Either pilot can take over control of a device as needed. Press the aircraft control button to gain control of the aircraft. Tap on the upper right corner of the gimbal camera view in DJI Pilot 2 to gain control of the gimbal camera. After gaining aircraft control, the pilot can lock it by pressing and holding the aircraft authority button on the remote controller. The aircraft authority button will turn blue when the control is locked. The control sticks are used for operating the gimbal if the remote controller only has control over the gimbal camera. When the remote controller has full control, the control sticks are used for controlling the aircraft and the dials for adjusting gimbal movement. 4. In Advanced Dual Operator mode, a control transfer mechanism will be triggered if one of the remote controllers is disconnected from the aircraft. When this happens, control of the gimbal camera will shift from the disconnected remote controller to the other remote controller still connected with the aircraft. If the disconnected remote controller also has aircraft control, the other remote controller will receive a notification that the user may manually take over aircraft control. If the pilot of the connected remote controller chooses not to take over aircraft control, the aircraft will automatically perform the failsafe action. If the pilot of the connected remote controller does not choose either option within a specified time period, the aircraft will also activate the failsafe action. https://dl.djicdn.com/downloads/matrice-30-series/20220830/Matrice30_Series_User_Manual_V1.2_EN1.pdf
[19b] forward the vehicle commands to the vehicle in response the vehicle being subject to the single source control or a source of the vehicle commands being assigned an authority greater than any other set of vehicles	The Accused FlightHub 2 software includes a fleet controller configured to forward the vehicle commands to the vehicle in response the vehicle being subject to the single source control or a source of the vehicle commands being assigned an authority greater than any other set of vehicles commands associated with the vehicle.

commands associated with the vehicle.	**Remote Controller Overview**  1. **External RC Antennas** Transmit control and video wireless signals between the remote controller and the aircraft. 2. **Touchscreen** Displays system and app views and supports up to 10 touch points. Make sure the touchscreen is clean, and completely dry before use. Otherwise, viewing and touch effects may be affected. 3. **Aircraft Authority Button** When flying with a M30 series aircraft, the aircraft authority button is used to take control of the aircraft and indicate the aircraft control status. Refer to Guide on the home screen for more information. 8. **Return to Home (RTH) Button** Press and hold to initiate RTH. Press again to cancel RTH. 9. **Microphone** DO NOT block the microphones during usage. 10. **Status LED** Indicates the status of the remote controller. View detailed descriptions of the Status LED in the Remote Controller LEDs and Alert section or in Guide on the home screen of the remote controller. 11. **Battery Level LEDs** Display the current battery level of the remote controller. View detailed descriptions of the Battery Level LEDs in the Remote Controller

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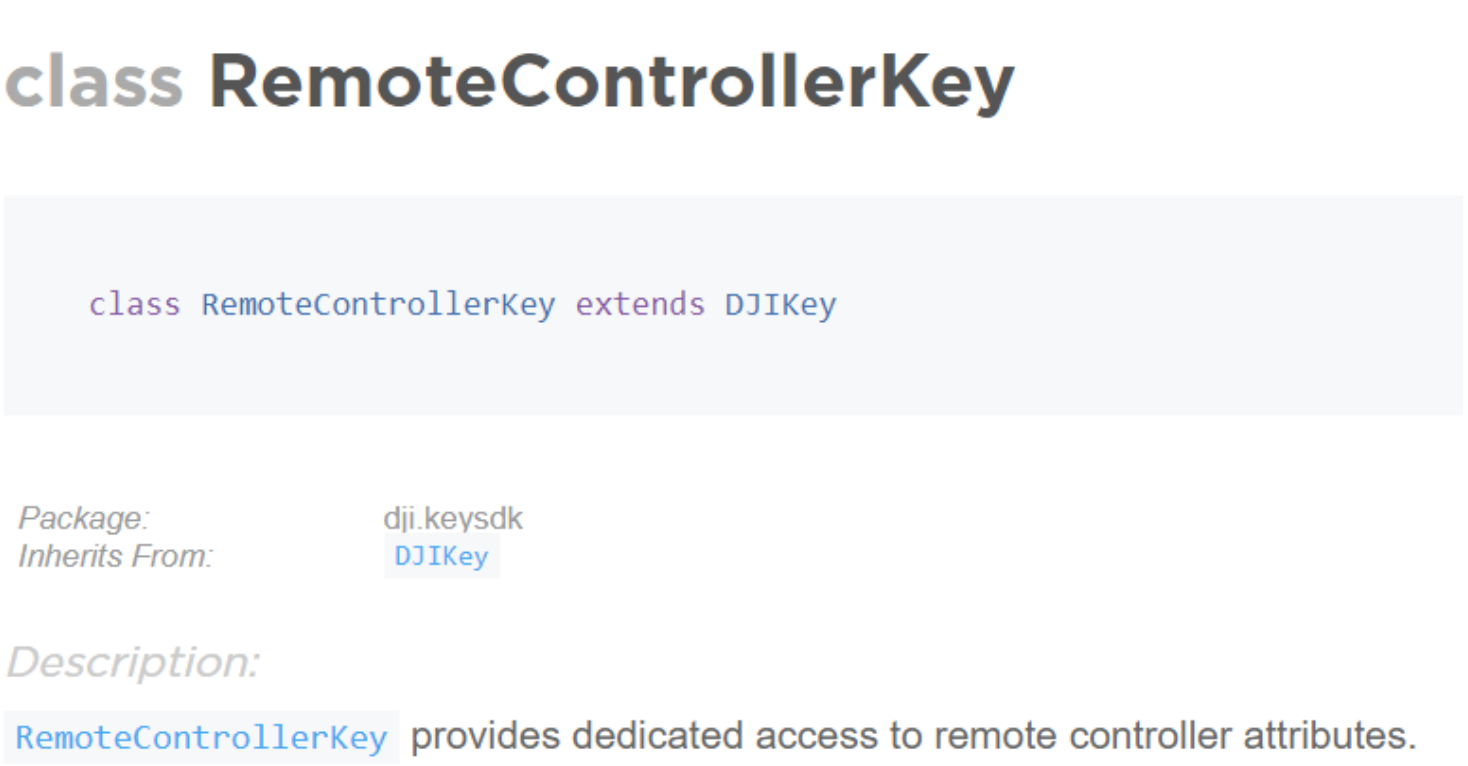
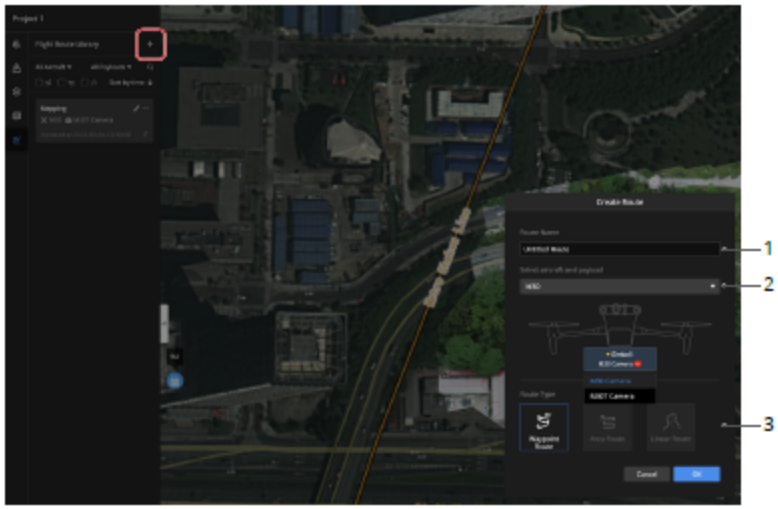


https://developer.dji.com/api-reference/android-api/Components/KeyManager/DJIRemoteControllerKey.html?search=authority&i=0&#remotecontrollerkey_multi_rc_control_authority_surpass_key

	3. Either pilot can take over control of a device as needed. Press the aircraft control button to gain control of the aircraft. Tap on the upper right corner of the gimbal camera view in DJI Pilot 2 to gain control of the gimbal camera. After gaining aircraft control, the pilot can lock it by pressing and holding the aircraft authority button on the remote controller. The aircraft authority button will turn blue when the control is locked. The control sticks are used for operating the gimbal if the remote controller only has control over the gimbal camera. When the remote controller has full control, the control sticks are used for controlling the aircraft and the dials for adjusting gimbal movement. 4. In Advanced Dual Operator mode, a control transfer mechanism will be triggered if one of the remote controllers is disconnected from the aircraft. When this happens, control of the gimbal camera will shift from the disconnected remote controller to the other remote controller still connected with the aircraft. If the disconnected remote controller also has aircraft control, the other remote controller will receive a notification that the user may manually take over aircraft control. If the pilot of the connected remote controller chooses not to take over aircraft control, the aircraft will automatically perform the failsafe action. If the pilot of the connected remote controller does not choose either option within a specified time period, the aircraft will also activate the failsafe action. https://dl.djicdn.com/downloads/matrice-30-series/20220830/Matrice30_Series_User_Manual_V1.2_EN1.pdf
[20] The system according to claim 15, wherein the requirements for use of the flight path comprise at least one of weight, size, minimum or maximum altitude, or airspeed.	The Accused FlightHub 2 software includes requirements for use of the flight path that comprise at least one of weight, size, minimum or maximum altitude, or airspeed. For example, FlightHub 2 software includes requirements for use of the flight path that include payload weight, drone size, minimum and maximum altitude, and airspeed.

Create Flight Routes

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



1. Route Name
   The route name is required and should be within 60 characters.
2. Select aircraft and payload
   Only the Matrice 30 and Mavic 3 enterprise series are supported.
3. Route Type
   Only the Waypoint routes are supported.

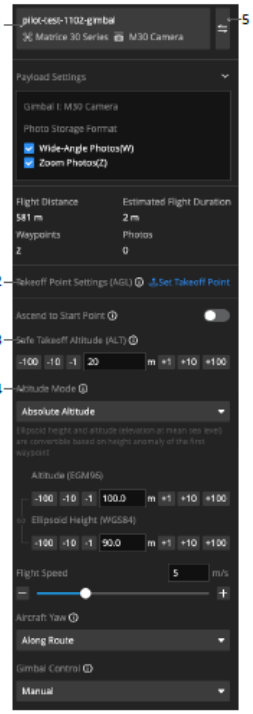
Click OK to create the flight route.

DJI FlightHub 2 User Guide

Edit Waypoint Routes

Users will be automatically directed to the flight route editor after creating a flight route. Members can also click to edit the flight route and waypoints.

Edit Flight Routes



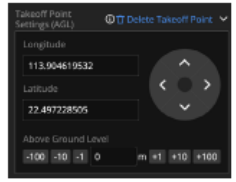
Move the mouse over ⓘ to view setting descriptions.

Pay attention to the settings below.

1. Basic Information
   Click to edit the flight route name and change the aircraft and payload.

   ⚠ Changing the payload will affect flight route settings.

2. Takeoff Point Settings (AGL)
   Click Set Takeoff Point and set the location where the aircraft will take off.
   a. Edit the longitude, latitude, and altitude above the ground level on the coordinate panel.



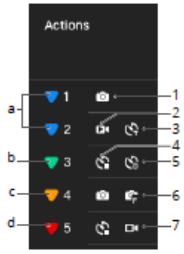
   b. Select and drag the takeoff point icon to move the takeoff point. Press and hold the Alt key and drag the icon up and down to adjust the altitude.
   c. Click Delete Takeoff Point to delete the takeoff point data.

• When the Altitude mode is set to Altitude Relative to Takeoff Point (ALT), the takeoff point will be a reference point used to plan the flight route. The actual takeoff point of an aircraft when performing a task may differ from the set takeoff point. The route altitude will be based on the altitude of the actual takeoff point during the flight.

3. Safe Takeoff Altitude (ALT)
   Safe Takeoff Altitude is the altitude relative to the takeoff point altitude. Aircraft will ascend to the safe takeoff altitude after takeoff and fly to the flight route start point.
4. Altitude Mode
   The Altitude mode is set to Absolute Altitude by default. Project members can also change it to Altitude Relative to Takeoff Point (ALT) or Above Ground Level.
5. Switch Between the Flight Route and Actions Panels
   Users can click to switch to the Actions panel.

Waypoint Action Icon Colors:

a. Blue: The waypoint parameters do not follow the flight route settings.
b. Green: The waypoint parameters follow the flight route settings.
c. Yellow: There are errors in the waypoint settings.
d. Red: There are severe errors in the waypoint settings, and the flight route cannot be performed.



Waypoint Action Icons:

1. Take a photo
2. Start recording
3. Start a timed interval shot
4. End the interval shot
5. Start a distance interval shot
6. Take a photo (Fixed angle)
7. End recording

https://dl.djicdn.com/downloads/DJI_FlightHub_2/20221123/DJI_FlightHub_2_User_Guide_v2.0.pdf

Maximum Altitude & Distance Restrictions

Maximum flight altitude restricts the aircraft flight altitude, while maximum flight distance restricts the aircraft flight radius around the Home Point. These limits can be set using the DJI Pilot 2 app for improved flight safety.

https://dl.djicdn.com/downloads/DJI_Mavic_3_Enterprise/20221212/DJI_Mavic_3E_3T_User_Manual_EN.pdf

Strong GNSS Signal		
	Flight Restrictions	Prompt in DJI Pilot 2
Max Altitude	The altitude of the aircraft cannot exceed the value set in DJI Pilot 2.	Aircraft approaching max flight altitude. Fly with caution.
Max Distance	The straight-line distance from the aircraft to the Home Point cannot exceed the max flight distance set in DJI Pilot 2.	Aircraft approaching max flight distance. Fly with caution.

https://dl.djicdn.com/downloads/DJI_Mavic_3_Enterprise/20221212/DJI_Mavic_3E_3T_User_Manual_EN.pdf

Annotation and Sync Map	✓	✓
Share Device Location	✓	✓
Real-time Mapping	Bind equipment with DJI FlightHub 2 for limited free trials of certain functions.	3,000 images/month [4] Unused number of mapping images will be rolled over into the following month only
Display Model	1 Includes 2D and 3D models. Only one model can be overlaid on the map at a time in a project	Unlimited
2.5D Map	✓	✓
Flight Path Planning	✓	✓

https://www.dji.com/flighthub-2

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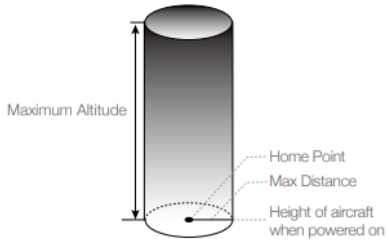
Maximum flight altitude restricts the aircraft flight altitude, while maximum flight distance restricts the aircraft flight radius around the Home Point. These limits can be set using the DJI Pilot 2 app for improved flight safety.



Home Point not manually updated during flight

https://dl.djicdn.com/downloads/matrice-30-series/20220830/Matrice30_Series_User_Manual_V1.2_EN1.pdf

2. Set the return-to-home altitude, out-of-control action, maximum altitude and maximum flight distance, update the Home Point, select the control stick mode, and set the battery warning threshold, obstacle sensing switches and obstacle sensing distances.

- It is recommended to carefully conduct the preflight check according to the operation scenario and requirements before takeoff.
- Before executing a mission flight, conduct a preflight check and verify the basic parameter information of the mission flight. Refer to the Mission Flight section for details.

https://dl.djicdn.com/downloads/matrice-30-series/20220830/Matrice30_Series_User_Manual_V1.2_EN1.pdf