

DJI Dock 3 Matrice 4D Series

Unmanned Aircraft Flight Manual

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In the event of divergence among different versions, the English version shall prevail.

Searching for Keywords

Search for keywords such as “battery” and “install” to find a topic. If you are using Adobe Acrobat Reader to read this document, press Ctrl+F on Windows or Command+F on Mac to begin a search.

Navigating to a Topic

View a complete list of topics in the table of contents. Click on a topic to navigate to that section.

Printing this Document

This document supports high resolution printing.

Using this Manual

Legend

 Important

 Hints and Tips

 Reference

Read Before Use

DJI™ provides users with tutorial videos and the following documents:

1. Safety Guidelines
2. Quick Installation Guide
3. Installation and Setup Manual
4. User Manual (Unmanned Aircraft Flight Manual)

It is recommended to watch all tutorial videos and read the Safety Guidelines before using for the first time. Prepare for dock installation and first flight by reviewing the Quick Installation Guide. Refer to the Installation and Setup Manual and this user manual for more information.

-
-  • The dock must be installed and set up by an authorized service provider. Unauthorized installation and setup may lead to safety risks. Contact DJI Support for information on authorized service providers.
- The aircraft and the dock does not meet the standard operating temperature for military-grade application (-55° to 125° C/-67° to 257° F), which is required to endure greater environmental variability. Appropriately use the product for applications that meet the operating temperature range requirements of that grade.
-

This document was developed following the process, content and structure defined in ASTM Specification F2908.

Video Tutorials

Go to the address below or scan the QR code to watch the tutorial videos, which demonstrate how to use the product safely:

<https://enterprise.dji.com/dock-3/video>

Download DJI Assistant 2

Download DJI ASSISTANT™ 2 (Enterprise Series) at:

<https://www.dji.com/downloads/software/assistant-dji-2-for-matrice>

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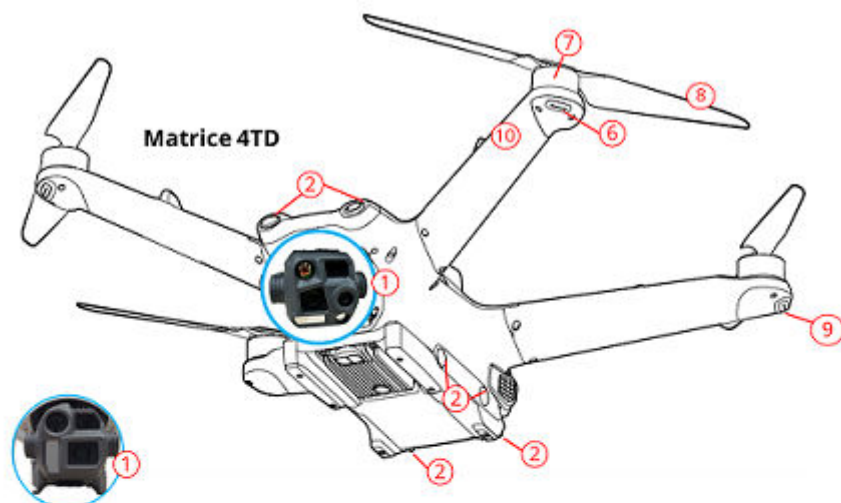
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General Information and System Description

1 General Information and System Description

1.1 Overview

Aircraft



Matrice 4D



1. Gimbal and Camera ^[1]
2. Vision Systems
3. Internal Charging Module
4. Infrared Sensing System
5. Auxiliary Light
6. Front LEDs
7. Motors
8. Propellers

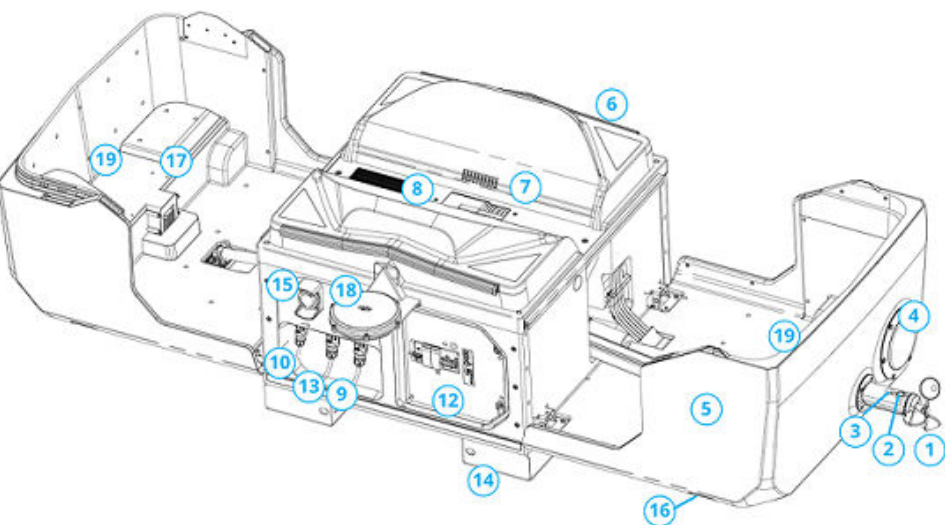
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| 9. Aircraft Status Indicators | 16. Battery Buckle |
| 10. Frame Arms (incl. Internal Antennas) | 17. Battery Locking Arm |
| 11. GNSS/RTK Antenna | 18. USB-C Assistant Port (E-Port Lite) |
| 12. Beacon | 19. microSD Card Slot |
| 13. Intelligent Flight Battery | 20. Cellular Dongle Compartment |
| 14. Power Button | 21. E-Port |
| 15. Battery Level LEDs | |

[1] The Matrice 4D and Matrice 4TD are equipped with different cameras. Refer to the actual product purchased.



- Contact DJI or a DJI authorized dealer to replace the components of the product if damaged. DO NOT disassemble the product without the assistance of a DJI authorized dealer (except for components allowed to be disassembled by users in this guide), otherwise it will not be covered under warranty.
 - The aircraft has particle dampers installed in the LED covers at the end of the frame arms to dampen frame arm vibration, ensuring a reliable, extended flight time in various environments. It is normal for the particle dampers to make a sound when shaken.
-

Dock



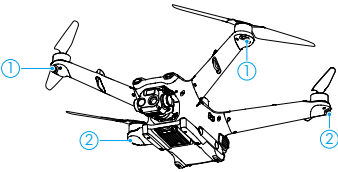
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|---|--|
| 1. Wind Speed Gauge | 11. Earth Wire (located underneath the dock) |
| 2. Security Camera | 12. Electrical Cabinet |
| 3. Camera Auxiliary Light | 13. LAN-IN Port |
| 4. Rainfall Gauge | 14. Mounting Base Brackets |
| 5. Dock Cover | 15. Emergency Stop Button |
| 6. Positioning Markers | 16. Status Indicators |
| 7. Landing Pad | 17. Dongle Compartment |
| 8. Aircraft Orientation Marker ^[1] | 18. RTK Module |
| 9. PoE Output Port | 19. Vehicle-mounted Gimbal Mount |
| 10. AC-IN Port | |

[1] Internal Charging Module The dock is equipped with a built-in charging module. Make sure the surface is clear of any metal objects in order to avoid high temperatures that may damage the landing pad. Make sure the aircraft orientation is consistent with the arrow on the landing pad.

1.2 Aircraft

Aircraft Status Indicators

The aircraft has front LEDs and aircraft status indicators.



1. Front LEDs

2. Aircraft Status Indicators

When the aircraft is powered on but the motors are not running, the front LEDs glow solid green to display the orientation of the aircraft.

When the aircraft is powered on but the motors are not running, the aircraft status indicators will display the current status of the aircraft.

Aircraft Status Indicators Descriptions

Normal States		
	Blinks red, yellow, and green alternately	Powering on and performing self-diagnostic tests
 × 4	Blinks yellow four times	Warming up
	Blinks green slowly	GNSS enabled
 × 2	Blinks green twice repeatedly	Vision systems enabled
	Blinks yellow slowly	GNSS and vision system disabled (ATTI mode enabled)
Warning States		
	Blinks yellow quickly	Remote controller signal lost
	Blinks red slowly	Takeoff is disabled (e.g., low battery) ^[1]
	Blinks red quickly	Critically low battery
 —	Solid red	Critical error
	Blinks red and yellow alternately	Compass calibration required

[1] If the aircraft cannot take off while the status indicators are blinking red slowly, view the warning prompt in DJI Pilot 2.

After the motors start, the front LEDs blink green, and the aircraft status indicators blink red and green alternately. The green lights indicate the aircraft is a UAV, and the green and red lights indicate the heading and position of the aircraft.



- Lighting requirements vary depending on the region. Observe local laws and regulations.
 - To obtain better footage, the front LEDs turn off automatically when taking photos and videos if the front LEDs are set to **Auto** in DJI Pilot 2.
-

Beacon

The beacon on the aircraft allows users to find the aircraft when flying at night. The beacon can be enabled/disabled in DJI FlightHub 2.



- DO NOT look directly at the beacon when it is in use to avoid eye damage.
-

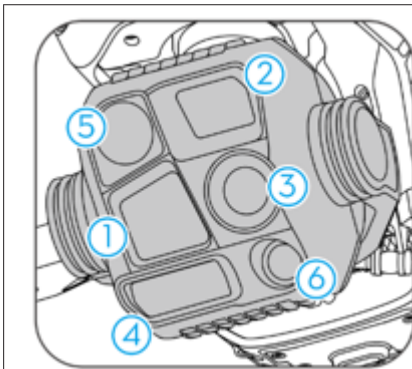
Auxiliary Light

The auxiliary light will automatically turn on in lowlight environments to assist the downward vision system.

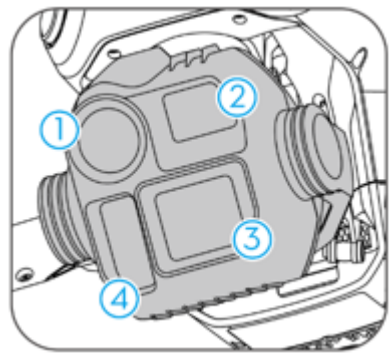


- ⚠ • The auxiliary light will automatically turn on in low-light environments when the flight altitude is under 5 m. Note that the positioning performance of the vision system may be affected. Fly with caution if the GNSS signal is weak. Pay attention to the dock and the aircraft livestream.

Camera



Matrice 4TD



Matrice 4D

1. Tele Camera
2. Medium-Tele Camera
3. Wide Camera

4. Laser Range Finder
5. Thermal Camera
6. NIR Auxiliary Light

-
- ⚠ • Due to the characteristics of the infrared sensor, the infrared sensor may become burnt before sunburn protection is triggered. DO NOT expose the infrared camera lenses to strong sources of energy such as the sun, lava, or laser beams. Otherwise, the camera sensor may become burnt, leading to permanent damage.
 - Make sure the temperature is within a suitable range for the camera during use and storage.
 - Use a lens cleaner to clean the lens to avoid damage or poor image quality.
 - DO NOT block any ventilation holes on the camera as the heat generated may damage the device or cause injury to the user.
-

Storing Media Files

The aircraft supports the use of a microSD card to store photos and videos. Refer to the specifications for more information.

-
- ⚠ • Ensure that the SD card slot and the microSD card are clean and free of foreign objects during use.
 - DO NOT remove the microSD card from the aircraft when taking photos or videos. Otherwise, the microSD card may be damaged.
 - Check camera settings before use to ensure they are configured correctly.
 - Before shooting important photos or videos, shoot a few images to test whether the camera is operating correctly.
 - Make sure to power off the device correctly. Otherwise, the camera parameters will not be saved, and any recorded videos may be affected. DJI is not responsible for any loss caused by an image or video recorded in a way that is not machine-readable.
 - To ensure the stability of the camera system, single video recordings are limited to 30 minutes.
-
- 💡 • The images and videos will be automatically uploaded to DJI FlightHub 2 after each flight task. Open the DJI FlightHub 2 Project page and click  > **Media Files** to view the uploaded files.
-

Gimbal

Gimbal Operation Modes

The gimbal operates in Follow Mode: The tilt angle of the gimbal remains stable relative to the horizontal plane, which is suitable for shooting stable images. Users can adjust the gimbal tilt.

Gimbal Notes

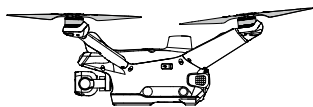
-
- ⚠ • Make sure there are no stickers or objects on the gimbal before taking off. DO NOT tap or knock the gimbal after the aircraft is powered on. Take off the aircraft from open and flat ground to protect the gimbal.
 - Avoid getting dust or sand on the gimbal, especially in the gimbal motors.
 - DO NOT add any extra payload other than an official accessory to the gimbal, as this may cause the gimbal to function abnormally or even lead to permanent motor damage.
 - Precision elements in the gimbal may be damaged by a collision or impact, which may cause the gimbal to function abnormally. Make sure to protect the gimbal from damage.
 - A gimbal motor may enter protection mode if the gimbal is obstructed by other objects when the aircraft is put on uneven ground or on grass, or if the gimbal experiences an excessive external force, such as during a collision.
 - Remove the gimbal protector before powering on the device. Attach the gimbal protector when the device is not in use.
 - Flying in heavy fog or clouds may make the gimbal wet, leading to temporary failure. The gimbal will recover full functionality once it is dry.
-

Flight Control Surfaces

Not applicable for multicopters.

Propulsion System

The propulsion system consists of motors, ESCs, and folding propellers, to provide stable and powerful thrust.



Avionics

Flight Control and Navigation System

The flight control and navigation system built into the aircraft has modules such as the flight controller, IMU, barometer, GNSS receiver, RTK module, and a compass, providing stable and reliable navigation and control. The dedicated industrial flight controller provides multiple operation modes for various applications. The aircraft also supports centimeter-level positioning when used with the built-in onboard RTK antennas.

Aircraft RTK

When the aircraft is used with the RTK module of the dock, centimeter-level positioning data can be obtained, allowing for a precise flight route and landing.

Users can choose different positioning accuracy when making task plans in DJI FlightHub 2:

- RTK: The aircraft will take off and wait for the RTK data to converge before performing a task. It is unable to pause the task during convergence. It is recommended to choose this task when high positioning accuracy is required.
- GNSS: The aircraft will perform a task directly without converging RTK data. It is recommended to choose this task when basic positioning accuracy is acceptable. Make sure that there are no obstacles within 20 meters along the flight route before initiating the task plan.

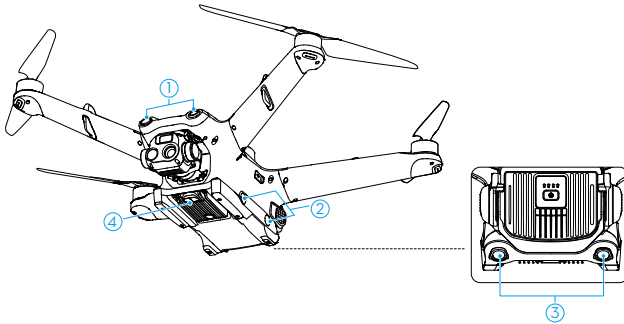


- The number of searched satellites should be greater than 20 for the aircraft RTK data to converge. If there is strong signal interference or ionospheric scintillation, the aircraft RTK data may not converge.
 - The RTK positioning needs to be done in an environment with a strong GNSS signal (outdoors in an open area without obstacles) to ensure high-precision positioning. The RTK solution is fixed to converge to centimeter-level accuracy.
 - Make sure the dock RTK is calibrated before an RTK task to ensure accurate flight along the flight route.
 - If the aircraft RTK type is switched (for example switched to the network RTK using the remote controller then linked the aircraft and the dock), make sure to restart the aircraft before performing flight tasks.
-

Communications Equipment

The aircraft boasts DJI O4 Enterprise Transmission system with OcuSync video transmission antennas, offering stable and reliable communication with the control station.

Sensing System



1. Forward and Upward Vision System
2. Lateral Vision System
3. Backward and Downward Vision System
4. Infrared Sensing System

-
- ⚠ • To ensure a safe and steady flight, DO NOT block the vision and infrared sensors.
- Clean the lenses of the vision and infrared sensing systems on a regular basis. If the vision sensor lenses are blurry, a warning will appear in DJI FlightHub 2 during flight tasks. Clean the lenses as soon as possible after the warning appears.
-

Detection Range

-
- ⚠ • Visit <https://enterprise.dji.com/dock-3/specs> to for more information on the detection range of the sensing systems. Aircraft cannot sense obstacles that are out of the detection range. Fly with caution.
- The aircraft cannot sense moving obstacles such as people, animals, or vehicles.
-

Usage Scenarios

The positioning function of the Downward Vision System is applicable when GNSS signals are unavailable or weak. It is automatically enabled in Normal mode. When flying in an environment surrounded by obstacles, make sure the vision system is enabled for flight safety. The lateral and upward vision system will activate automatically when the aircraft is powered on if the aircraft is in N mode and Obstacle Sensing is enabled in DJI FlightHub 2 or DJI Pilot 2.

-
- ⚠ • Pay attention to the flight environment. The vision system and infrared sensing system only work in certain scenarios and cannot replace human control and judgment. During flight, pay attention to the surrounding environment and to the warnings in DJI FlightHub 2. Be responsible for and maintain control of the aircraft at all times.
 - The downward vision system works best when the aircraft is at an altitude from 0.5 to 30 m if there is no GNSS available. Extra caution is required if the altitude of the aircraft is above 30 m as the vision positioning performance may be affected.
 - In low-light environments, the vision systems may not achieve optimal positioning performance even if the auxiliary light is turned on. Fly with caution if the GNSS signal is weak in such environments.
 - The downward vision system may not work properly when flying near water. Therefore, the aircraft may not be able to actively avoid water below it when landing. It is recommended to maintain flight control at all times, make reasonable judgments based on the surrounding environment, and avoid over-relying on the downward vision system.
 - The vision system cannot work properly near surfaces without clear pattern variations or where the light is too bright or too dark. The vision system cannot work properly in the following situations:
 - Flying near monochrome surfaces (e.g., pure black, white, red, or green surfaces).
 - Flying near highly reflective surfaces.
 - Flying near water or transparent surfaces.
 - Flying near moving surfaces or objects.
 - Flying in an area with frequent and drastic lighting changes.
 - Flying near extremely dark (<1 lux) or bright (>40,000 lux) surfaces.
 - Flying near surfaces that strongly reflect or absorb infrared waves (e.g., mirrors).
 - Flying near surfaces without clear patterns or textures.

- Flying near surfaces with repeating identical patterns or textures (e.g., tiles with the same design).
- Flying near obstacles with small surface areas (e.g., tree branches, and power lines).
- Keep the sensors clean at all times. DO NOT scratch or tamper with the sensors. DO NOT use the device in dusty or humid environments.
- DO NOT fly when it is rainy, smoggy, or the visibility is lower than 100 m.
- The infrared sensing systems may NOT detect the distance accurately in the following situations:
 - Flying over surfaces that can absorb sound waves (e.g., asphalt road surfaces).
 - A large area of strong reflectors situated at a distance of more than 15 m (e.g., multiple traffic signs placed side by side).
 - Tiny obstacles (e.g., iron wires, cables, tree branches, or leaves).
 - Mirrors or transparent objects (e.g., water or glass).
 - In low-visibility environments (e.g., heavy fog or snow).
- DO NOT obstruct the infrared sensing system and vision system. DO NOT hang or place anything in an area that will block the vision systems, infrared sensing systems, and their observation range.
- Make sure that the sensor lens is clear and free of stains. DO NOT interfere with the vision systems and infrared sensing system in any way such as using a strong light source to illuminate the vision system or aiming specular reflectors towards the infrared sensor.
- Make sure that the sensor lens is clear and free of stains. Check the following before placing the aircraft on the dock:
 - Make sure there are no stickers or any other obstructions over the glass of the infrared sensing system or vision system.
 - Use a soft cloth if there is any dirt, dust, or water on the glass of the vision system and infrared sensing system. DO NOT use any cleaning product that contains alcohol.
 - Contact DJI Support if there is any damage to the lenses of the infrared sensing and vision system.

DJI AirSense

Crewed airplanes or helicopters with Automatic Dependent Surveillance–Broadcast (ADS-B) transmitters can broadcast flight information. The DJI aircraft equipped with DJI

AirSense can receive the flight information broadcast from ADS-B transmitters that comply with the 1090ES (RTCA DO-260) or UAT (RTCA DO-282) standard and within a radius range of 10 km. DJI AirSense only issues warning messages under certain circumstances when specific crewed airplanes or helicopters are approaching and are not able to actively control or take over the DJI aircraft to avoid collisions. DJI AirSense has the following limitations:

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

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

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



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

Intelligent Flight Battery

Notice

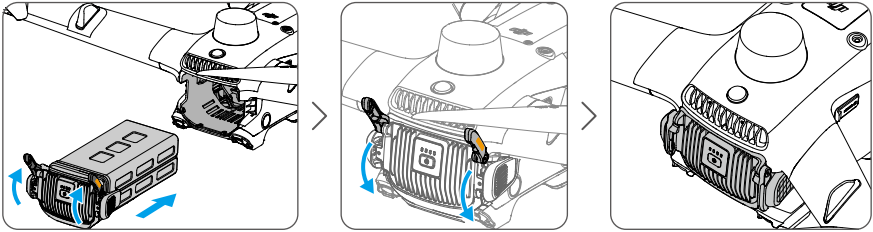


- Refer to the *Safety Guidelines* and the stickers on the battery before use. Users shall take full responsibility for all operation and usage.

1. DO NOT charge an Intelligent Flight Battery immediately after flight as it may be too hot. Wait for the battery to cool down to the allowable charging temperature before charging again.
2. To prevent damage, the battery only charges when the battery temperature not in the charging temperature range. The ideal charging temperature is from 22° to 28° C (71.6° to 82.4° F). Charging at the ideal temperature range can prolong battery life. Charging stops automatically if the temperature of the battery cells exceed 55° C (131° F) during charging.
3. A fully charged battery will automatically discharge when it is idle for a period of time. Note that it is normal for the battery to emit heat during the discharging process.
4. Discharge and charge the battery completely once every three months to keep it in good condition. If the battery is not used for an extended period, battery performance may be affected or may even cause permanent battery damage. If a battery has not been charged or discharged for five months or more, the battery will no longer be covered by the warranty.
5. For safety purposes, keep the batteries at a low power level in transit. This can be done by flying the aircraft outdoors until there is less than 30% charge left.
6. Over-discharge protection is enabled and discharging stops automatically to prevent over-discharge when the aircraft is idle. Charge the battery to wake it from over-discharge protection before using again. Over-discharge protection is not enabled during flight.
7. Over-discharging will lead to serious damage of the battery. If the battery level is less than 5% while the aircraft is idle, the battery enters Hibernation mode after three days to prevent over-discharge.

Inserting and Removing the Battery

Insert the Intelligent Flight Battery as shown below. Make sure the battery is fully inserted with a clicking sound, which indicates the battery buckles are securely fastened.



Checking Battery Level

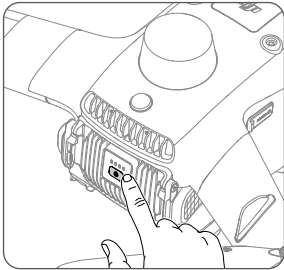
Using DJI FlightHub 2

There are two ways to check the battery information in DJI FlightHub 2.

- Open the Project page, click > to view the battery level and battery status.
- Open the Devices page, click **Dock** > to view the battery level and battery temperature, battery cycles and other information.

Using the Power Button

Press the power button once to check the battery level.



The battery level LEDs display the power level of the battery during charging and discharging. The statuses of the LEDs are defined below:

- LED is on.
- LED is blinking.
- LED is off.

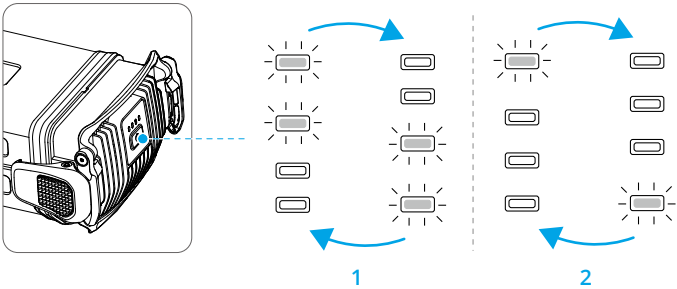
Blinking Pattern	Battery Level
● ● ● ● ●	89-100%
● ● ● ● ●	76-88%
● ● ● ● ●	64-75%
● ● ● ● ●	51-63%
● ● ● ● ●	39-50%
● ● ● ● ●	26-38%
● ● ● ● ●	14-25%
● ● ● ● ●	1-13%

Warming the Battery

Manual Warming: If the battery is not inserted into the aircraft, press and hold the power button to initiate self-heating. The battery will continue to keep warm for approximately 30 minutes. Press and hold the power button to stop self-heating.

Automatic Self-Heating: When the battery temperature is low, self-heating starts once the battery is inserted into the aircraft and powered on. The aircraft cannot takeoff when the battery temperature is low. Flight tasks will start after the battery is warmed up.

When the battery is warming up and keeping warm the battery level LEDs will blink as follows.



- 1. Warming Up
- 2. Keeping Warm

Dock Warming

If the aircraft is powered off in low-temperature environments, the dock will constantly provide a power supply for the battery to keep warm, so that the aircraft can take off at

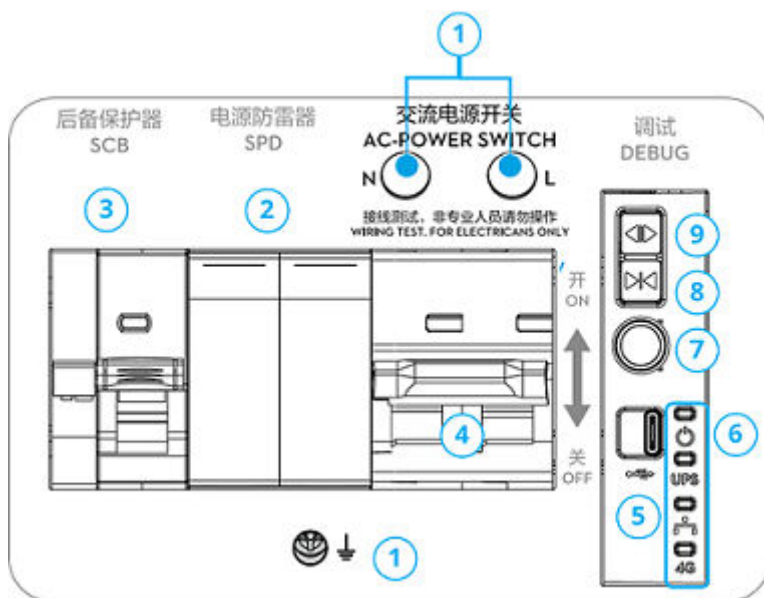
any time in cold environments. After the battery charging is completed, if the aircraft is in the idle status, the battery will keep warm at a temperature above 10° C (50° F).

The battery will stop keeping itself warm when the user initiates an Immediate flight task, powers on the aircraft, or starts battery charging.

1.3 Control Station

Dock

Electrical Cabinet Panel



1. Wire Testing Terminals

Connect to a multimeter to test the termi when configuring the dock.

2. SPD for AC Power

Protect electrical devices of the dock from lightning, overvoltage, and surge damage.

3. Surge Protector Circuit Breaker (SCB)

Protect the SPD for AC Power and conduct leakage protection to avoid risk of fire.

4. AC Power Switch

Power on/off the dock.

5. USB-C Port

Connect to a computer to access DJI Assistant 2.

6. Electrical Cabinet Indicators

Indicate the working status of the power supply, the backup battery, the wired network and the wireless network.

7. Multifunctional Button

Press and hold for three seconds to enter the linking mode.

Press, and then press and hold to power the backup battery on or off when the external AC power supply is disconnecting.

8. Close Button

Press and hold to close the dock cover.

9. Open Button

Press and hold to open the dock cover.

Electrical Cabinet Indicators

Status Indicator		Status		Description
	Power Indicator	 —	Solid red	AC power supply is normal.
			Off	No AC power supply.
UPS	Backup Battery Indicator	 —	Solid blue	Backup battery is full or is supplying power to the dock.
			Blinks blue slowly	Backup battery is charging.
			Blinks blue quickly	Backup battery has low battery power.
			Off	Backup battery is not installed or the backup battery switch is turned off.
	Wired Network Indicator		Blinks green quickly	The Ethernet cable is connected and has data transfer with the dock.
			Off	The Ethernet cable is disconnected.
4G	4G Network Indicator		Blinks green quickly	4G network is connected and has data transfer with the dock.
			Off	4G network is disconnected or does not have data transfer with the dock.

Backup Battery

If the dock is powered off due to an emergency power outage, the backup battery can provide power to the dock so that the aircraft can safely return and land.

- ⚠ • After a power outage, the dock does not support functions like aircraft charging, air conditioning, and wind speed gauge heating. Always check malfunctions in time.
 - Check and fix the malfunctions as soon as possible to restore power to the dock and make sure to power off the backup battery. The backup battery will be over-discharged if the power supply cannot be restored for more than 10 days.
 - When the dock is not in use for an extended period, make sure to maintain the backup battery by charging it for at least six hours. Refer to the Quick Installation Guide for more information on charging and maintaining the backup battery.
-

Dock Cover

- ⚠ • Make sure the internal video transmission antennas are not blocked by snow, ice, or any foreign matter.
 - Regularly check if the propeller bumpers are in good condition. Replace any worn or damaged parts when necessary.
-

Opening and Closing the Dock Cover

- ⚠ • Make sure the emergency stop button is released before opening the dock cover. If the emergency stop button is not released, pull out or rotate clockwise to release the emergency stop button.
 - Keep a safe distance from the dock cover to avoid injury when opening or closing the dock cover. Press the emergency stop button if necessary.
 - DO NOT press or place heavy objects on the dock cover after it is opened.
 - When the aircraft battery level is low, the aircraft cannot power on to rotate and fold the propellers and the dock cover cannot be closed remotely. To avoid this situation, the dock will automatically close the dock cover when the battery level is low, and the aircraft will automatically power off when the battery level is extremely low.
-

Using DJI FlightHub 2

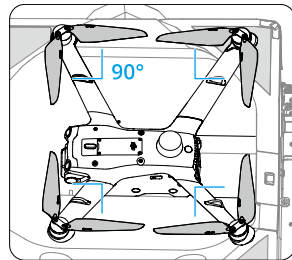
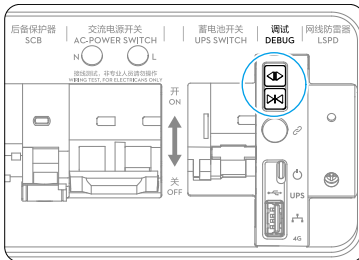
Open the DJI FlightHub 2 Project page, click > > **Action**, and enable **Remote Debugging**; or open the Devices page, click **Dock** > , and enable **Remote Debugging** to open or close the dock cover.

If the dock cannot detect the aircraft, check whether the aircraft is on the landing pad by using the dock livestream, and follow the instructions in DJI FlightHub 2. Click **Force Close Dock Cover** if the aircraft is not on the landing pad. Click **Close Dock Cover** if the aircraft is on the landing pad.

- 💡 • When closing the dock cover, the aircraft will automatically power on, and the propellers will slowly rotate to avoid damage to the propellers.
- ⚠️ • If the dock has no power supply, the aircraft cannot power on to rotate and fold the propellers before closing the dock cover. In this case, **DO NOT** remotely open the dock cover in DJI FlightHub 2. Otherwise, the dock cover cannot be closed.
- **DO NOT** click **Force Close Dock Cover** if the aircraft is on the landing pad. Otherwise, the propellers and the dock cover may be damaged.

Using the Open or Close Button

- ⚠️ • Make sure there are no obstacles blocking the dock cover. Keep your hands away from the dock cover to avoid injury.
- Before closing the dock cover, make sure to adjust the propeller position as shown in the diagram in order to avoid breaking the propellers when closing the dock cover.

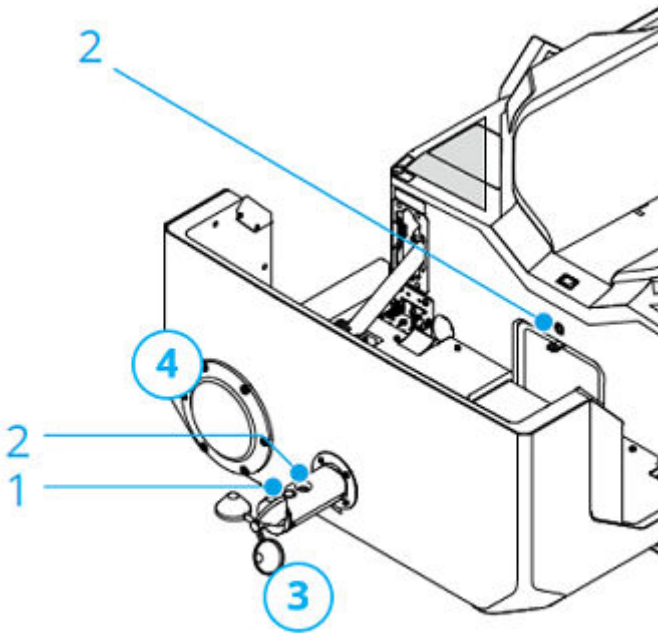


Dock Cover Status Indicator and Buzzer Alerts

Normal States		
	Blinks white	The dock is working normally and the aircraft is ready to take off.
	Blinks blue	The dock and the aircraft are linking, and the buzzer emits a short beep.
	Blinks green	The aircraft has taken off from the dock and is performing a flight task.
	Solid blue	The dock is updating or debugging (including remote debugging and on-site debugging).
Warning States		
	Blinks red	The dock cover is moving or the aircraft is taking off or landing, and the buzzer emits a long beep. ⚠ Keep a safe distance from the dock to avoid injury.
	Blinks red and yellow alternately	The emergency stop button on the dock is pressed.

Environmental Monitoring System

DJI Dock integrates multiple environment sensors to provide information on wind speed, rainfall, temperature, and humidity, allowing users to monitor real-time environment condition and ensure safe flight.



1. Security Camera: Used to monitor the real-time dock environment.
2. Camera Auxiliary Light: Automatically enabled at night or in low-light conditions to help the aircraft to identify the positioning markers.
3. Wind Speed Gauge: Used to measure wind speed near the dock. The wind speed gauge features self-heating and is able to work in low-temperature environments. To ensure flight safety, the aircraft cannot take off when the wind speed is high.

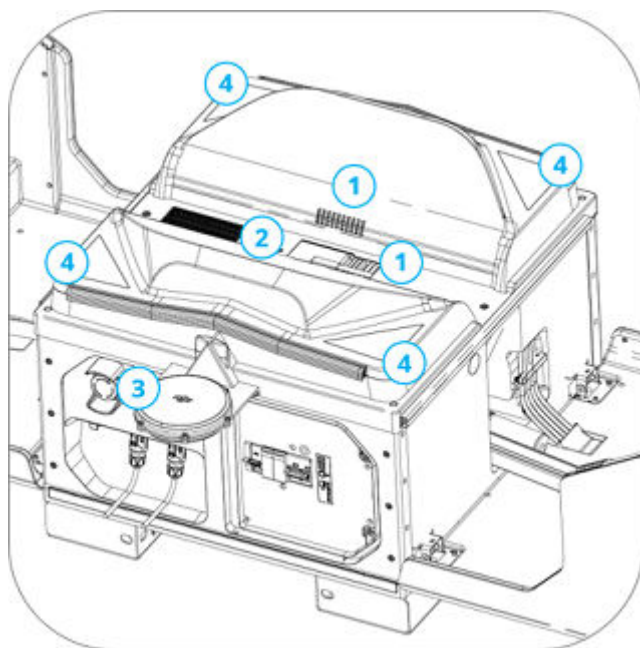
⚠ • The wind speed gauge can only measure the wind speed near the dock, which is different from the wind speed provided by local meteorological department. If the aircraft ascends to high altitude, the wind speed and direction may change significantly. Fly with caution when the measured wind speed is close to the maximum wind resistance.

4. Rainfall Gauge: Used to measure rainfall information near the dock. The rainfall gauge features self-heating and is able to work in low-temperature environments.

⚠ • There is a pressure sensing module in the rainfall gauge. DO NOT press hard on the surface of the rainfall gauge. Otherwise, the pressure sensing module may be damaged.

- Clean the rainfall gauge surface on a regular basis. Replace the rainfall gauge immediately if it is dented, deformed, or damaged.
 - If the dock is installed near a vibration source such as near railways, false detection of rainfall may be triggered. Try to keep the dock away from areas with strong vibration sources or strong noise.
-
5. The dock features temperature and sensors, which are used to measure external temperature.
- To ensure flight safety, the aircraft cannot take off when the external temperature is too low. Flight tasks will be resumed after the external temperature reaches the operating temperature.
6. The dock features water immersion sensors, which are used to detect whether the dock is immersed in water. If a water immersion warning appears in DJI FlightHub 2, contact a qualified electrician to disconnect the dock power supply and remove the water. If the dock fails to work properly, make sure to push the AC power switch and backup battery switch into the off position, and contact DJI Support.

Landing Pad



1. Return Vent and Supply Vent: Clean the return vent and the supply vent regularly to remove any dust or debris.
2. Aircraft Orientation Marker: When placing the aircraft on the landing pad, make sure to align the aircraft heading with the aircraft orientation mark. Otherwise, the aircraft and the driving rods may be damaged.
3. RTK module: Make sure the surface of the RTK module is clear of obstacles and the RTK antennas are not covered. Otherwise, the signals will be obstructed and the positioning performance will be affected.
4. Positioning Markers: There are four positioning markers on the landing pad for the aircraft to identify dock position.



- DO NOT place any metal objects or electronic devices on the landing pad after the dock is powered on to avoid burns. DO NOT place any metal objects such as rings near the landing pad or touch the landing pad surface when placing the aircraft on the landing pad in order to avoid burns.

Air Conditioning System

When the dock is in Idle status, the air conditioning system will automatically adjust the temperature inside the dock, providing a suitable environment for the aircraft and the Intelligent Flight Battery.

Users can open the DJI FlightHub 2 Devices page, click **Dock** > , and enable **Remote Debugging** to start heating or cooling.



- To ensure the service life of the air conditioning system, a five-minute interval is required when switching between cooling and heating operations. A countdown will appear in DJI FlightHub 2. Wait for the countdown to end before switching operations.

Dock Network Connection

The dock can be connected to a wired network or 4G network ^[1] for internet access. Users can choose different internet access based on actual needs. When the dock is connected to both a wired network and a 4G network, the wired network will take priority.

Using 4G wireless network for the dock will consume data traffic. The actual data consumption is related to the number, file type, resolution of the transferred media files, and the liveview duration.

[1] 4G network service is not available in some countries or regions. Consult your local DJI-authorized dealer or DJI Support for more information.

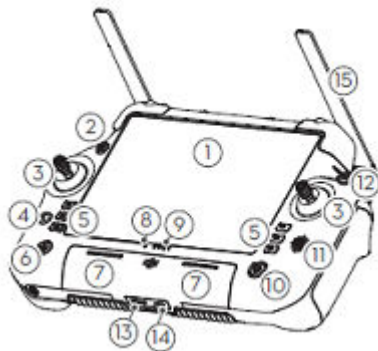
-  DJI Cellular Dongle 2 (sold separately) can be mounted to the dock to access a 4G wireless network according to the on-site network conditions. Refer to the [“Enhanced Transmission”](#) section for more information on how to install the DJI Cellular Dongle 2 and use Enhanced Transmission.

DJI FlightHub 2

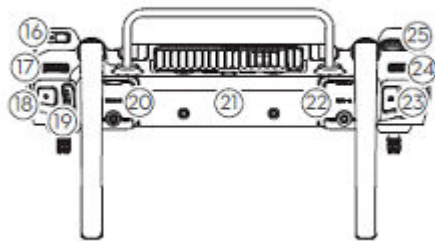
DJI FlightHub 2 is a cloud-based aircraft task management platform, providing features such as member, device, map photos, task area, flight route, and task plan management. By planning flight routes on the web and distributing tasks to DJI docks and supported aircraft, DJI FlightHub 2 makes remote access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

Watch the [DJI FlightHub 2 video tutorials](#) and read the [DJI FlightHub 2 User Manual](#) for more information on usage.

Remote Controller (Optional)



1. Touchscreen
2. Connection Status LED
3. Joystick
4. Back/Function Button
Press once to return to the previous screen. Press twice to return to the home screen.
5. L1/L2/L3/R1/R2/R3 Buttons
6. Return to Home (RTH) Button



- Press and hold to initiate RTH. Press again to cancel RTH.
7. Microphones
 8. Status Indicator
 9. Battery Level LEDs
 10. Power Button
Press once to check the current battery level. Press and then press and hold to power the remote controller on or off. When the remote controller

is powered on, press once to turn the touchscreen on or off.

11. 5D Button

View the default button functions or customize in DJI Pilot 2.

12. Flight Pause Button

Press once to make the aircraft brake and hover in place (only when GNSS or Vision Systems are available).

13. microSD Card Slot

14. USB-C Port

15. External Antennas

16. Customizable C3 Button

17. Left Dial

18. Record Button

19. Flight Mode Switch

20. HDMI Port

21. Internal Antennas

22. USB-A Port

23. Focus/Shutter Button

Press halfway down on the button to autofocus and press all the way down to take a photo.

24. Right Dial

For zoom control.

25. Scroll Wheel

26. Handle

27. Speaker

28. Air Vent

29. Reserved Mounting Holes

30. Customizable C1 Button

Use to switch the wide and zoom screen by default. The functions can be customized in DJI Pilot 2.

31. Customizable C2 Button

Use to switch the map and camera view by default. The functions can be customized in DJI Pilot 2.

32. Rear Cover

33. Battery Release Button

34. Battery Compartment

For installing the WB37 Intelligent Battery.

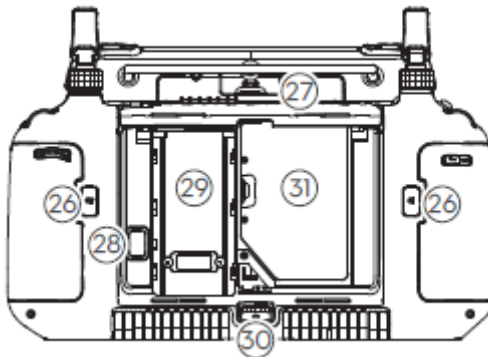
35. Rear Cover Release

36. Cellular Dongle Compartment

37. Alarm

38. Air Intake

39. M4 Screw Hole



Remote Controller Alert

The remote controller vibrates or beeps twice to indicate an error or warning. For detailed information, see the real-time prompts on the touchscreen or in the DJI Pilot 2. Swipe down from the top of the screen to open Shortcut Settings and turn on Silent mode to disable all voice alerts.

Any voice prompts and alerts will be disabled in Silent mode, including alerts during RTH and low battery alerts for the remote controller or aircraft. Fly with caution.

Status Indicator

The status LED indicates the status of the remote controller, the aircraft, and the link between them.

Blinking Pattern		Descriptions
 —	Solid red	Disconnected from the aircraft
	Blinks red	Aircraft low battery level
 —	Solid green	Connected with the aircraft
	Blinks blue	The remote controller is linking to an aircraft
 —	Solid yellow	Firmware update failed
	Blinks yellow	Remote controller low battery level
	Blinks cyan	Control sticks not centered

Battery Level LEDs

The battery level LEDs indicate the battery level of the remote controller.

Blinking Pattern	Battery Level
	88-100%
	75-87%
	63-74%
	50-62%
	38-49%
	25-37%
	13-24%
	0-12%

Optimal Transmission Zone



Unfold and adjust the antennas. The strength of the remote controller signal is affected by the position of the antennas.

Adjust the direction of the external RC antennas of the remote controller and make sure their flat side is facing the aircraft, so that the controller and aircraft are within the optimal transmission zone.

-
- ⚠ • DO NOT overstretch the antennas, to avoid damage. Contact DJI Support to repair the remote controller if the antennas are damaged. A damaged antenna will greatly decrease the performance of the remote controller and might affect flight safety.
 - During flight, DO NOT use other 2.4 GHz or 5.8 GHz communication devices in the same frequency band at the same time, so as not to interfere with the communication signal of the remote controller. For example, avoid enabling mobile phone Wi-Fi.
 - A prompt will appear in DJI Pilot 2 if the transmission signal is weak during flight. Adjust the antennas to make sure that the aircraft is in the optimal transmission range.
-

HDMI Settings

The touchscreen can be shared with a display screen via an HDMI cable.

The resolution can be set in Settings, Display, Advanced, and then HDMI.

1.4 Command and Control Link (C2 Link)

The command and control (C2) link between the aircraft and control station is established using DJI O4 Enterprise Transmission technology with the OcuSync video transmission

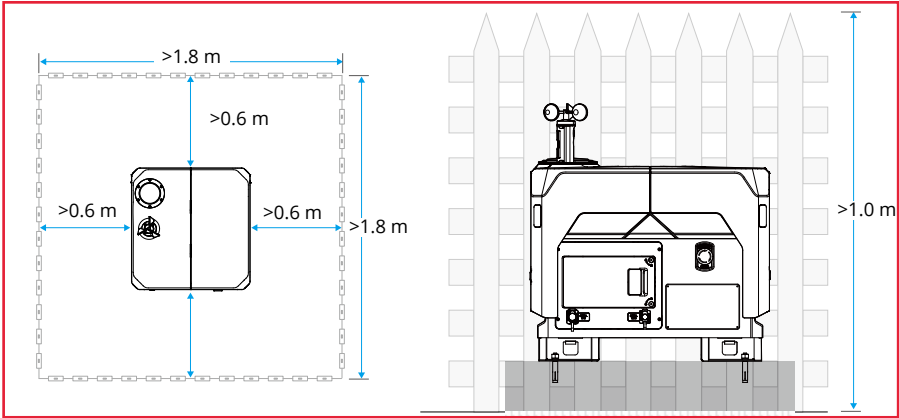
antennas and DJI O4 Enterprise Transmission system, offering stable and reliable communication. The C2 link provides the control signal from the control station to the aircraft, facilitating real-time operations.

During a flight task, DJI FlightHub 2 will display the video transmission signal strength in the device status window:

-  : The transmission signal is strong.
-  : The transmission signal is weak, there will be a voice prompt.
-  : The transmission signal is weak, there will be a voice prompt to alert users to fly with caution.
-  : The transmission signal is disconnected, there will be a voice prompt to alert users to fly with caution.

1.5 Ground Operational Area Setup

The aircraft will take off from and land at the dock. It is recommended to install a protective fence so that unauthorized personnel cannot enter the area where the dock is installed. Refer to the *Installation and Setup Manual* for more information on the protective fence.



Performance and Limitations

2 Performance and Limitations

2.1 Performance

Visit <https://enterprise.dji.com/dock-3/specs> for more information on the flight performance of the aircraft.

2.2 Prohibited Actions

The following actions are prohibited:

- DO NOT operate in the vicinity of crewed aircraft. DO NOT interfere with the operations of crewed aircraft. Be alert and make sure there is no other aircraft in the operation area.
- DO NOT fly the aircraft in venues of major events, including but not limited to sporting events and concerts.
- DO NOT fly the aircraft without authorization in areas prohibited by local laws. Prohibited areas include airports, national borders, major cities and densely populated areas, venues of major events, areas where emergencies have occurred (such as forest fires), and locations with sensitive structures (such as nuclear power plants, power stations, hydropower plants, correctional facilities, heavily traveled roads, government facilities, and military zones).
- DO NOT fly the aircraft above the authorized altitude. DO NOT use the aircraft to carry illegal or dangerous goods or payloads.
- Make sure you understand the nature of your flight operation (such as for recreation, public, or commercial use) and have obtained corresponding approval and clearance from the related government agencies before flight. Consult with your local regulators for comprehensive definitions and specific requirements. Note that remotely-controlled aircraft may be banned from conducting commercial activities in certain countries and regions. Check and follow all local laws and ordinances before flying, as those rules may differ from those stated here.
- Respect the privacy of others when using the camera. DO NOT conduct surveillance operations, such as image capture or video recording on any person, entity, event, performance, exhibition, or property without authorization or where there is an expectation of privacy, even if the image or video is captured for personal use.
- Be advised that in certain areas, the recording of images and videos from events, performances, exhibitions, or commercial properties by means of a camera may contravene copyright or other legal rights, even if the image or video was shot for personal use.

- DO NOT use this product for any illegal or inappropriate purpose, such as spying, military operations, or unauthorized investigations. DO NOT trespass onto the private property of others. DO NOT use this product to defame, abuse, harass, stalk, threaten, or otherwise violate the legal rights of others, such as privacy and publicity rights.



- Read the Safety Guidelines for more prohibited actions before first time use.
-

2.3 Center of Gravity Limitations

The original aircraft center of gravity has been adjusted before delivery.

The aircraft is equipped with an E-Port and E-Port Lite for connecting third-party payloads. If any third-party payloads are installed on the aircraft, make sure to adjust the aircraft center of gravity as per the guidelines and requirements. Refer to the ["Expansion Ports"](#) section for more information.

Normal Procedures

3 Normal Procedures

3.1 Airspace and Radio Frequency Environment

The dock shall be installed at an appropriate site by a DJI-authorized service provider. Make sure that all flight routes around the installation site are carried out in an open area.

- DO NOT use the aircraft in severe weather conditions including strong winds, snow, rain, and fog.
- Avoid obstacles, crowds, trees, and bodies of water (recommended height is at least 3 m above water).
- The performance of the aircraft and its battery is limited when flying at high altitudes. Fly with caution. DO NOT fly above the specified altitude.

The braking distance of the aircraft is affected by the flight altitude. The higher the altitude, the greater the braking distance. When flying at high altitudes, you should reserve adequate braking distance to ensure flight safety.

- DO NOT use the aircraft or the dock in an environment at risk of a fire or explosion.
- Only operate the dock and the aircraft for applications in the operating temperature range. In low-temperature environments, it is necessary to check whether the dock cover and the aircraft is covered with snow and ice, and whether the propellers are frozen using dock camera livestreams in DJI FlightHub 2. In snowy weather or environments with low temperatures and high humidity, it is recommended to use anti-freezing propellers. Make sure to avoid the propellers from freezing during flight, consequently affecting flight safety.
- Make sure to set an alternate landing site before flight. The aircraft will fly to the alternate landing site when it is not suitable to land in the dock. Follow the instructions to set an alternate landing site when deploying the dock. An obvious sign should be set up near the alternate landing site. Make sure that the area within the one-meter radius of the alternate landing site is flat and is clear of obstacles.
- Be extremely alert when flying near areas with magnetic or radio interference. It is recommended to set the remote controller as controller B during flight tests. Pay close attention to the video transmission quality and signal strength on DJI Pilot 2. Sources of electromagnetic interference include but are not limited to: high voltage lines, large-scale power transmission stations or mobile base stations, and broadcasting towers. The aircraft may behave abnormally or lose control when flying in areas with too much interference. Return to the dock and land the aircraft, and make future task plans until the flight test is stable.

- Fly in wide open areas. Tall buildings, steel structures, mountains, rocks, or tall trees may affect the accuracy of the GNSS signal and block the video transmission signal.
- Avoid interference between the dock and other wireless equipment. It is recommended to power off nearby Wi-Fi and Bluetooth devices.

3.2 Flight Restrictions and Unlocking

GEO (Geospatial Environment Online) System

The DJI 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 flights. Prior to that, you must submit an unlocking request based on the current restriction level in the intended flight area. The GEO system may not fully align with local laws and regulations. You are responsible for your own flight safety and must consult with the local authorities on the relevant legal and regulatory requirements before requesting to unlock a restricted area. For more information about the GEO system, visit <https://fly-safe.dji.com>.

GEO Zones

The DJI GEO system designates safe flight locations, provides risk levels and safety notices for individual flights, and offers information on restricted airspace. All restricted flight areas are referred to as GEO Zones, which are further divided into Restricted Zones, Authorization Zones, Warning Zones, Enhanced Warning Zones, and Altitude Zones. You can view such information in real-time in . GEO Zones are specific flight areas, including but not limited to airports, large event venues, locations where public emergencies have occurred (such as forest fires), nuclear power plants, prisons, government properties, and military facilities. By default, the GEO system limits takeoffs and flights in zones that may cause safety or security concerns. A GEO Zone map that contains comprehensive information on GEO Zones around the globe is available on the official DJI website: <https://fly-safe.dji.com/nfz/nfz-query>.

Flight Restrictions in GEO Zones

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