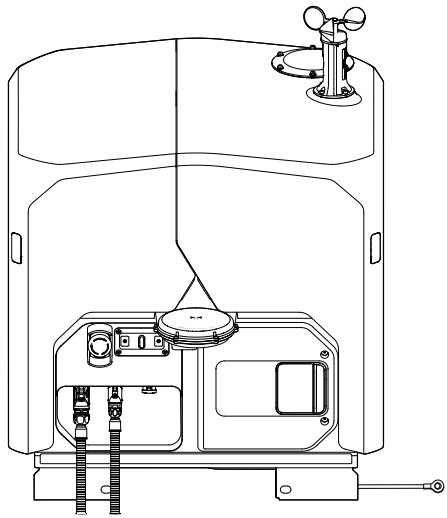
DJI DOCK 3

Installation and Setup Manual

v1.0 2025.03



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

- This product 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. Use the product for applications that meet the operating temperature range requirements of that grade.

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*

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.

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 Enterprise App

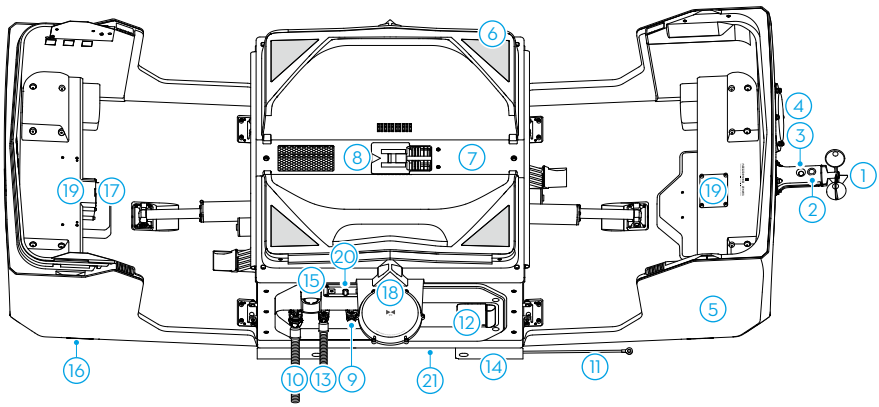
Scan the QR code to download the latest version.

- To check the operating system versions supported by the app, visit https://www.dji.com/downloads/djiapp/dji-enterprise.
- The interface and functions of the app may vary as the software version is updated. Actual user experience is based on the software version used.

Contents

1 Overview

1.1 Dock



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

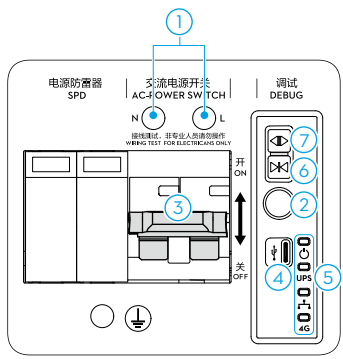
[1] The dock comes with a built-in charging module. Make sure that the landing pad surface is clear of any metal objects in order to avoid high temperatures that may damage the landing pad.

[2] The dock cover will fail to open or close if the emergency stop button is pressed.

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.

1.2 Electrical Cabinet Panel



1. **Wire Testing Terminals**

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

2. **Multifunctional Button**

   Press and hold: The dock enters the linking mode.

   Press once, then press and hold: Power on/off the backup battery.

3. **AC Power Switch**

   Power on/off the dock.

4. **USB-C Port**

   Connect to a computer to access DJI Assistant 2.

   Connect to a mobile phone to use DJI Enterprise App.

5. **Electrical Cabinet Indicators**

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

6. **Close Button**

   Press and hold to close the dock cover.

7. **Open Button**

   Press and hold to open the dock cover.

Electrical Cabinet Indicators

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.
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.

2 Safety Precautions Before Installation

To ensure safety of people and the devices, follow the labels on the devices and the safety precautions in the manual during installation, configuration, and maintenance.

2.1 Notices

	• Installation, configuration, maintenance, troubleshooting, and repair of the product must be done by official authorized technicians in compliance with local regulations. • The person who installs and maintains the product must have undergone training to understand the various safety precautions and be familiar with the correct operations. They must also understand the various potential dangers during installation, configuration, and maintenance and be familiar with the solution. • Only those who hold a certificate issued by the local department can carry out operations at heights above 2 m. • Only those who hold a certificate issued by the local department can carry out above-safety-voltage operation. • Only those who hold a certificate issued by the local department can carry out welding work.
	• Make sure to perform the operation such as installation, configuration and maintenance in accordance with the steps in the manual.
	• When operating at heights, always wear protective gear and safety ropes. Pay attention to personal safety.
  	• Make sure to wear protective equipment during installation, configuration, and maintenance, such as a safety helmet, goggles, insulated gloves, and insulated shoes. • Wear a dust mask and goggles when drilling holes to prevent dust from entering the throat or falling into the eyes. • Pay attention to personal safety when using any electrical tools.
	• Make sure DJI Dock is properly grounded before use. When installing the dock, connect the earth wire before other cables. When moving the dock, remove other cables before the earth wire. • DO NOT operate the dock without an earth wire installed. • DO NOT damage the earth wire installed.

2.2 Warning

- DO NOT install, configure, or maintain the product (including but not limited to installing the product, connecting the cables, or performing operations at a height) in severe weather such as thunderstorms, snowfall, or winds exceeding 8 m/s.

- DO NOT wear conductive objects (such as watches, rings, necklaces or other metals) to install, configure or maintain the dock in order to avoid electric shocks or burns.
- Measure the voltage on the contact points of the conductor with a multimeter, make sure there is no risk of electric shock before touching any conductor surfaces or terminals (such as the terminals of the AC power input). The dock must be powered off before installation.
- Make sure to turn off the main switch in the distribution box, then use a multimeter or a voltage tester to conduct an electrical test at the end of the power cable before installing or removing the power cable.
- Make sure the handle of the other tools such as a voltage tester is insulated to avoid electric shocks.

- In the event of a fire, immediately evacuate the building or the product installation area and then call the fire department. DO NOT re-enter a burning building or product installation area under any circumstances.

- When carrying heavy objects, make sure to prepare to bear the weight to avoid sprains or being crushed by heavy objects.
- Pay attention to personal safety if the dock needs to be hoisted.

- Make sure to keep away from the dock when it is in operation, so as not to be injured by moving mechanisms or rotating propellers.

3 Construction Preparation (Fixed-mounted Deployment)

Make sure to read this chapter carefully, select a site for the dock according to the requirements, and fill out the DJI Dock Site Survey Checklist. Failure to select a site according to the requirements may lead to the malfunctioning of the dock, operational stability deterioration, shortening of the service life, unsatisfactory effects and potential safety hazards, property losses, and casualties.

3.1 Environmental Survey

Environmental Requirements

- The installation site altitude should not be higher than 4500 m.
- The annual temperature of the installation site should be between -30° to 50° C (-22° to 122° F). Temperatures exceeding the range will cause the device to not work. To ensure operation safety, operation can resume after the temperature is within the temperature range. [1]
- In order to ensure the normal operation of the dock and aircraft, choose a location with weather conditions with little wind, sand or dust to install the dock. Ensure that the gust wind speed is not greater than 12 m/s and the airflow is stable when the aircraft takes off and lands.
- Make sure there are no obvious biological destructive factors such as rodent infestation and termites at the installation site.
- DO NOT install the product near dangerous sources without permission, such as gas stations, oil depots, and dangerous chemical warehouses.
- DO NOT install the dock at a site with flammable materials. Consider that biological matter such as catkins, pinecones, and birch bark is also flammable. RISK OF FIRE: Install the dock on a concrete or other non-combustible surface only.
- Avoid installing the product in lightning strike areas.
- Avoid areas that are prone to water accumulation, severe erosion, landslides, heavy snow accumulation, or other natural disasters.
- Avoid installing the dock in areas with chemical plants or septic tanks upwind to prevent pollution and corrosion. If the dock is configured near coastlines, avoid installing in areas where the dock may be immersed in or splashed by seawater in order to prevent the corrosion of metal components.

- Avoid installing the dock directly under artificial lighting with reflective items on the ground. Otherwise, it will interfere with the vision system of the aircraft, affecting its landing and flight stability.
- Make sure to install the dock at a distance of more than 200 m from sites with strong electromagnetic wave interference, such as radar stations, microwave stations, and drone jamming equipment.
- It is recommended to install the dock at a distance from sites with iron ore and large steel structures or buildings to avoid interference with the aircraft compass.
- It is recommended to install the dock at a distance from sites with strong vibration sources and strong noise. Otherwise, it can cause interference to the dock environment sensors, and at the same time easily lead to a decrease in the operating life of the whole machine.
- It is recommended to consider the future environmental factors of the installation site. Make sure to avoid areas with large-scale construction plans or large environmental changes in the future, including but not limited to the growth of weeds and trees (such as bamboo forests and vines), new buildings, bridges, communication base stations, and high-voltage towers. If there is any change, re-survey is required.
- It is recommended to consider whether the planned flight area is near or in a Restricted Zone. Make sure to apply for a GEO Zone Unlocking License and import it to the aircraft during installation and configuration.
- The dock and aicraft will produce a certain amount of noise when in use. Consider the impact on nearby residents when selecting the installation site of the dock. DO NOT install the dock near residential areas. Enable Silent mode for the dock if necessary.

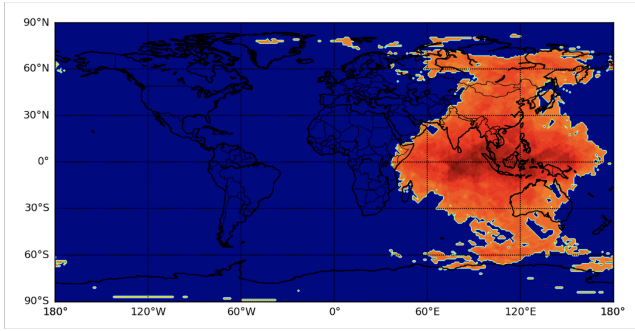
[1] When the environment temperature is below -20° C (-4° F), the dock will warm the aircraft so that the aircraft can take off, but the aircraft performance will reduce.

- Historical weather data can be queried on meteorological websites.
- The dock can work in an environment with 93% relative humidity as it has a protection rating of IP56.
- The normal transportation and storage temperature range is between -25° to 55° C (-13° to 131° F). If the period does not exceed 24 hours, the dock can be transported or stored at up to 70° C (158° F).
- When the dock is operating in silent mode, it has an A-weighted sound power level of less than 60 dB(A) at a height of 1.2 m and a horizontal distance of 1 m from the dock. (tested in the soundproof room with a background noise of 5 dB(A))

Recommended Installation Site

Notices

- DJI Matrice 4D Series aircraft and its matching remote controller are supported for Dock Site Evaluation. Select the aircraft model based on actual needs. The aircraft used for site evaluation must be free of with any payload or accessory.
- The functionalities of building-side deployment and communication tower deployment rely on the service area of the satellite positioning system, currently only supporting most regions in the Asia Pacific, as detailed in the figure below.



Unobstructed Deployment

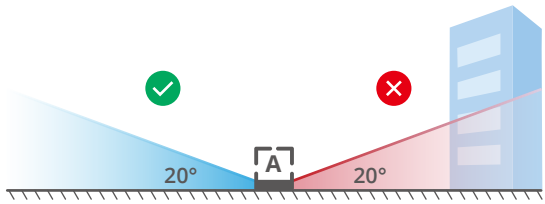
It is recommended to install the dock in a place without obvious signal obstruction, such as in an open area or on a roof top. Make sure there is no obvious signal obstruction within the range of 20° from the ground elevation angle to ensure the signal quality and stability of the RTK module.

If there is an obstacle, the minimum distance between the dock and the obstacle needs to meet the following requirements:

$d \geq h/0.36$

d: The minimum distance between the device and the obstacle

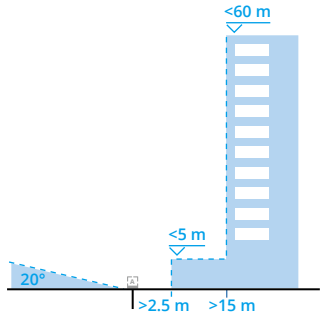
h: The obstacle height (the height of the obstacle can be measured by operating the aircraft)



- Make sure there is no obvious reflector in the sky and around the device installation location, so as to avoid impact on the normal operation of the aircraft video transmission system and GNSS system.

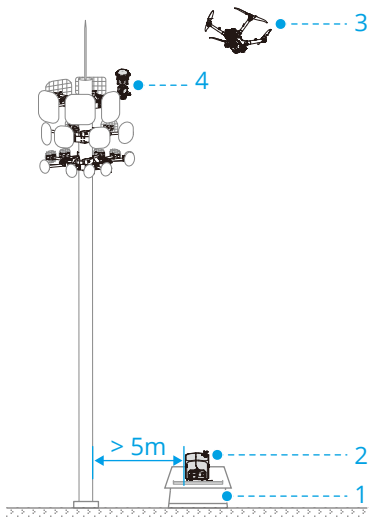
Building-Side Deployment

- For deployment beside the building or low wall, the site location must meet the requirements shown in the figure. Obstruction is only allowed on one side of the dock, and there should be no obvious signal obstruction within the range of 20° from the ground elevation angle on other sides of the dock. If the obstacle height is below 5 m, keep a distance of more than 2.5 m from the dock. If the obstacle height is between 5-60 m, keep a distance of more than 15 m. If the obstacle height exceeds 60 m, it is not suitable for deployment near buildings.
- It is strongly recommended to set an entry/exit route during the site evaluation for the dock.
- To ensure stable GNSS and video transmission signals covering the aircraft operating radius, it is strongly recommended to install a relay at the highest point of the building. Refer to the user manual of D-RTK 3 Relay Fixed Deployment Version for more information.



Tower-Side Deployment

- For deployment near a communication tower, make sure to reserve a path for people to pass through at the installation location for convenient inspection and maintenance.
- It is recommended to install the dock on the rooftop of the user computer room near the tower. If there is no applicable locations, use an extended load-bearing frame for installation. When using a load-bearing frame, make sure to consider the impact of the load and wind load on the tower after installing the dock.
- Make sure to set an entry/exit route during the site evaluation for the dock. Communication tower deployment is not allowed if the site evaluation result is poor.
- To ensure stable GNSS and video transmission signals covering the aircraft operating radius, it is strongly recommended to install a relay station on the first platform level of the tower. Refer to the user manual of D-RTK 3 Relay Fixed Deployment Version for more information.



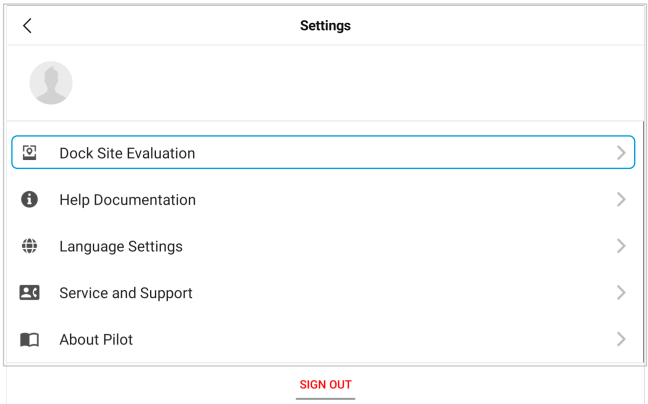
1. User Computer Room
2. Dock
3. Aircraft
4. Relay (Optional)

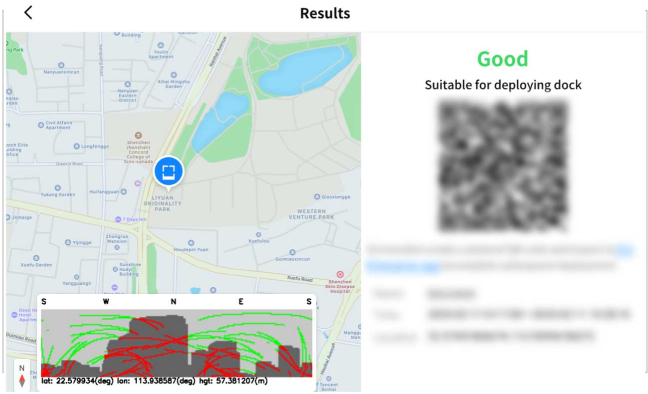
Dock Site Evaluation

GNSS Signal Quality Survey

Use the aircraft to collect data at the planned installation location. Follow the steps below for inspection.

1. Power on the aircraft and the remote controller. Make sure the aircraft is linked to the remote controller.
2. Run the DJI PILOT™ 2 App and tap > **Dock Site Evaluation**.
3. Follow the instructions in the app to create a new site evaluation task.
4. Make sure to check that the RTK module is working properly, update the ephemeris in advance and calibrate the aircraft. Fly the aircraft to the planned dock site and wait for the aircraft to automatically conduct the GNSS signal quality survey.



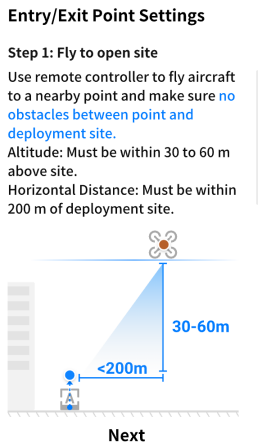


- When performing the quality survey, make sure that the aircraft flight altitude is at the same height as the landing pad after the dock is installed at the planned dock site.
- Make sure to conduct the quality survey in sufficient lighting conditions. DO NOT perform the dock site evaluation in rainy weather or at night.

Setting Entry/Exit Route

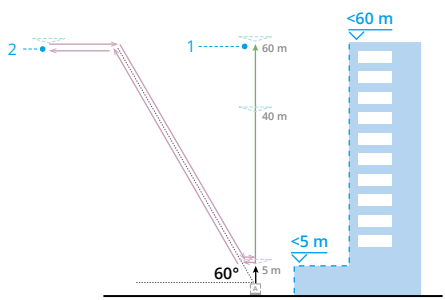
Entry/exit route can be set only using the aircraft with multiple GNSS systems when operating in the Asia Pacific.

If there is an obstruction at the current altitude during the survey, the aircraft will automatically ascend to a higher altitude and then continue the survey. During the aircraft ascent, the pilot can operate the aircraft to a suitable position and manually set the exit point.



After setting, the aircraft will then automatically perform the flight test.

1. For the auto ascent: The aircraft will automatically ascend vertically to find the exit point and then exit the setup process.
2. For the manual set: The aircraft will then automatically perform the entry/exit route flight.



Performing A Flight Route Test

Perform flight routes around the planned installation location to evaluate operational capabilities, such as video transmission signal strength, flight endurance, and RTK signal interference. Follow the steps below:

1. Create the flight tasks via the app on the remote controller.
2. Take off from the planned installation location, and record the video transmission signal quality and flight endurance during the flight.

- During the test, make sure the remote controller is near (and at the same height as) the planned dock site.
- The flight distance is related to the actual operating area around the dock, so the survey needs to be determined according to the user requirements.
- Make sure to check the planned installation location is not in a Restricted Zone or Altitude Zone using DJI Pilot 2, otherwise the flight operation will be affected. If permission to fly in a Restricted Zone is available, please visit https://fly-safe.dji.com/ or contact flysafe@dji.com to unlock the zone.
- If the D-RTK 3 Relay is installed, make sure to perform flight tests at the installation location of the relay. Refer to D-RTK 3 Relay Fixed Deployment Version user manual for more information.

3.2 Ground Conditions Survey

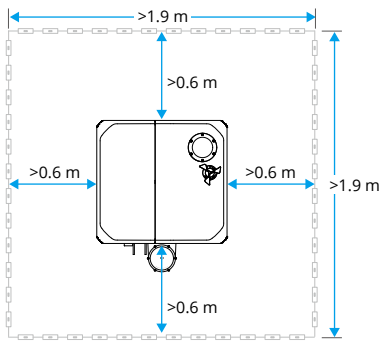
Fill out the information such as the installation location, installation method, installation orientation, and the list of required materials. It is recommended to mark the planned installation location of the dock and the Alternate Landing Site using paint.

Installation Location Requirements

- Try to avoid installing the dock on top of existing underground facilities.
- Make sure to install the dock on the roof of a building that is structurally sound. Reserve at least 2 m from the edge of the roof for the installation site or alternate landing site. DO NOT install the dock in the corner of a roof to avoid the aircraft accidentally crashing.
- When installed on top of a building, make sure the RTK and video transmission signals are not obstructed by any surrounding walls, structures, or other obstacles. Increase the height of the installation base if necessary.

- The dock needs to be installed in a ventilated area to facilitate heat dissipation. To achieve better ventilation, it is recommended to install the dock at a height of more than 0.5 m above the ground.
- For installation sites where snow accumulation may occur, make sure to elevate the product using a support base with dimensions not exceeding the product base, to avoid the product being covered by snow.

- The ground bearing capacity must not be less than 100 kg/m^2.
- Make sure the orientation of the dock camera on the wind speed gauge module is not facing direct sunlight. Otherwise, the service life of the product and camera view may be affected due to environmental factors.
- Reserve enough space around the dock as shown in the figure to allow for opening the dock cover and heat dissipation, and to provide sufficient space for normal operation and routine maintenance.



Top View

Installation Method

Select one of the following methods to install the dock according to the actual situation, such as establishing a concrete base, placing a steel frame base, using a load-bearing frame, or installing on the ground directly.

Using a Concrete Base

Applicable Locations

Installing the dock on a concrete base can raise the height of the dock, avoiding ground subsidence or risk of flooding. Applicable places are as follows:

- Ground without hardened concrete such as fields, woodlands, and grasslands.
- Ground with hardened concrete but has large slopes or unevenness.
- Ground with a loading capacity requirement, such as on top of buildings.

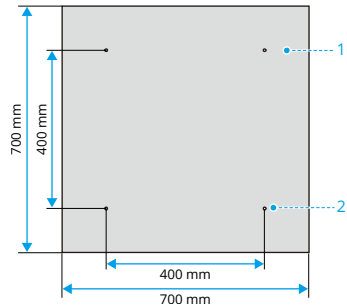
Concrete Base Requirements

Customize the base (not provided) by following below requirements.

- The concrete base size is recommended to be 700 mm × 700 mm × 100 mm. The specific height of the concrete base can be adjusted according to the on-site flooding risk situation, generally the minimum height is greater than or equal to 100 mm.
- The concrete base is established using C25 concrete, with single-layer two-way reinforcement and φ4 @ 150 mm mesh inside. Make sure the reinforcement is wrapped with a concrete protection layer larger than 25 mm. C25 concrete mix ratio is shown as below:

	Cement	Water	Sand	Gravel
Weight	372 kg	175 kg	593 kg	1260 kg
Weight Ratio	1	0.47	1.59	3.39

- Reserve four mounting holes with four M8 bolts pre-imbedded or mount four M8 expansion bolts directly after the concrete hardens to facilitate subsequent installation of the dock.
- Preparing the ground wire for lightning protection: The earth electrode above the ground should be made of 50 mm × 5 mm galvanized flat steel and is connected to the dock with a flexible copper core cable. The part under the ground should be made of 50 mm × 50 mm × 5 mm galvanized angle steel, and should be inserted under the ground with a depth no less than 1.6 m. Refer to the Lightning Protection System section for more information.
- Make sure to maintain the concrete base for at least 7 days after establishing it.
- Consider whether the base can be established easily, and the pipelines and cables surrounding the concrete base installed can be exposed at a later stage.



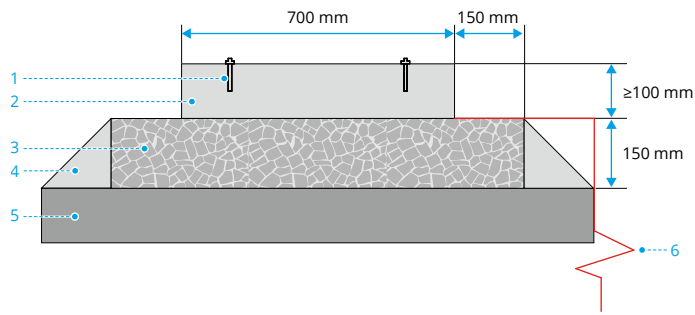
Top View

1. Concrete Base Surface
2. Mounting Holes for Dock

Base Establishing Steps

The base establishing steps vary according to the applicable site.

- Applied to no hard ground
  - Press down on the soil to ensure a stable foundation.
  - Add a 150mm thick crushed stone layer (sand and crushed stone ratio of 3:7, and crushed stone particle size of 5-40 mm) on the top of the original soil layer, and then use the C25 concrete around the crushed stone layer to form the edge.
  - Add the C25 concrete on the top of the crushed stone layer.
  - Smooth the C25 concrete surface, make sure the flatness does not exceed ±4 mm and the inclination is less than 3° from either side of the installation surface.
  - Install the earth-termination system for lightning protection.

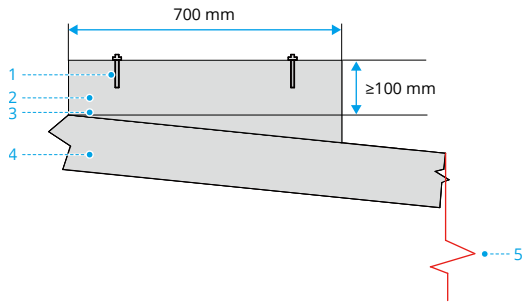


Sectional View

1. Mounting Holes for Dock
2. C25 Concrete Base
3. Crushed Stone Layer
4. C25 Concrete Edge

5. Original Soil Layer
6. Earth-termination System

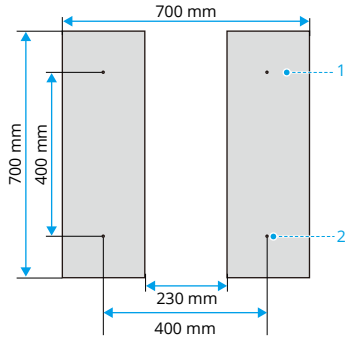
- Ground surface has hardened concrete but with large slopes or unevenness
  - Roughen the original concrete base surface.
  - Add the C25 concrete.
  - Smooth the C25 concrete surface, make sure the flatness does not exceed ±4 mm, and the inclination is less than 3°.
  - Install the earth-termination system for lightning protection.



Sectional View

1. Mounting Holes for Dock
2. C25 Concrete Base
3. Concrete Base Surface
4. Original Concrete Base
5. Earth-termination System

- Ground has loading capacity requirement
  - Make two C25 concrete mounds.
  - Smooth the C25 concrete surface, make sure the flatness does not exceed ±4 mm, and the inclination is less than 3°.
  - Install the earth-termination system for lightning protection. The space between the two mounds can be used for piping and wiring.



Top View

1. Concrete Base Surface
2. Mounting Holes for Dock

Using a Steel Frame Base

⚠
- Ground that is soft is not suitable for installation.
- When installing the dock on the top of the building, confirm in advance whether the roof floor can be drilled. If not, it is recommended to use the steel frame properly fixed with heavy objects (such as sandbags).

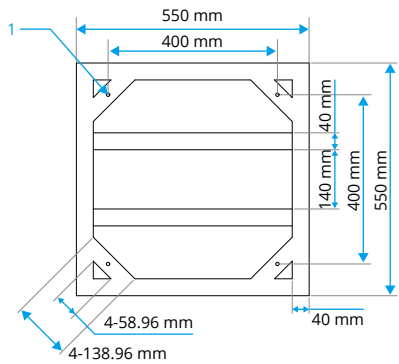
Applicable Locations

If the installation location already has a concrete-hardened ground (such as a building roof), but there may be risk of flooding or signal blocking, use a steel frame base. The construction period for this solution is shorter as there is no maintenance stage.

Steel Frame Base Requirements

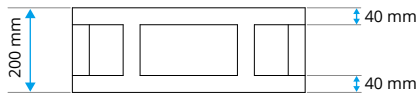
Customize a steel frame base (not provided) by following below requirements:

- Considering the tolerance in outdoor environment, it is recommended to use 40 mm galvanized square or 304 stainless steel square, and spray paint to avoid corrosion.
- Generally the height of the base is not less than 200 mm. And make sure it is higher than the historical highest water level of the installation site by more than 100 mm.
- The recommended measurements are shown as below:



Top View

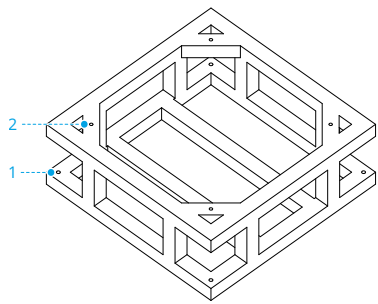
1. Secured with M8 bolts



Side View

Installation Steps

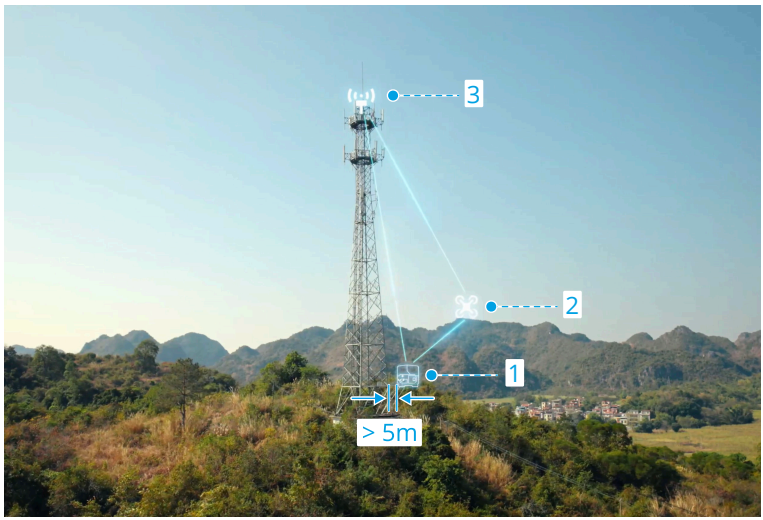
1. Fix the steel frame base on the hardened ground with expansion bolts or heavy objects such as sandbags.
2. Use M8 screws to install the dock on the steel frame base.



Using a Load-Bearing Frame

Applicable Locations

The load-bearing frame is suitable for deployment near communication towers or utility poles. The installation location requires a pole or a column with a load-bearing capacity of more than 200 kg. The construction period for this solution is shorter as there is no maintenance stage.

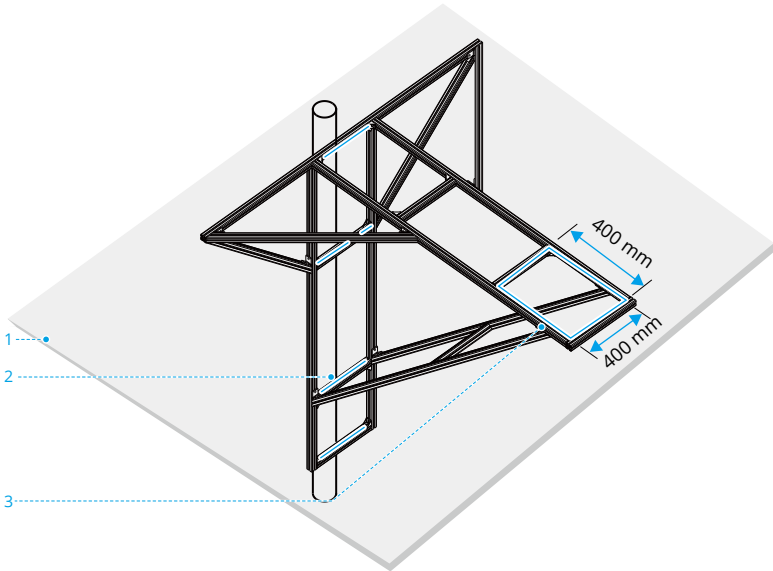


1. Dock
2. Aircraft
3. Relay

Load-Bearing Base Requirements

Customize a load-bearing frame (not provided) by following below requirements:

- Considering the tolerance of outdoor environments, it is recommended to use 40mm galvanized square tube or 304 stainless steel square tube, and spray paint to avoid corrosion.
- The installation plane of the load-bearing frame should have a vertical load-bearing capacity of more than 200 kg and a horizontal load-bearing capacity of more than 100 kg.
- Below diagram is for reference only. Make sure to consider the convenience of personnel operation during installation and maintenance referring to the actual situation.



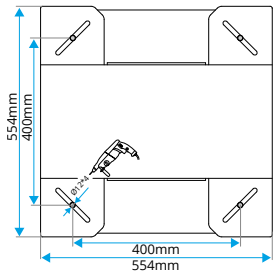
1. Ground
2. Fixing to A Pole
3. Dock Installation Location

Installation Steps

1. Use connectors to secure the load-bearing frame to the tower or utility pole. Make sure the inclination of the installation plane is less than 3°.
2. Use M8 screws to install the dock on the load-bearing frame. Make sure the installation tilt of the dock is less than 3°, and the horizontal distance between the dock and the pole is more than 5 m.
3. Install the earth-termination system for lightning protection.

Directly Installing on Ground

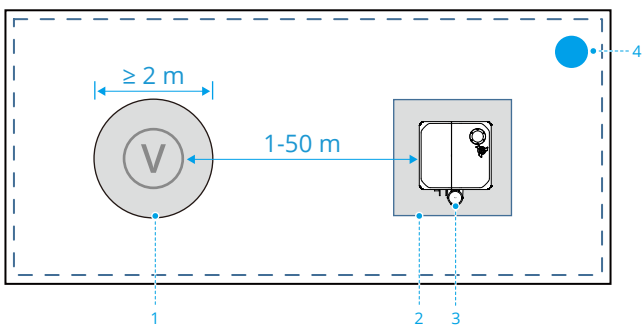
If the installation site has hardened-concrete ground and no risk of flooding or obvious obstacles surrounding it, the dock can be directly installed on the ground using expansion bolts.



Alternate Landing Site Requirements

It is necessary to set up an alternate landing site near the dock. When there is an issue with the dock or the aircraft cannot land due to bad weather or equipment failure, the aircraft will hover until low battery level occurs and then fly to the alternate landing site and land.

- When choosing the alternate landing site, consider the clearance needed during the aircraft landing process. Make sure there are no obstacles within a 1 m radius of the alternate landing site.
- It is recommended to set the alternate landing site in an open area near the dock, which is at the same height and has a straight-line distance of 1-50 m from the dock.
- Place a clear mark at the alternate landing site to prevent people from approaching.



1. Alternate Landing Site
2. Concrete Base
3. Dock
4. Third-Party Security Camera

- Pay attention to avoid personal injury when the aircraft is landing at the alternate landing site.

- If the alternate landing site is set on the roof of the building, make sure not to set it in the corner of a roof in order to avoid the aircraft from accidentally crashing.
- For the alternate landing site, it is recommended to use a V symbol as the marker and a single-colored background. Using other types of symbols or background colors may affect the aircraft's visual identification, thereby reducing landing accuracy.

3.3 Lightning Protection and Grounding Requirements

Lightning Protection System

Make sure that the device can be protected by a lightning rod. The protected region of the air-termination system can be calculated using the rolling sphere method. A device remained within the imaginary sphere is said to be protected from a direct lightning flash.

If the device is not under the protection of the nearest lightning rod, a designated lightning protection system should be designed by a qualified professional.

Earth-termination System

Select the appropriate earth-termination system based on the conditions of the installation site.

- When installed on the rooftop, it can be directly connected to the lightning protection belt.
- Use an earthing resistance meter to measure the earthing resistance, and make sure that the earthing resistance for the device is less than 10 Ω. Once the distance between the earth-termination system and the product is greater than 1 m, install the 40 mm × 4 mm flat steel within 1 m of the product and connect it to the earth-earth electrode. If there is no existing earth-termination system, additional earth electrode and installation are required. Follow below descriptions to make the earth electrode.

Requirements for producing and installing the earth electrode

- It is recommended to produce a vertical earth electrode using hot-dip galvanized steel,copper, or copper-clad steel. The recommended length of the vertical earth electrode is 1.5-2.5 m according to the soil quality and geographical conditions around the earth electrode.

- The earth electrode number is determined by the size of the earth-electrode network and the geographical environment. The distance between any two vertical earth electrodes should not be less than 5 m. When using an earth-electrode network, make sure its four corners use the vertical earth electrodes.
- If using angled steel, make sure one end is pointed, which can be made by using oblique cutting.
- When installing the earth electrode under the ground, the depth should generally be no less than 0.7 m (the distance between the upper end of the earth electrode and the ground surface). In cold weather regions, the earth electrode should be installed below the permafrost layer. In areas with thin gravel soil, the installation depth of the earth electrode should be determined according to actual conditions.

- When using an earth resistance meter, make sure to operate it according to its instructions, and perform a short-circuit zero calibration on the meter before measurement.
- If the earth resistance does not meet the requirements of the device installation, it is recommended to use multiple earth electrodes and apply a long-term resistance-reducing liquid or use a special earthing rod.
- If the earth resistance is less than 10 Ω, the lightning protection system can be used for the other earth-termination systems.

Earth Electrode Specifications

When the earth electrode is made of hot-dip galvanized steel, the length depends on the needs of the installation, and the specifications are as follows.

Earth Electrode Type	Specifications
Steel Pipe	Thickness no less than 3.5 mm
Angle Steel	No less than 50 mm × 50 mm × 5 mm
Flat Steel	No less than 40 mm × 4 mm
Round Steel	Diameter no less than 10 mm

3.4 Power Supply and Cable Requirements

Power Supply Requirements

When using the dock, an external AC power supply needs to be connected to dock. The power supply requirements are as shown below:

- The electrical connection should comply with local laws and regulations.
- Make sure to use a stable power supply without frequent power outages.

- Make sure the voltage and frequency meet the dock operation requirements:

Type	Specifications
Power Supply	Single-Phase AC
Output Voltage	100-240 VAC
Maximum Output Voltage	< 264 VAC
Frequency	50/60 Hz
Output Power	> 1000 W

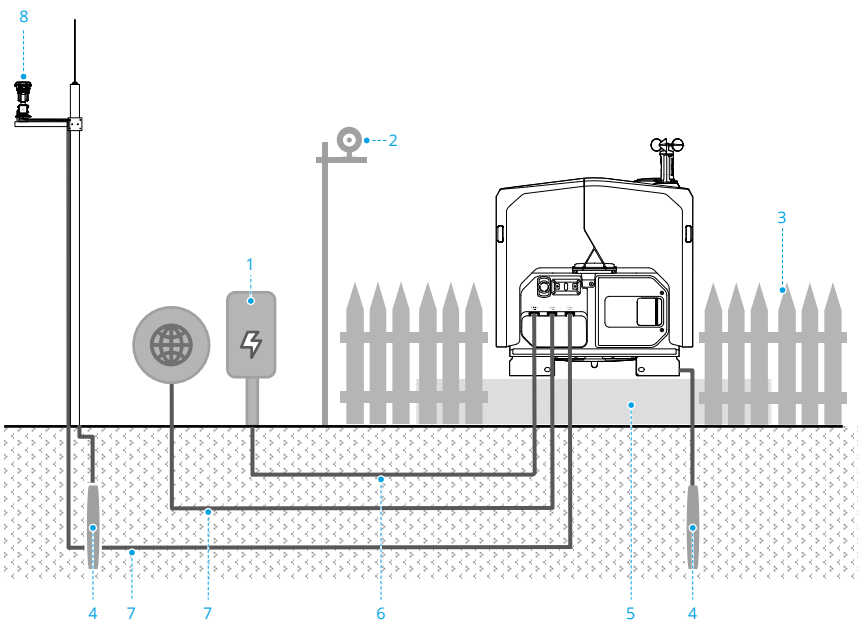
- When supplying power to the dock, make sure to install a separate 2P 16A circuit breaker and a 40kA surge protection device in the user distribution box.

Cable Requirements

Make sure to place the cables connecting the dock to the external power supply inside the protective pipelines.

Cable Connection Suggestion

The recommended overall connection is shown as below.



1. Waterproof Distribution Box
2. Third-Party Security Camera (Optional)
3. Protective Fence (Optional)
4. Earth Electrode

5. Concrete Base
6. Power Cable
7. Category 6 Twisted Pair Cable
8. Relay

Power Cable Requirements

- If the user distribution box is more than 50 meters away from the dock, it is recommended to install an additional outdoor waterproof distribution box near the dock for convenient maintenance and other equipment to draw power.
- Make sure the power cable length and cross-sectional area meet the following requirements:

Power Cable Length	Cross-sectional Area
<100 m	three-core outdoor sheathed copper core cable of 16AWG (1.5 mm^2)
100-200 m	three-core outdoor sheathed copper core cable of 12AWG (4 mm^2)
>200 m	three-core outdoor sheathed copper core cable of 10AWG (6 mm^2)

The standard dock power connector is only compatible with a power cable that has a cross-sectional area of 16AWG (1.5 mm^2). If the power cable has a cross-sectional area that is larger than 16AWG (1.5 mm^2), an addition waterproof distribution box is required for cable conversion.

Protection Pipeline Laying Requirements

- Make sure the outdoor cables are laid with PVC pipes and are installed under the ground. In the situation that the PVC pipes cannot be installed under the ground (such as on the top of a building), it is recommended to use galvanized steel pipe fastenings to the ground and make sure the steel pipes are well grounded. The inner diameter of the PVC pipes should be at least 1.5x the outer diameter of the cable, while taking the protective layer into consideration.
- Make sure the cables do not have joints within the PVC pipes. The joints of the pipes are waterproofed, and the ends are well sealed with sealant.
- Make sure the power cable and the Ethernet cable are separated using different PVC pipes and that the PVC pipes are not installed close to water, heating, or gas pipes with a distance of no less than 30 mm.

Waterproof Distribution Box

If necessary, make sure to install an outdoor waterproof distribution box that meet the requirements as shown below:

- Make sure the waterproof distribution box is securely installed and that the bottom of it is at least 500 mm above the ground to avoid flooding.
- Make sure the waterproof distribution box is installed on the side with the incoming power cable that leads from the dock electrical cabinet for a secure cable connection and dock configuration.
- Make sure the waterproof distribution box is more than 1 m away from the dock in order to avoid affecting aircraft takeoff and landing.
- Make sure the lead-in and lead-out cables of the waterproof distribution box are protected using PVC pipes that are installed under the ground, and that the joints between the pipe and the distribution box are properly waterproofed and sealed with sealant.
- Make sure both the earth wires of the outlet in the waterproof distribution box and the leadout cables of the dock are properly connected to the waterproof distribution box and well grounded.

The recommended electrical components in the waterproof distribution box are shown as below:

Component	Usage
Waterproof Distribution Box	Contains various electrical components and provides waterproof protection.
Ground Bus Bar	Connects the earth wires of the lead-in cable, the socket, the leadout cable, and the enclosure of the waterproof distribution box if the waterproof distribution box is made of metal.
C16 Circuit Breaker	Connects the dock to supply power.
C10 Circuit Breaker	Connects the socket in the waterproof distribution box to supply power.
DIN Rail Mount Socket of 10A	Provides power for other devices such as the ethernet device, hammer drill, laptop, mobile phone charger for convenient on-site installation and configuration.

3.5 Network Requirements

When using the dock, it needs access to the Internet, connect to the internet by using an Ethernet or a 4G wireless network. The dock can also use the 4G wireless network as a backup to the Ethernet connection. When both networks are connected, the Ethernet connection will be used in priority.

- 4G network service is not available in some countries or regions. Please consult your local distributor for details.

Ethernet Connection

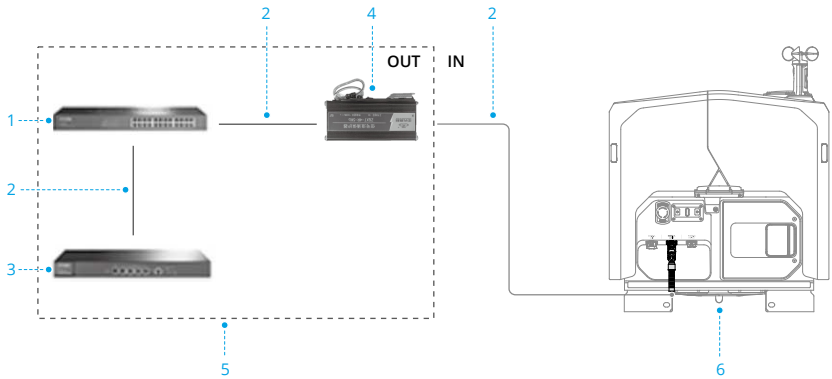
Ethernet Connection Requirements

- The dock only supports IPv4 protocols, make sure the ethernet supports IPv4 protocols.
- It is recommended to use Category 6 twisted pair as the network connection cable.
- Make sure to place the cables connecting the dock to the Ethernet within the protective pipelines.
- Make sure to use and install PVC pipes under the ground for outdoor cables. For situations where PVC pipes cannot be installed under the ground, use galvanized steel pipes that are fastened to the ground and ensure that the pipes are well grounded. Make sure to lay the Ethernet cable during construction to facilitate quick dock installation.
- Make sure the power cable and the Ethernet cable are separated into different PVC pipes, and that the PVC pipes are not installed near water pipes, heating pipes, or gas pipes.
- Select the appropriate connection method according to the distance between the user computer room and the dock.
- It is recommended to use a Gigabit network with both upstream and downstream bandwidth greater than 20 Mbps, to ensure a better user experience, it is recommended to be greater than 40 Mbps. Use a laptop to measure the network speed using a speed measurement website by connecting the network port.

If the distance is less than 80 m:

Use the twisted pair cable to connect the device directly. Make sure to install a data and signal surge protector device to the lead-out cable from the user computer room, in order to protect the network devices from being damaged by lightning strikes and ensure stable data transmission. Follow the instructions as shown below for installation.

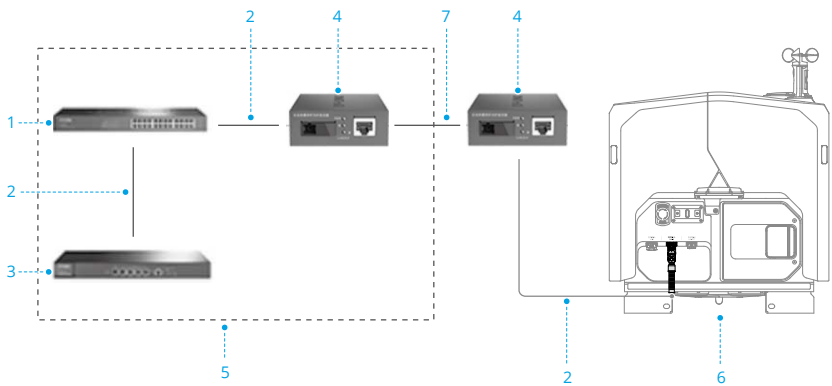
1. Use a category 6 (Cat 6) or above twisted pair cable and crimp a category 6 (Cat 6) pass through connector at one end of the cable.
2. Install a surge protector device in the grounded rail with reliable contact, and make sure that the earth wire is properly connected to the ground.
3. Use the Ethernet cable, connect the IN end of the surge protector device to the dock and the OUT end to the network devices such as a network switch and router. Make sure the IN and OUT ends are properly connected, otherwise the surge protector device may be damaged and the surge protection will not work.



1. Network Switch
2. Twisted Pair Cable
3. 4G Router or Network Provider
4. Surge Protection Device
5. User Computer Room
6. Dock

If the distance is more than 80 m:

Use a fiber optic solution and install a fiber optic transceiver. Choose a fiber optic transceiver that meets the transmission distance requirements, in order to avoid the mismatch between the transmission distance and the transceiver, which may result in network instability or even loss of connection.



1. Network Switch
2. Twisted Pair Cable
3. 4G Router or Network Provider
4. Fiber Optic Transceiver
5. User Computer Room
6. Dock
7. Long-distance Transmission Optical Fiber

Wireless Network Connection

In scenarios where the ethernet connection is unavailable, a DJI Cellular Dongle 2 can be mounted to the dock to access a 4G network.

- Make sure that the mobile network operator offers a strong network signal at the dock installation site.
- Choose the appropriate data plans according to the future operation requirements and operation frequency.

- Use a network speed test app to perform network speed test at the planned dock installation site. Make sure that the upstream and downstream bandwidth is greater than 20 Mbps. The mobile network operator selected during the survey test needs be the one selected for the dock in the future.

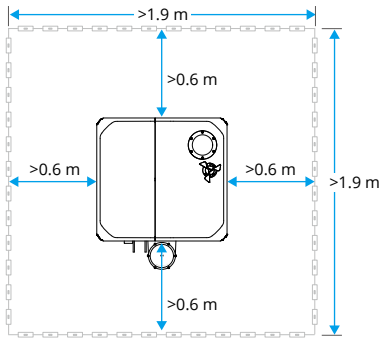
3.6 Protective Fence

Make sure to install a protective fence to ensure the safety of pedestrians and prevent theft of the product so that unauthorized personnel or animals cannot enter the area where the dock is installed.

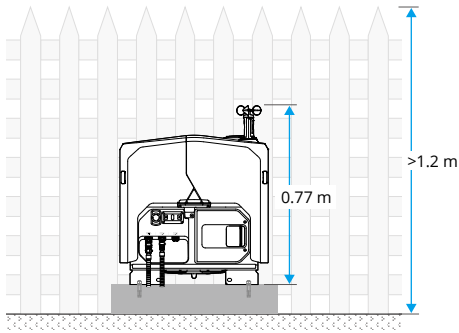
Protective Fence Requirements

- Operators who enter the protective fence need to undergo professional training and fully understand the precautions and risks of various operations.
- Make sure that no flight plan is performed on DJI FlightHub 2 and that the aircraft has landed inside the dock before entering the protective fence area when operating the dock on site. After entering the area, make sure to press the emergency stop button of the dock.

- It is recommended that the protective fence dimensions are not less than shown in the diagram.
- Make sure the protective fence is stable after installation, and that a door is installed for personnel to enter for inspection and maintenance. Make sure the door is locked to prevent unauthorized personnel from entering.
- Make sure that a warning sign that states Danger: Risk of Mechanical Equipment Injury is fixed to the outside of the fence clearly.
- Make sure to use fiber-reinforced plastic or non-metallic fencing for minimal impact on the video transmission signal and RTK signal.



Top View



Side View

The protective fence needs to be purchased and installed by the user or service provider. DJI does not provide this item.

3.7 Third-party Security Camera

An additional third-party security camera can be installed according to security monitoring requirements.

Third-party security cameras need to be purchased and installed by the user or service provider. DJI does not provide this item.

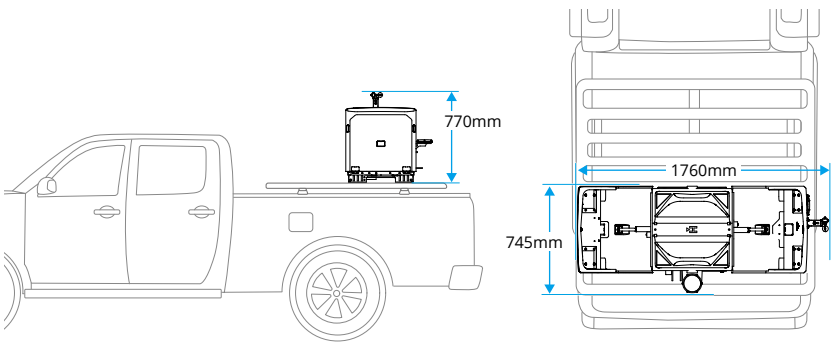
4 Construction Preparation (Vehicle-mounted Deployment)

Please make sure to read this chapter carefully and install the dock on the vehicle as required.

4.1 User-prepared Vehicle-mounted Platform

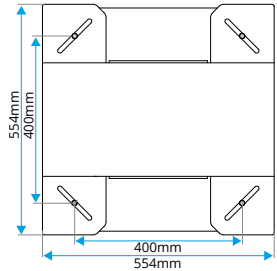
Vehicle Requirements

- It is recommended to use pickup trucks or similar vehicles that can easily carry the dock. It is recommended to use new energy vehicles with AC output for convenience to charge the dock.
- Make sure the overall height of the vehicle installed the dock complies with local regulations and registration requirements.
- The vehicle dimensions must meet the dock size requirements.



Vehicle-mounted Platform Requirements

- The vehicle-mounted platform must be securely mounted onto the vehicle, and anti-off nuts must be installed. Or by welding. Make sure to consider the stability of the attachment during rapid acceleration and braking of the vehicle.
- Make sure the vehicle-mounted platform can meet the screw hole specifications on the dock mounting base bracket as per diagram. It is recommended to use T-shaped screws to secure the dock.



- It is recommended to purchase an integrated aluminum alloy vehicle-mounted platform. The diagram shows the recommended style and dimensions.

1. Aligning the Holes of Mounting Bases

4.2 Grounding Requirements

Make sure the device is effectively grounded during the flight task. It is recommended to connect the earth wire to the grounding rod and insert the grounding rod into the ground. When deploying multiple docks, a single grounding rod can be shared.

4.3 Power Supply and Cable Requirements

Power Supply Requirements

- The electrical connection should comply with local laws and regulations.
- The AC output of the vehicle, a gasoline generator, or an outdoor mobile power supply can be used as the power input. It is recommended to use DJI Power 1000.
- When using a gasoline generator, make sure to keep away from the dock during operation to avoid effect from vibration and high temperatures .

- The power device and the power connector of vehicle must be water-resistant to prevent device damage or electric shock risks.
- Make sure the vehicle power supply meets the vehicle-mounted deployment requirements and be properly secured.
- The power supply device must be equipped with short circuit protection to prevent dangers caused by overload or short circuit.
- Make sure the voltage and frequency of the vehicle power supply meets the dock operation requirements:

Type	Specifications
Power Supply	Single-Phase AC
Output Voltage	100-240 VAC
Maximum Output Voltage	< 264 VAC
Frequency	50/60 Hz
Output Power	> 1000 W

Cable Requirements

Cables need to be laid through protective cable housing. The requirements are as follows:

- Make sur to use the corrugated pipes for laying. The inner diameter of the PVC pipes should be at least 1.5x the outer diameter of the cable, while taking the protective layer into consideration.
- Make sure the cables do not have joints within the PVC pipes. The joints of the pipes are waterproofed, and the ends are well sealed with sealant.
- Make sure the power cable and the Ethernet cable are separated into different PVC pipes, and the PVC pipes are with a distance of no less than 30 mm.

4.4 Network Requirements

When using the dock, it needs access to the Internet, connect to the internet by using an Ethernet cable or a 4G wireless network. The dock can also use the 4G wireless network as a backup to the Ethernet. When both networks are connected, the Ethernet will be used in priority.

For vehicle-mounted deployment, it is recommended to install the DJI Cellular Dongle 2 to the dock. When using a CPE terminal to provide a network for the dock, ensure proper protection for the device and install appropriate cooling measures to avoid network anomalies.

Ethernet Connection

- It is recommended to use category 6 (Cat 6) or above twisted pair cable as the Ethernet cable.
- Use a CPE terminal, such as a 4G or 5G router. It is recommended to use a network with both upstream and downstream bandwidth greater than 20 Mbps, to ensure a better user experience, it is recommended to be greater than 40 Mbps. Use a laptop to measure the network speed using a speed measurement website by connecting the network port.

Wireless Network Connection

In scenarios where the ethernet connection is unavailable, a DJI Cellular Dongle 2 can be mounted to the dock to access a 4G network.

- Make sure that the mobile network operator offers a strong network signal at the dock installation site.
- Choose the appropriate data plans according to the future operation requirements and operation frequency.

5 Transportation and Storage

5.1 Dock Transportation

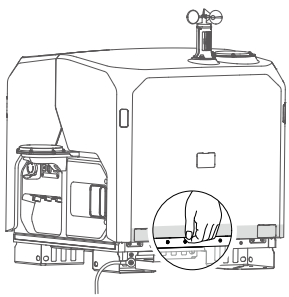
⚠ Make sure the dock is transported by a professionally trained operator. Operators should read this manual carefully. If the dock is damaged due to failure to store, transport, install, or use according to the instructions in this manual, it will not be covered by the warranty.

Carrying and Transporting the Dock

⚠ When carrying and transporting the dock, make sure to prepare for load bearing to avoid sprains or being crushed by heavy objects and to wear protective gloves to avoid injury.

When carrying and transporting the unpacked dock, move it carefully to avoid scratching the surface. DO NOT impact or drop the dock to avoid damage.

When moving or lifting the dock, hold the bottom edge of the dock cover.



Lifting the Dock

⚠
- The operator who performs the lifting operation needs to undergo professional training and can only work after obtaining the required qualification.
- Make sure the tools used for lifting the dock is inspected to meet the standards and service life requirements.
- DO NOT walk under the dock when it is raised. Make sure to keep a safe distance from the dock when it is moved to avoid injury from it from falling, rolling, or swinging.

It is recommended to use a crane cage to lift the unpacked dock (the crane cage needs to be prepared by the lifting company and brought to the lifting site in advance). Otherwise, use the rigging to lift the dock, make sure to select the correct lifting positions, connect the rigging securely, and then try to lift it.

5.2 Dock Storage

If the dock is not used immediately, follow the requirements as shown below for temporary storage:

- Store it in a dry, rainproof, and fireproof place with no corrosive materials.
- Protect it from erosion and damage caused by wildlife.
- Make sure to check that the outer packaging of the dock is in good condition regularly. Make sure to charge the backup battery for at least 6 hours every three months.
- If the dock is removed from storage and not used for a period of time, place it in a water-resistant bag sealed with adhesive tape and then store it in the original packaging with a desiccant.
- DO NOT tilt or invert the dock or place items on top of the box when the dock is stored in the box.
- If the installed dock is left outdoors for an extended period, make sure to remove the aircraft from the dock and store it separately. Properly package and transport the aircraft separately.

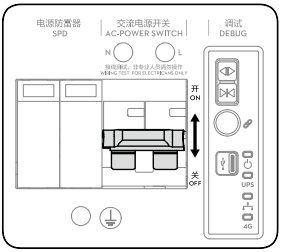
5.3 Charging the Backup Battery

⚠
- Only those who hold a certificate issued by the local department can carry out above safety voltage operations.
- Make sure to pay attention to safety during operation in order to avoid an electric shock.
- Make sure that PE, N, and L wires are connected properly.

If the dock is stored for an extended period, make sure to charge the backup battery before use:

1. Refer to the Connecting the Power Cable section to rebuild the power connector and connect the power connector to the AC-IN port.
2. Open the electrical cabinet door.

3. Turn on the AC power switch to power on the dock.



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 following table for the backup battery maintenance intervals under different storage temperatures.

Storage Temperature Range	Backup Battery Maintenance Intervals
Below 20° C (68° F)	Every nine months
20° to 30° C (68° to 86° F)	Every six months
30° to 40° C (86° to 104° F)	Every three months
40° to 60° C (104° to 113° F)	Every month

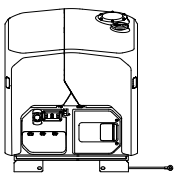
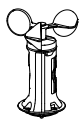
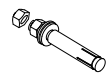
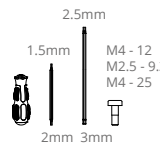
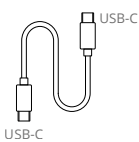
- The backup battery cannot be charged when the temperature is higher than 40° C (104° F) or lower than -25° C (-13° F).

6 Dock Installation and Connection

6.1 Getting Started

In the Box

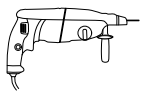
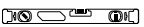
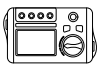
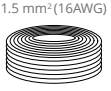
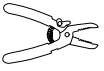
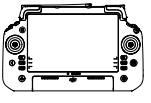
Check that all of the following items are included in the package. If any abnormalities, missing items or inconsistent models are found, make sure to record on-site and contact your device carrier and device supplier.

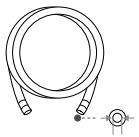
Dock Body ×1	Wind Speed Gauge ×1	RTK Module ×1	Expansion Bolt ×1
			
Ethernet Cable Connector ×2	**Power Cable Connector ×1**	**Wire Ferrule ×6**	**Screws and Tools**
			
USB-C to USB-C Cable ×1			
			

User Prepared Tools and Items

Below tools and items are used during installation and configuration, prepare them in advance and ensure that the tools work properly.

Hammer Drill	Claw Hammer	Digital Level	Adjustable Wrench

			
Earthing Resistance Meter	Screw Nut	Corrugated Tubing	Corrugated Tubing Plug
			
Twisted Pair Cable [1]	Pass Through Connector	Cable Crimping Pliers	Power Cable [1]
			
Diagonal Cutting Pliers	Wire Stripper	Pin Terminal Crimping Plier	Electrical Tape
			
Multimeter [2]	PC	Phone	DJI RC Plus 2 Enterprise
			
DJI Cellular Dongle 2 (Optional) [3]	Drain Pipe (Optional)	Clamp (Optional)	

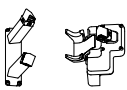
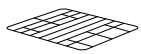
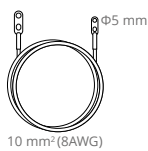
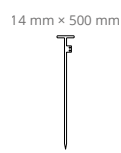
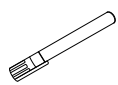
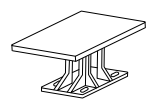
[1] Cables are reserved by the authorized service provider before installation. The power cable requires RVV three-core 1.5 mm² (16 AWG) outdoor sheathed cable with a cable diameter of 7-12 mm, and the Ethernet cable requires Cat 6 twisted pair cable with a cable diameter of 6-9 mm. In order to guarantee the seal is secure and that the water-resistant performance is not compromised.

[2] Make sure the length of the multimeter probes is greater than 18 mm in order to facilitate accurate testing of the wire terminals.

[3] The DJI CellularDongle 2 only supports nano-SIM cards. Make sure to prepare one.

For Vehicle-mounted Deployment

To use the vehicle-mounted deployment, make sure to prepare below items additionally.

Vehicle-mounted Gimbal Mount	Vehicle-mounted Platform	T-type Screw Nut [1] [2]	Anti-drop Steel Wire Rope [1]
			
Anti-drop Lock [1]	Earth Wire	Grounding Rod	Drain Pipe
			
Clamp	Paint Marker	T-shape Air Guide Baffle (Optional)	
			

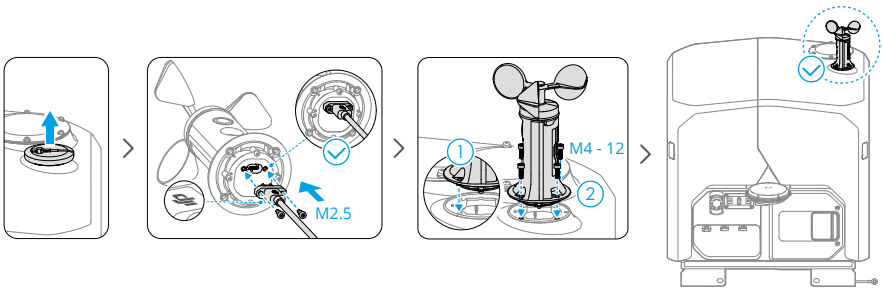
[1] Make sure that the total load-bearing capacity of each item is greater than 165 kg.

[2] Make sure to use nylon locknuts and the outer diameter of the flat washer must be no less than 30 mm.

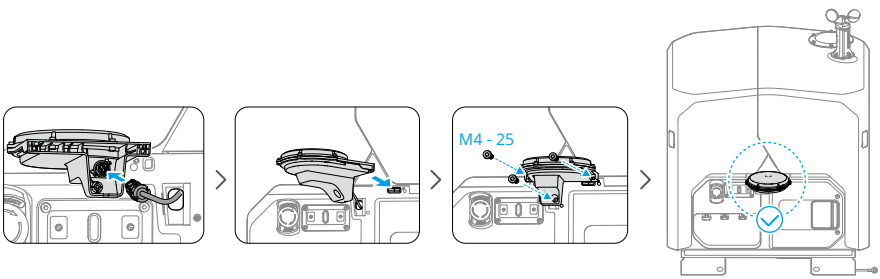
6.2 Dock Installation

Installing the Parts

1. Mount the wind speed gauge module following the diagrams. Make sure the connector is oriented correctly. Avoid the screws from falling through the hole into the dock cover.



2. Mount the RTK module as per diagram. Gently insert the signal cable. Make sure to securely tighten all the screws.



Confirming Installation Position and Orientation

Make sure to consider below factors before installing the dock:

- Make sure the integrated security camera orientation is not facing direct sunlight, otherwise the service life may be affected and the camera view may be effected due to the backlight.
- To avoid false detection when the aircraft lands, make sure that there are no light-colored objects similar to the shapes or visual identification markers on the landing pad within 5 m of the dock, such as white rectangles, white triangles, and H patterns.

- Place the digital level on top of installation site to measure two diagonal direction. Make sure that the surface is horizontally level with inclinations less than 3° in any direction.
- When mounting more than two docks in the same area, make sure to add all docks to the same project to ensure the Multi-Drone Takeoff/Landing performs properly. If Multi-Drone Takeoff/Landing is unavailable, make sure to keep a separation distance of more than 20 m between the docks.

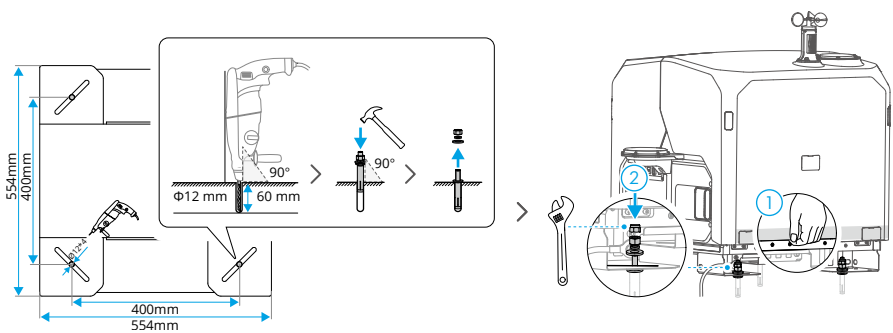
Mounting

Fixed-mounted Deployment

⚠
- Wear a dust mask and goggles when drilling holes to prevent dust from entering the throat or falling into the eyes. Pay attention to personal safety when using any electric tools.
- DO NOT put hands under the mounting base bracket during adjustment to avoid injury if it is difficult to align the expansion bolt with the hole of the mounting base bracket, and the position of the dock needs to be adjusted.

A concrete base or steel frame base needs to be fabricated in advance at the installation site. The following installation instructions use a concrete base as an example.

1. Use the installation card to assist drilling holes and mount the expansion bolts.
2. It is recommended that at least two people to carry the dock. Carefully lift the dock to the installation position and secure the mounting brackets onto the expansion bolts. Make sure to securely tighten the anti-loosening nuts.

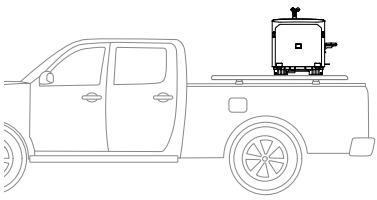


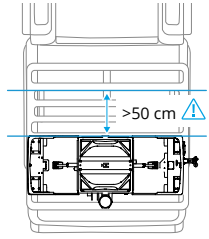
⚠
- To perform a multi-dock task, purchase multiple docks as needed. Go to the Installation and Setup Manual to refer to the Multi-Dock Task section before installing and configuring the docks.

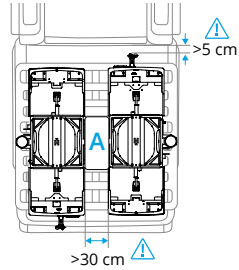
Vehicle-mounted Deployment

- For the vehicle-mounted deployment, it is required to install the vehicle-mounted gimbal mount to the dock.
- Make sure the overall height of the vehicle installed the dock complies with local regulations and registration requirements. Pay attention to the overall height to avoid damage to the product during vehicle movement.
- Be careful when carry the dock onto the vehicle. DO NOT carry the RTK module to avoid damage it.
- When aligning the screws with the mounting base brackets, DO NOT put your hands under the mounting base brackets when moving the dock in order to avoid injury.
- Make sure the dock cover is closed during vehicle moving.

1. Leave enough space to install the dock onto the vehicle-mounted platform (user prepared) as per diagram. Properly orient the electrical cabinet for easy operation. Make sure there is no obstruction within 50 cm in front of the dock air conditioning system.For dual-dock installation, make sure to mount an air guide baffle (A) to guarantee the heat dissipation.



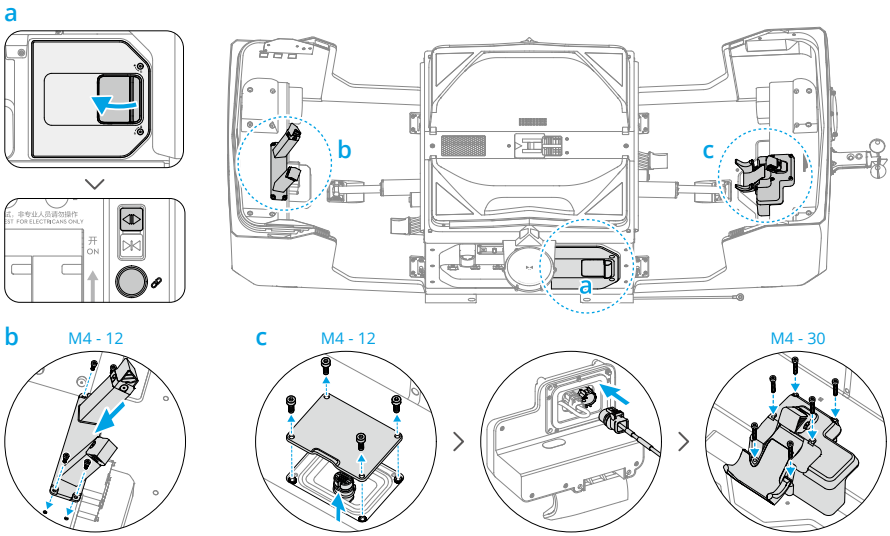




2. Open the electrical cabinet door. Press, and then press and hold the multifunctional button to power on the backup battery. Press and hold the open button to open the dock cover. Power off the backup battery in the same way.

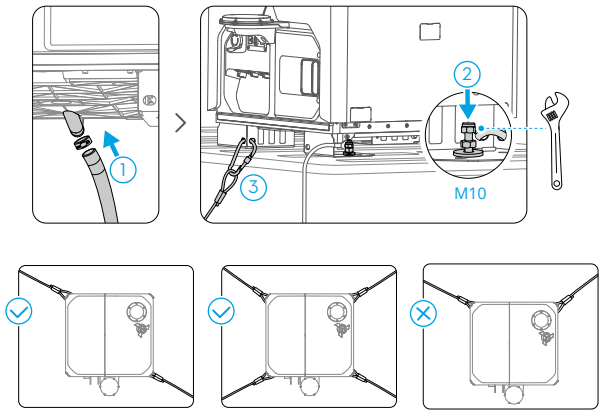
   Correctly mount the Vehicle-mounted Gimbal Mount to the dock as per diagram. Gently insert the signal cable. Make sure to route the cables and securely tighten the screws.

   Power on the backup battery. Press and hold the close button to close the dock cover. Close and secure the electrical cabinet door.



- When installing the part shown in diagram b, make sure not to install it in reverse, and use the correct screws.

3. Connect the drain pipe as per diagram. It is recommended that at least six people to carry the dock. Carefully lift the dock to the vehicle-mounted platform and secure the mounting brackets onto the T-screws. Make sure to securely tighten the anti-loosening nuts. Use a paint marker to check if the nut has loosened. Use the anti-off locks to fasten one end of the anti-off steel rope to the dock, and another end to a secure location.



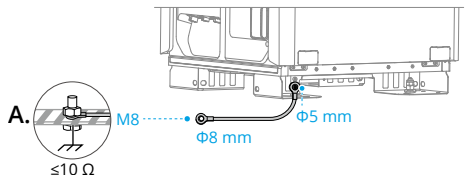
6.3 Connecting and Powering on the Dock

Connecting the Earth Wire

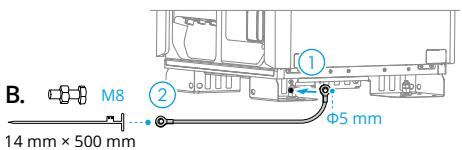
⚠ The dock must be properly grounded by following below requirements.

Make sure that the earth wire is not coiled or intertwined with the signal cables.

- Fixed-mounted Deployment: Check that the design and assembly of the earth-termination system meet the requirements before installation. Connect and tighten the earth wire to the lead-out pole of the earth electrode.



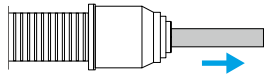
- Vehicle-mounted Deployment: Replace with user prepared earth wire and connect it to the ground rod. Make sure the ground rod is properly grounded before each dock operation.



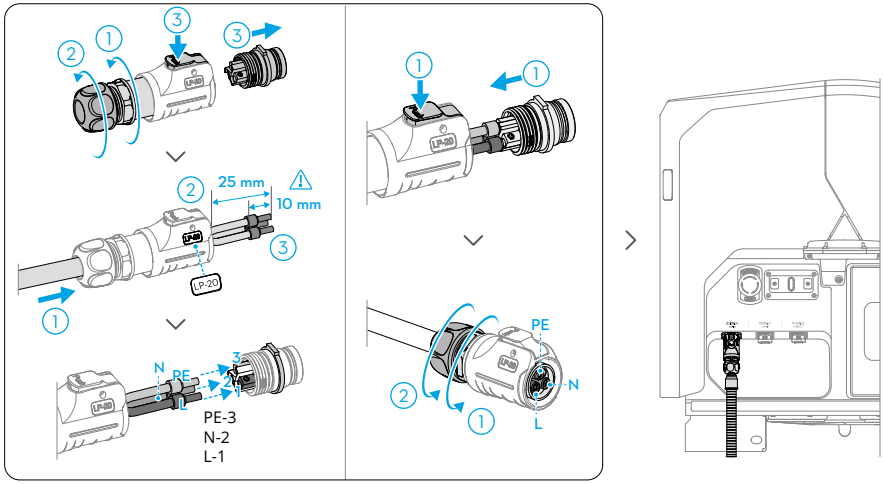
Connecting the Power Cable

⚠
- Only those who hold the certificates issued by the local department can carry out above safety voltage operations.
- Before operation, make sure to turn off the switch of the superior power supply of the dock, and hang a sign to prohibit turning on the switch.
- Use a multimeter to measure the electrical current of the power cable. DO NOT operate with an electrical current.
- Make sure to check the wiring order. DO NOT connect them in reverse.

1. Lead the cable near to the product. Insert the cable into the corrugated tubing and the corrugated tubing plug in sequence.

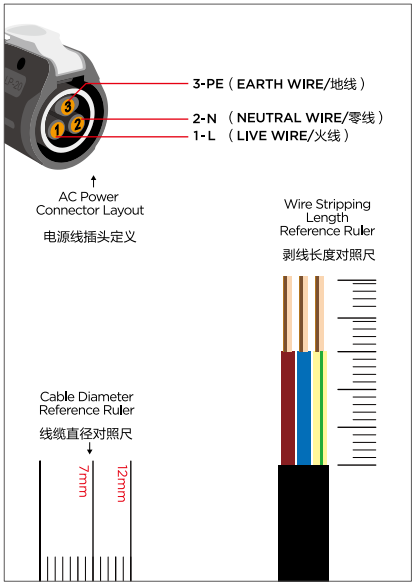


2. Follow the steps below on how to rebuild the power connector.



a. Disassemble the power connector as per diagram.

b. Lead the power cable through the power connector. Use the ruler pattern (printed on the accessory box) to measure the length of the cable and wires. Use a tool to remove the outer and inner insulation layers to expose the conductor of the wire. Crimp the wire ferrules onto the end of the wires.



c. Loosen the screws on the inner component and insert the wire ferrules. Make sure L (live wire), N (neutral wire), and the PE (earth wire) wires are corresponding to terminals 1, 2, and 3 before tightening the screws. [1]

d. Insert the internal component into the outer casing. Strictly follow the steps to tighten the tail sleeve and the tail nut in sequence.

3. Insert the power connector until a click is heard

[1] The color of the earth, neutral and live wires may vary by country and region. Make sure the three wires are properly and securely connected.

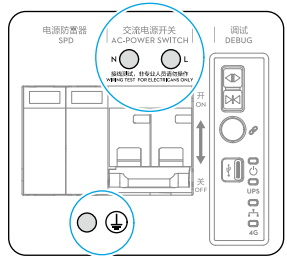
- Be careful not to damage the wire insulation layer when stripping the cable insulation layer.
- Check that the connection between the power cable connector and the cable is not damaged to guarantee waterproof performance.

Wiring Connection Test

DO NOT touch the metal parts of the dock or the multimeter lead probes to avoid an electric shock.

1. Turn on the upstream main switch in the user distribution box.

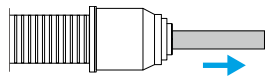
2. Open the electrical cabinet door. Set the multimeter to 750V AC voltage range, and measure at the wire testing holes respectively. Make sure that the results are as shown in the table and that the maximum input voltage does not exceed 240 V. If any measurement result is inconsistent, perform troubleshooting before powering on the dock.



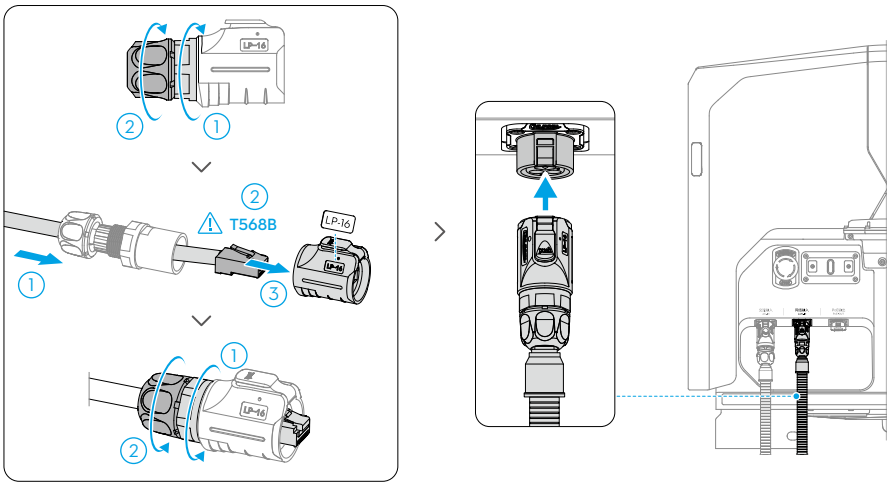
Wire Testing Holes		Fixed-mounted Deployment	Vehicle-mounted Deployment
N	L	90-240 V	90-240 V
N	⏚	<4 V	$\approx U_{LN}/2$
L	⏚	90-240 V	$\approx U_{LN}/2$

Connecting the Ethernet Cable

1. Lead the cable near to the product Insert the cable into the corrugated tubing and the corrugated tubing plug in sequence.



2. Strictly follow the steps as per diagram to rebuild the Ethernet connector.
3. Insert the Ethernet connector until a click is heard.



- Make sure the other end of the Ethernet cable is properly and securely connected to the device in the user computer room.
- Make sure the network is able to access the Internet with an upstream and downstream bandwidth greater than 20 Mbps. To ensure a better user experience, it is recommended that the bandwidth be greater than 40 Mbps.
- Refer to the Installing a Cellular Dongle (Optional) section for more information if the dock needs to access a wireless network.
- After installation, press the locking tab of the pass through connector using a flathead screwdriver to remove it from the Ethernet connector.
- When using D-RTK 3 Relay Fixed Deployment Version (sold separately), use the same method to make an Ethernet cable connector and insert to the PoE output port. Read the corresponding manual for installation and use information.

Powering on the Dock

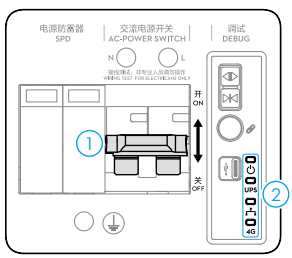
Checklist Before Powering On

Checklist	Description
Earth Wire	• The two ends of the earth wire have been properly connected.

Checklist	Description
Power Cable	• The wire connection test has been performed and the wire sequence is correct. • The insulation layer of the power cable has been properly covered by the tail nut. • All parts of the power connector have been tightened securely. • The power connector has been inserted into the dock securely.
Ethernet Cable	• All parts of the Ethernet connector have been tightened securely. • The Ethernet connector has been inserted to the dock securely.
Dock	• The dock has been installed and is stable with a tilt angle of less than 3 degrees. • The inside of the dock is clean and tidy, without any dust or dirt, or items left inside. • The emergency stop button of the dock has been properly pulled out and released. • The landing pad surface is clear of any metal objects. • For vehicle-mounted deployment, make sure the anti-off locks are connected securely.
The Surrounding Environment	• The area around the dock has been cleared of packaging materials such as cardboard, foam, and plastic. • No obstacles block the dock covers when opening.

Powering On and Checking

1. Make sure the upstream main switch in the user distribution box has been turned on. Turn on the AC power switch.
2. Within 30 seconds, the electrical cabinet status indicators should display as follows. Otherwise, troubleshooting is to be performed.

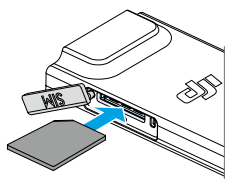


Power Indicator		
—	Solid red	AC power supply is normal.
Backup Battery Indicator		
—	Solid blue	Backup battery is full or is supplying power to the dock.
.....	Blinks blue slowly	Backup battery is charging.
Wired Network Indicator		
.....	Blinks green quickly	Ethernet is connected and has data transfer with the dock.
4G Network Indicator		
.....	Blinks green quickly	4G network is connected and has data transfer with the dock.

6.4 Installing a Cellular Dongle (Optional)

Inserting the nano-SIM Card

Open the SIM card slot cover on the dongle, insert the nano-SIM card into the slot in the same direction as shown in the figure, and close the cover.



- It is strongly recommended to purchase a nano-SIM card which supports a 4G network from official channels of the local mobile network operator.
- DO NOT use an IoT SIM card, otherwise the video transmission quality will be seriously compromised.
- DO NOT use a SIM card provided by the virtual mobile network operator, otherwise it may lead to an inability to connect to the Internet .
- DO NOT cut the SIM card by yourself, otherwise the SIM card may be damaged, or the rough edges and corners may cause the SIM card to be unable to be inserted or removed properly.

- If the SIM card is set with a password (PIN code), make sure to insert the SIM card into the smartphone and cancel the PIN code setting, otherwise it will fail to connect to the Internet.

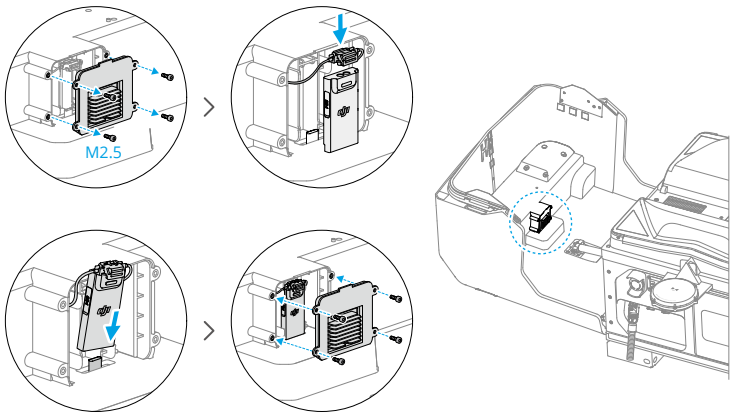
- Open the cover and push the nano-SIM card to partially eject it.

Installing a Cellular Dongle to the Dock

DJI Cellular Dongle 2 is used as an example.

Operate with caution. Avoid pulling the cables or crushing the cables by the compartment cover.

Make sure that the indicator on the dongle is green.



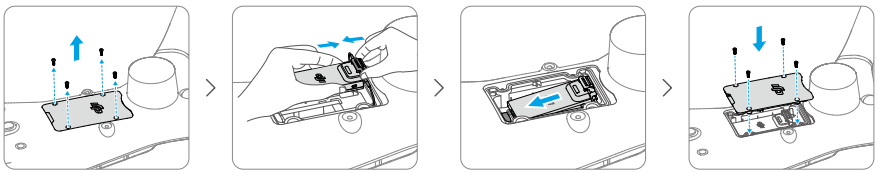
If the indicator displays other patterns, refer to the DJI Cellular Dongle 2 user guide for more information.

https://enterprise.dji.com/dock-3/downloads

7 Preparing the Aircraft

7.1 Installing a Cellular Dongle (Optional)

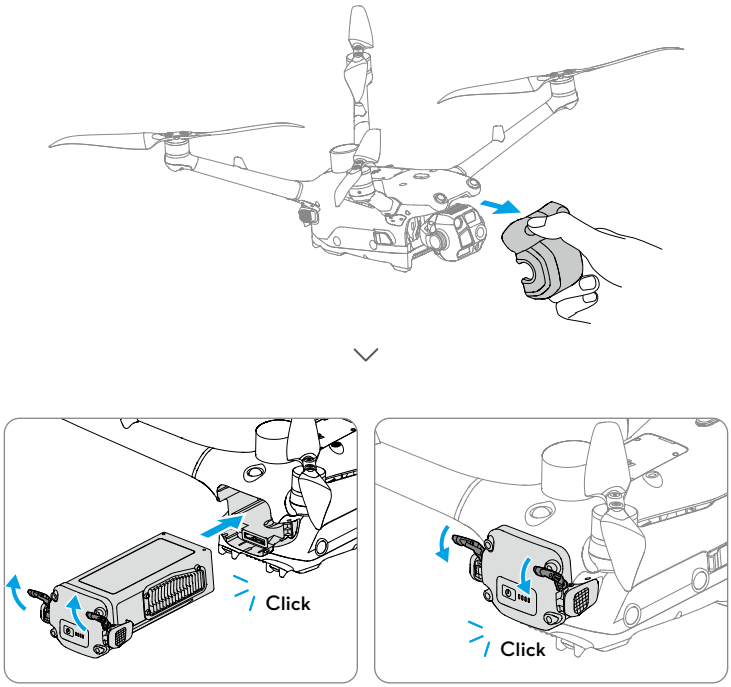
Refer to the Inserting the nano-SIM Card section to install the nano-SIM card.



- Operate when the aircraft is powered off. To avoid damage, DO NOT apply force onto the dongle surface or pull the antennas by force. Make sure the antenna cables are firmly connected and the cable routing is tidy.

7.2 Preparing the Aircraft

1. Remove the gimbal protector from the camera.
2. Install the Intelligent Flight Battery.



⚠ • Make sure to install the gimbal protector for the aircraft before transportation.

7.3 Linking and Activation

The aircraft needs to Link with the dock for use.

The aircraft can also link with the DJI RC Plus 2 Enterprise remote controller, using the remote controller as controller B. During on-site flight tests, remote controller B can take control and manually control the flight.

Read the Configuring the Dock using DJI Enterprise App section to learn about linking and activation.

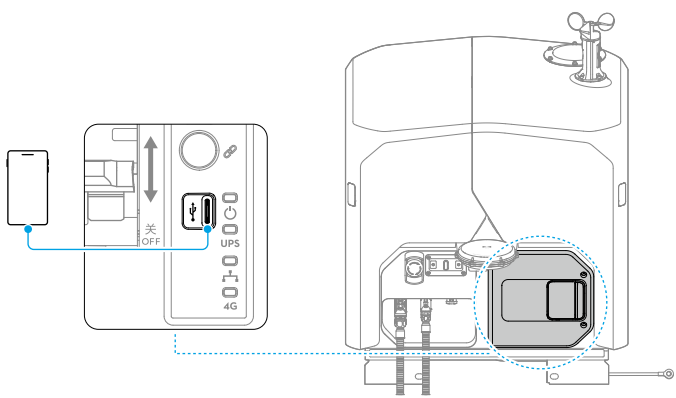
8 Configuring the Dock using DJI Enterprise App

8.1 Notices

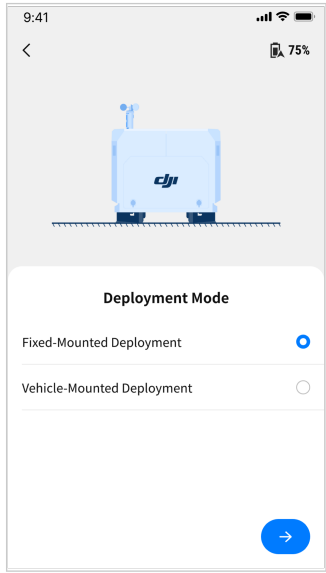
- To configure the dock, users need to use the DJI Enterprise App. Download DJI Enterprise App and install on your smartphone.
- For fixed-mounted deployment, DO NOT move a configured dock. If the site changes, the dock needs to be reconfigured.
- Make sure to keep a safe distance when using the app to open the dock cover in order to avoid injury. Press the emergency stop button on the dock to stop the dock cover from opening, if necessary.
- When the aircraft is placed in the dock. Make sure to move the two blades of each motor to be at 90° with each other in order to avoid breaking the propellers when manually closing the dock cover.
- Make sure the aircraft orientation is consistent with the arrow mark on the landing pad when manually placing the aircraft in the dock.

8.2 Installation Checking

1. Use the USB-C to USB-C cable to connect the smartphone to the dock. Open the DJI Enterprise App and select the proper deployment mode.



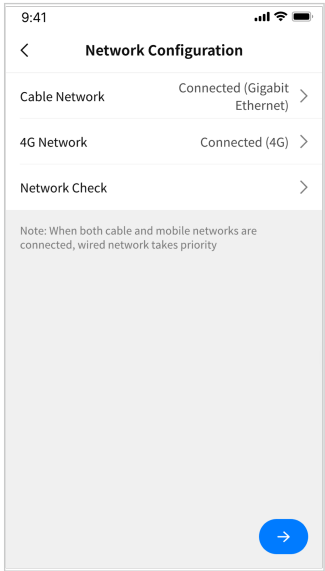
2. After successfully loading the dock configuration page, follow the installation steps as prompted. Check each step to ensure correct installation and connection.



- For vehicle-mounted deployment, make sure to park the vehicle on a level surface. Check in DJI Enterprise App to ensure that the inclination is less than 3°.
- In vehicle-mounted mode, if the dock loses power and is in idle status, the backup battery will be powered on to provide short-term power. If the backup battery is also powered off, you can restore the dock power supply or restart the backup battery to continue your operations.

8.3 Configuring the Network of the Dock

Perform the network configuration and network detection according to the prompts in the app and the actual network conditions.



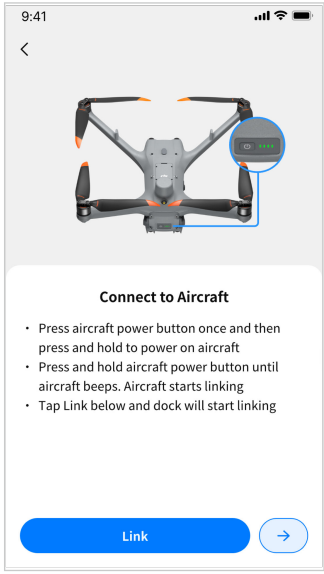
- When configuring the network, DO NOT use the below network segment range to configure the DNS address, IP address, and gateway address.
  - 192.168.41.xxx
  - 192.168.42.xxx
  - 192.168.43.xxx
  - 192.168.50.xxx
  - 192.168.100.xxx
  - 192.168.5.xxx

8.4 Connecting the Dock and the Aircraft

The aircraft and the dock need to be linked before using for the first time.

1. Prepare the aircraft by referring to the manual included in the aircraft packaging. Place the aircraft next to the dock, then press and hold the power button to power on the aircraft.
2. Tap the Link button in app to connect the dock and the aircraft by following the onscreen instructions in the app. During the linking process, the status indicator on the dock covers will blink blue slowly, and the buzzer emits a beeping sound.

3. If the aircraft cannot be linked after powering on due to low battery power, place the aircraft on the landing pad with the aircraft nose pointing towards the arrow, close the dock cover, and then tap the Charge button in the app to charge the aircraft.



- If the linked aircraft cannot be powered on due to low battery power, it can be charged using the dock.
- If the unlinked aircraft cannot be powered on due to low battery power, it is recommended to charge the aircraft battery using the charger and the charging hub before powering on. You can also link the aircraft and charge via the dock following the steps:
  1. Place the aircraft on the landing pad with the aircraft nose pointing towards the arrow.
  2. Press and hold the close button to close the dock cover.
  3. Press and hold the multifunctional button and the close button simultaneously until the dock beeps.
  4. When the dock stops beeping, press and hold the open button and then the close button to open and close the dock cover again, and the dock will start charging the aircraft.
- Do not power off the aircraft immediately after linking with the dock in order to avoid losing any information.

8.5 Activation

Make sure the aircraft is linked to the dock. Activate the dock and the aircraft by following the instructions in the app.

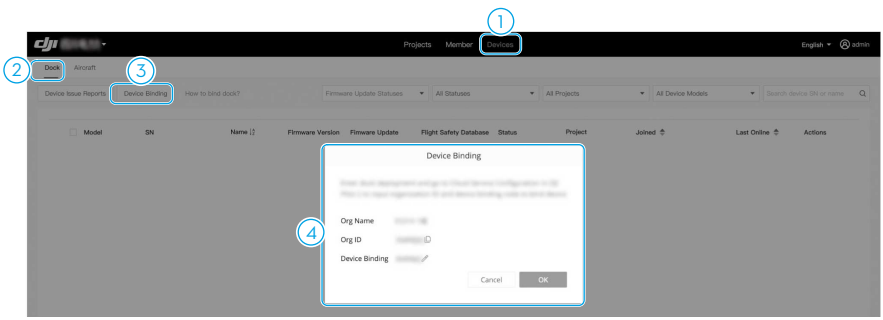
The aircraft and the dock require activation before using for the first time. An internet connection is required for the smartphone during activation.

8.6 Configuring the Cloud Service

The automatic operation of the dock needs to be operated using the cloud service. Bind the dock and aircraft to DJI FlightHub 2 using the app.

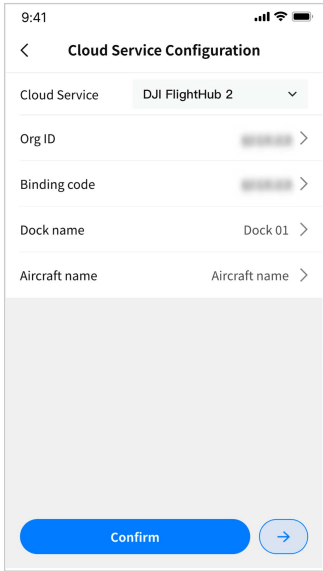
Getting the Device Binding Code

1. Use a computer to visit https://fh.dji.com, and log in to DJI FlightHub 2 using an account. Click to create an organization, and enter the organization page.
2. Obtain the organization ID and device binding code as per diagram.



Binding to DJI FlightHub 2

Fill in the information in the app with the obtained organization ID and device binding code to bind the dock and aircraft to DJI FlightHub 2.



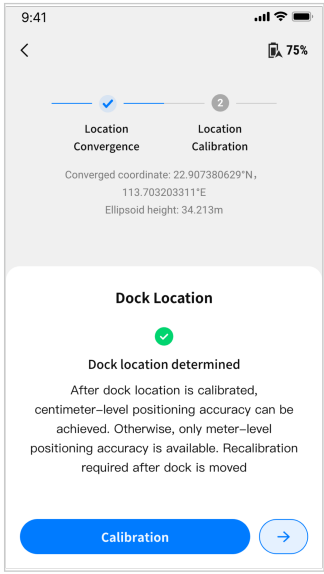
- The product can also be bound to the FlightHub private platform or a third-party cloud platform. Click the cloud service drop-down list to select as needed, then follow the prompts in the app to bind.
- Refer to the DJI FlightHub 2 Private Edition Deployment Manual for more information

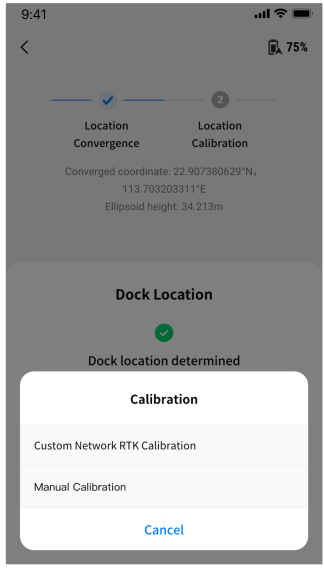
  http://developer.dji.com/cn/resources/private/free/

8.7 Calibrating the Dock Location

Make sure that the RTK module of the dock can obtain accurate coordinates, calibrate the dock location to obtain an accurate absolute position.

1. Make sure the RTK module is not blocked. During calibration, stay away from the dock to avoid the RTK antenna being blocked.
2. Custom network RTK calibration and manual calibration are available. Custom network RTK calibration is recommended to obtain better accuracy and simplify the operation. Make sure the smartphone is connected to the Internet during calibration.
3. Wait until the app displays the calibration results as converged and fixed.





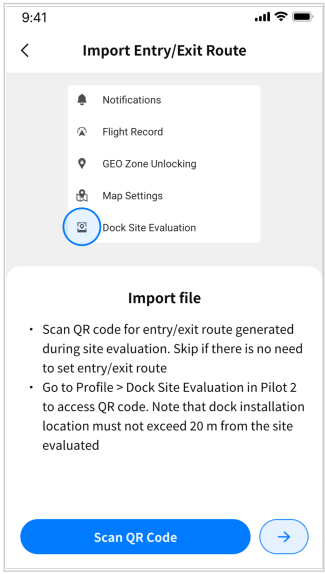
- The dock location calibration data is valid for a long time. There is no need to calibrate it when the dock is restarted. However, re-calibration is required once the dock is moved.

- After the dock location is calibrated, it may prompt that the aircraft RTK positioning data suddenly change. This is normal. Restart the aircraft to clear the prompt.
- To ensure the accuracy of flight operations, make sure that the RTK signal source used during flight is consistent with the RTK signal source used during the device location calibration when importing flight routes using DJI FlightHub 2. Otherwise, the actual flight trajectory of the aircraft may deviate from the planned flight route, which may lead to unsatisfactory operation results or even cause the aircraft to crash.
- Make sure to keep a safe distance when using the app to open the dock cover in order to avoid injury. Press the emergency stop button on the dock to stop the dock cover from opening, if necessary.

8.8 Importing the Entry/Exit Route

Scan the QR code generated in DJI Pilot 2 during the site evaluation of the dock to import the entry/exit route.

- Make sure that the installation location of the dock does not deviate more than 20 meters from the site evaluation location, otherwise the import will fail.
- When the site evaluation result is **Average**, it is recommended to set the entry/exit route to avoid affecting the landing stability of the aircraft.

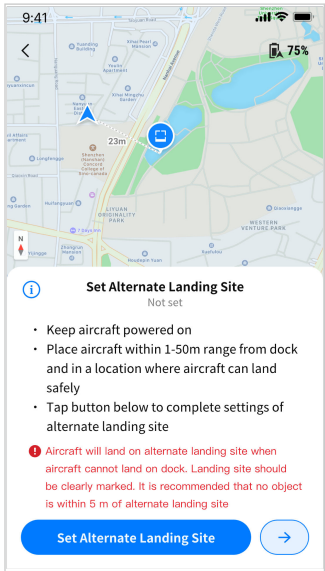


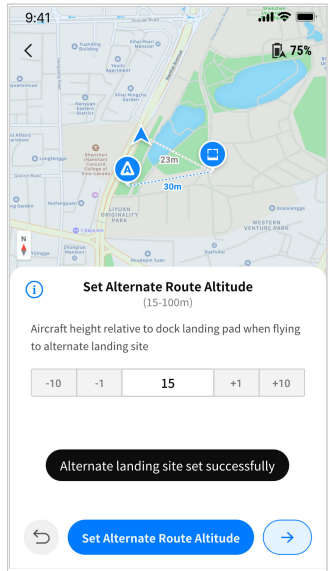
For vehicle-mounted deployment, there is no need to import the entry/exit route.

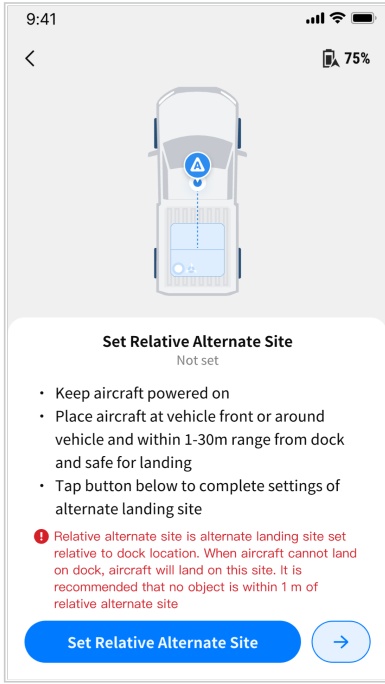
8.9 Setting the Alternative Landing Site

When the dock or the aircraft fails or is affected by external bad weather, the aircraft cannot land at the dock, however it can fly to and land at an alternate landing site. Follow the prompts in the app to set an alternate landing site, pay attention to the following requirements:

- Tap Set Alternate Landing Site in the app and follow the prompts to operate. When choosing the alternate landing site, consider the clearance needed during the aircraft landing process.
- Set a reasonable Alternate Route Altitude to ensure that there are no obstacles when the aircraft flies from the dock to the alternate landing site to avoid collisions.
- Make sure to complete the previous step of the dock location calibration before setting the alternate landing site.





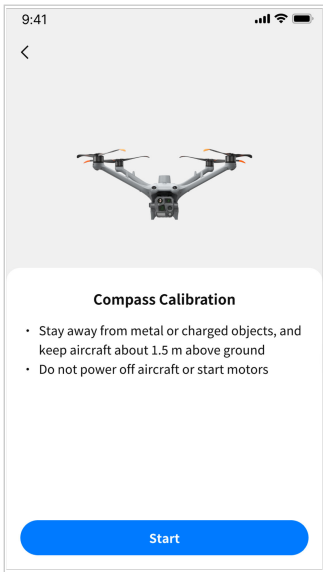


- For vehicle-mounted deployment, make sure to set a Relative Alternate Site, keeping a horizontal distance of 1-30 meters from the dock.
- **Relative Alternate Site**: An alternate landing site that is set relative to the dock location and is recommended to set at the flat areas, such as the roof or front of the vehicle. During a vehicle-mounted task, the aircraft will land at the relative alternate site if it cannot land at the dock. For the alternate landing site, it is recommended to use a V symbol as the marker and a single-colored background. Using other types of symbols or background colors may affect the aircraft's visual identification, thereby reducing landing accuracy.

8.10 Calibrating the Compass

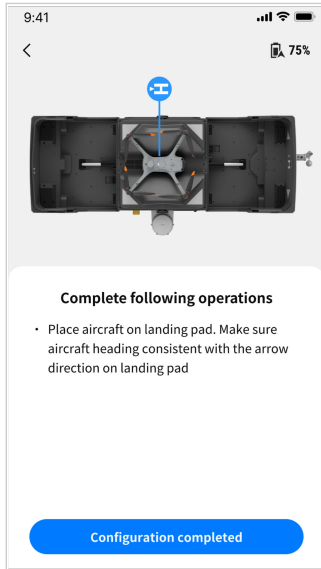
Make sure to calibrate the compass before using for the first time or after mounting/replacing the speaker. Otherwise, the aircraft positioning accuracy may be adversely affected.

Choose an open area for calibration. Place the aircraft 1.5 m away from the dock and 1.5 m above the ground, and then perform the compass calibration according to the prompts in the app.

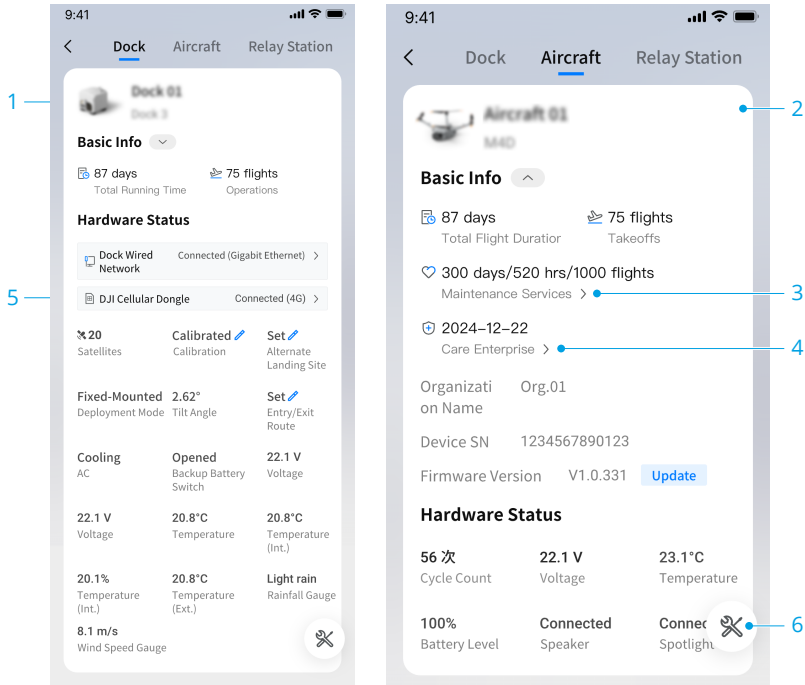


8.11 Completing the Configuration

Make sure the aircraft orientation is consistent with the arrow mark on the landing pad, and the aircraft is placed on the landing pad as shown in the diagram to complete the configuration.



Dock Onsite Debugging in the app provides the dock status, the aircraft status, and operations such as testing air conditioning, controlling the dock cover, and charging the aircraft.



1. Dock Status

   Displays information such as the running time, flights, air conditioner status, inside temperature or humidity, outside temperature, rainfall scale, and wind speed.

2. Aircraft Status

   Displays information such as battery temperature, and battery level.

3. Maintenance Service

   Provides historical flight data to help users determine if maintenance is required.

4. DJI Care Enterprise

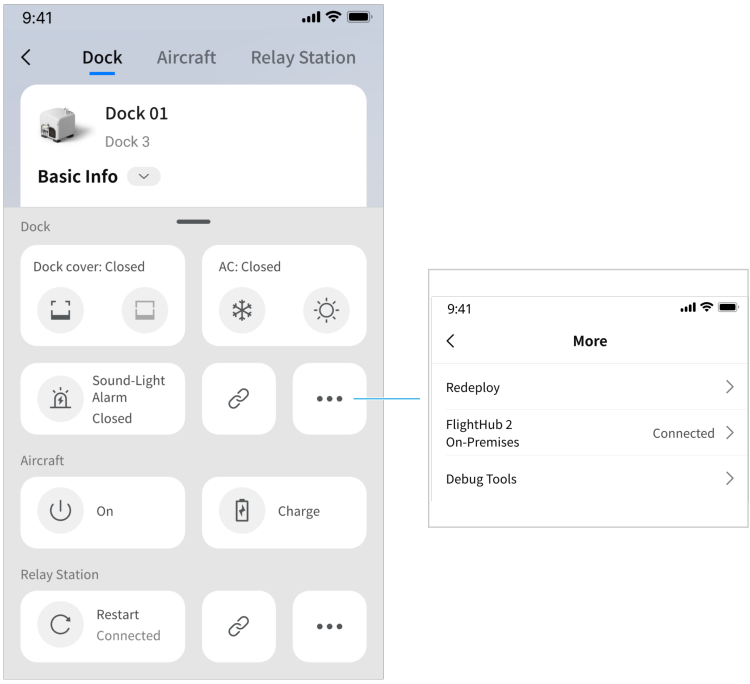
   Relevant information can be viewed if the device is bound to DJI Care.

5. Enhanced Transmission Service

   Installing the DJI Cellular Dongle 2 on the Aircraft. Supports 4G private settings.

6. Control Console

   Supports the control of the dock covers, aircraft battery charging status, and aircraft powering on and off. Tap the linking icon to link the dock to the other device. The dock and the relay linking information can be cleared in the Debug Tools.

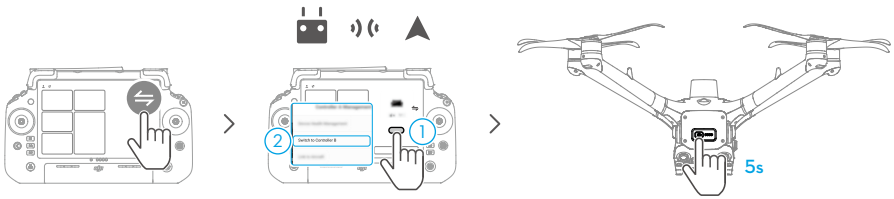


- The aircraft can be charged after it is linked with the dock. Make sure to keep the dock covers closed during charging and the landing pad surface clear of any metal objects.
- Make sure the dock is properly functioning before disconnecting the USB-C cable.

9 Automatic Operation Test

9.1 Connecting the Remote Controller as Controller B

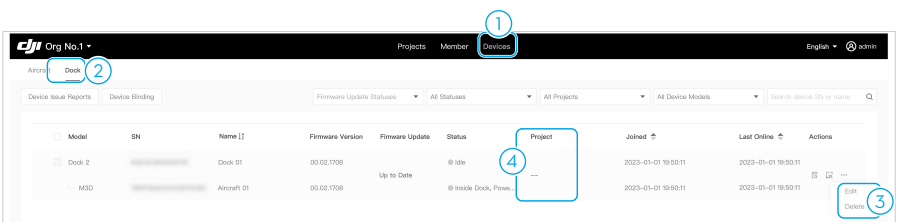
To ensure the safety of the flight test for the dock, the remote controller can be used to take control of the aircraft manually during flight, after connecting to the aircraft as controller B.



- Controller B is supported to be used when no relay station is deployed.
- Note that under C6 scope, the remote controller can only be used for emergency landing. Using the remote controller for emergency control and flight operations is out of C6 scope.

9.2 Binding the Dock to a Project

1. Enter the DJI FlightHub 2 and create a project.
2. Add the dock to the specified project in the drop down box of the project as per diagram.



For vehicle-mounted deployment, if mounting two docks on one vehicle, add all docks to the same project to ensure the Multi-Drone Takeoff/Landing performs properly.

9.3 Performing the Flight Task

- For vehicle-mounted deployment, make sure to calibrate the dock RTK and complete the in DJI FlightHub 2 before takeoff. Complete checking the inclination. DO NOT move the vehicle during the dock operation.
- Make sure to perform the flight task in sufficient lighting conditions. DO NOT perform the flight task in rainy weather or at night.

1. Click Trial Flight in Device Maintenance and a task plan will be automatically created. Complete the plan name, use the default settings and start the flight.
2. The dock cover will open and the aircraft will begin to perform the flight task.
3. Click **Project** > **Team** to view the operation status, warning information, and live view.
4. After completing the flight task, the aircraft will land to the dock and the dock cover will close.

- To use the trial flight, make sure the dock is bound to a project, the dock status is Idle, and use a project admin account.
- During the flight, observe whether the flight trajectory and the entry/exit route are consistent with expectations. If the entry/exit point needs to be adjusted, re-survey the site and re-import the entry/exit route.
- During the flight task, press the emergency stop button to test if the aircraft can fly to the alternate landing site.

10 Checklist before Leaving

Before leaving the site, be sure to check the following items.

- The HMS of DJI FlightHub 2 has no abnormal alarm.
- The screws of the wind speed gauge module and the RTK module are tightened securely.
- Check the wind speed gauge data displayed in DJI FlightHub 2 by rotating the wind speed gauge.
- The surface of the dock cover, rainfall gauge and landing pad are clear of dirt and foreign matter.
- The AC power switch in the electrical cabinet is turned on.
- Make sure the aircraft is correctly placed on the landing pad and the aircraft heading is aligned with the arrow mark.
- Make sure the covers of all the ports have been closed properly if not used.
- Make sure the screws are securely tightened with the provided tool if any official payloads are mounted on the aircraft.
- The lenses of the vision systems, gimbal cameras, glass of the infrared sensors, and auxiliary lights are clean.
- Dock cover closed
- The electrical cabinet door is closed and locked.
- The aircraft alternate landing site test has been completed.

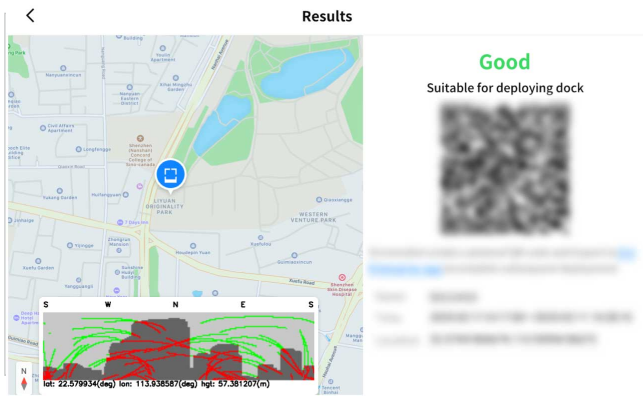
11 Appendix

11.1 Multi-Dock Task

To perform a multi-dock task, purchase multiple docks as needed. Every dock used to create a multi-dock task is required to perform an environmental survey, construction preparation, installation, configuration, and flight task testing. Make sure to read the following instructions for creating a multi-dock task carefully.

Construction Preparation - Environmental Survey

1. Environmental Requirements: When selecting the installation sites, the distance between each dock that is performing the multi-dock task should be less than 15 kilometers.
2. GNSS Signal Quality Survey: The dock site evaluation result needs to be Good for each dock.



- For the dock that is already in use and needs to add support to the multi-dock task, make sure to use the remote controller and aircraft that are updated to the latest firmware versions to re-perform the dock site evaluation and that the survey result is Good. If the survey result is not shown as Good, it is required to choose a new installation site for the dock.
- When using the multi-dock task, the flight process does not support the entry/exit route. DO NOT use the multi-dock task in the building-side deployment and communication tower deployment scenarios, otherwise the aircraft may not be able to return to the dock.

3. Performing a Flight Task: Select the installation site for the dock according to the actual operation needs. Plan the flight routes between the docks that need to perform a multi-dock task, and then perform the flight task. Make sure that no restricted zones or authorization zones affect the multi-dock task, and that there is no strong interference along the flight route.

Dock Installation and Connection - Mounting Dongle

To create a multi-dock task, it is recommended to install the aircraft with DJI Cellular Dongle 2.

Configuring the Dock Using DJI Enterprise App

1. Calibrating the Dock Location: For the single-dock that is already in use and needs to add support to the multi-dock task, make sure that the dock is updated to the latest firmware version and to re-calibrate the dock location. DO NOT use manual calibration, and makesure to use the same RTK signal source when calibrating multiple docks.
2. Setting the Alternative Landing Site: It is required to set the alternative landing site for each dock to perform a multi-dock task. It's ok to use the same aircraft or use different aircraft to set all of the alternate landing sites.
3. Connecting a Remote Controller as Remote Controller B: Remote controller B linking and flight control are unavailable during the multi-dock tasks.
4. Once the dock has connected to the relay, regardless of whether the relay station is online or offline, if a multi-dock task needs to be performed, make sure to connect to the dock and use DJI Enterprise App to clear the linking between the dock and relay.

Automatic Operation Test

1. Multi-dock task is unavailable when using the Trial Flight. To perform the multi-dock task, create the flight route task.
2. Multi-Dock Plans must be selected in the Task Plan Library in DJI FlightHub 2 before performing a multi-dock task. Docks that have performed a multi-dock task can also perform single-dock task simply by selecting Single-Dock Plans in the Task Plan Library.
3. During on-site flight tests, the aircraft may disconnect from the dock if remote controller B is linked to the aircraft. Make sure to re-link the aircraft and the dock before leaving the site.

4. If Emergency Landing or Alternate Landing is triggered during the flight task test, make sure to re-link the aircraft and the dock before leaving the site.

11.2 Expansion Port

The aircraft is equipped with an E-Port to support PSDK, enabling more feature development. Visit https://developer.dji.com for more information about SDK development and instructions.

Installation Requirements

- The device supports installing official accessories such as the speaker, the spotlight, and the obstacle sensing module. The detection range of the aircraft vision system and obstacle sensing performance of the aircraft will be limited. Fly with caution. Make sure to re-calibrate the aircraft compass after installing the speaker. Visit https://enterprise.dji.com/dock-3/downloads to view the accessory user guide and learn about how to use the product.
- Installing payloads will shorten the flight time and reduce the aircraft wind resistance. Make sure to install the payload as needed. Refer to the accessory user guide for more information.
- Make sure to securely installed the payload and tightened all the screws. Use the included screwdriver to tighten the screws again after installation. Loose installation may affect the overall water-resistant performance or even cause the payload from falling during flight, which will seriously affect flight safety.

Third-Party Payload Requirements

- Installing a third-party payload may affect the aircraft performance (such as video transmission, GNSS and obstacle sensing) and flight safety. It is recommended to use official payloads or the payloads in the Enterprise Ecosystem Solution Catalogue. The payload size must meet Payload Development Criteria. Visit https://developer.dji.com for more information.
- Make sure that the total weight of the aircraft does not exceed the maximum takeoff weight.
- The third-party payload should have a protection rating equal to or higher than that of the aircraft in order not to reduce the working stability or the service life of the aircraft. It is recommended to test the water-resistant performance with the payload installed. If water leaks into the aircraft, it will seriously affect flight safety.

- After installing the third-party payload, perform a stability test to ensure that there will be no interface disconnection, aircraft GNSS satellite search affected, video transmission performance degraded, or incorrect obstacle sensing.

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DJI SUPPORT

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