LiGrip O2 Airborne Kit User Manual

Compatible with DJI Matrice 300/350

1.Airborne Kit Components

The airborne kit includes: Shock-Reducing Gimbal*1, Skyport Adapter*1, GNSS Antenna (with feeder cable)*1, GNSS Adapter Module*1, Installation Toolkit (screws, multiple screwdrivers), etc.

<table>
<tr>
<td>
① Shock-Reducing Gimbal</td>
<td>
② Skyport Adapter</td>
</tr>
<tr>
<td>
③ GNSS Antenna</td>
<td>
④ Antenna Adapter Module</td>
</tr>
</table>

*Other accessories: including a matched installation toolkit (screws, multiple screwdrivers);

*Supported Devices: DJI M300 and M350 drones.

2.Data Collection and Precautions

The device can be controlled using the GreenValley APP during data collection operations. Please refer to the product user manual for the data collection workflow.



Example of Data Collection Operation

Additional Precautions:

① Power on the drone first, then power on the device;

② The device is powered by the drone; a battery level reading of 0 is normal;

③ When creating a project for data collection, select airborne mode for the device configuration;

④ If GNSS processing is required, set up the base station before starting data collection. RTK mode is not recommended in airborne mode;

⑤ Wait for the LiDAR device to complete initialization on the ground before takeoff and following the planned flight route;

⑥ When the drone moves away, the APP indicates a disconnection, which is normal. At this time, the phone and device cannot establish a stable connection.

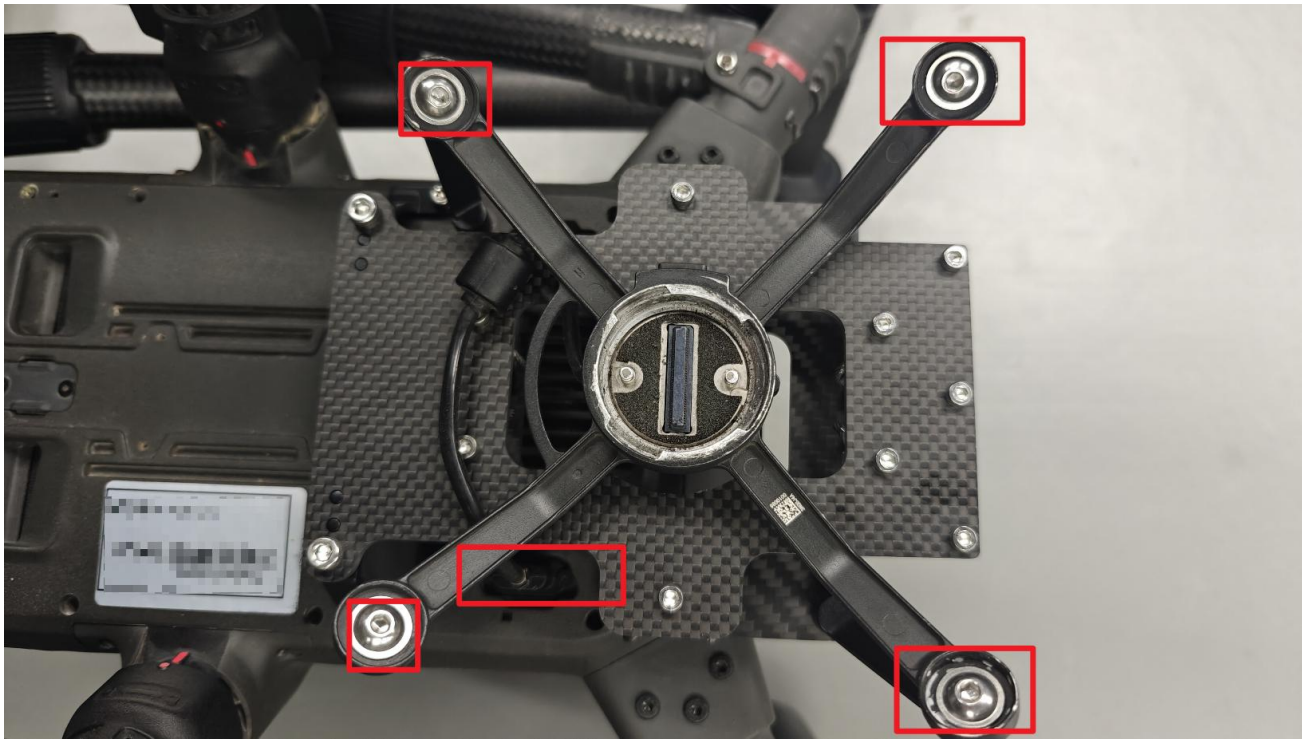
3.Airborne Kit Installation

3.1.Replacing the Shock-Reducing Gimbal

Replacing the shock-reducing gimbal consists of three steps: ① Remove the mounting plate; ② Replace the airborne kit gimbal; ③ Install the mounting plate.

① Remove the Mounting Plate

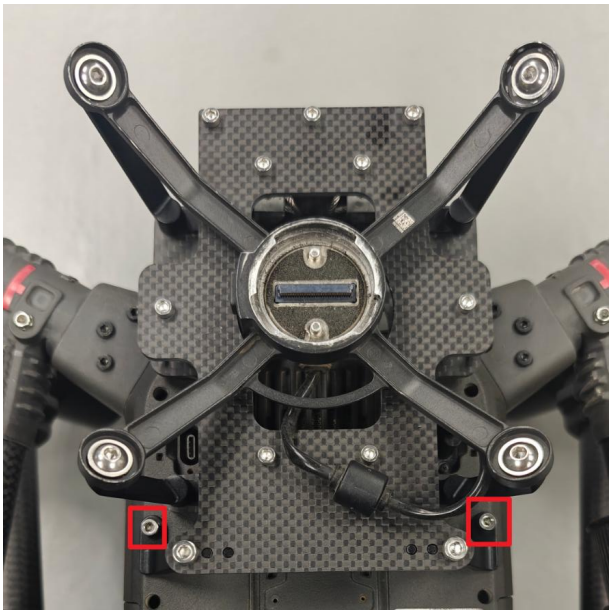
The mounting plate is connected to the shock-reducing gimbal with four screws and to the drone via a Type-C communication cable. First, unscrew the four corner screws, then remove the small screw at the communication cable interface to remove the mounting plate. The image below shows the bottom view of the drone.



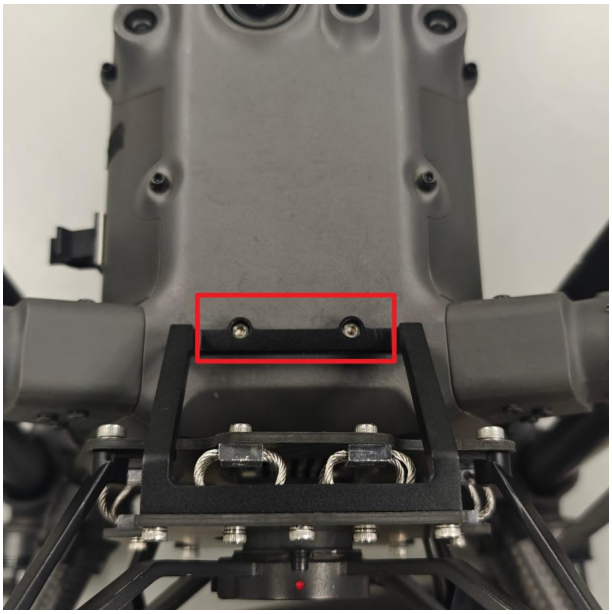
Bottom Screw Diagram

② Replace Shock-Reducing Gimbal

The shock-reducing gimbal is attached to the drone with two screws on the front and two screws on the bottom. Remove these four screws to replace the airborne kit's shock-reducing gimbal, then re-tighten the screws.



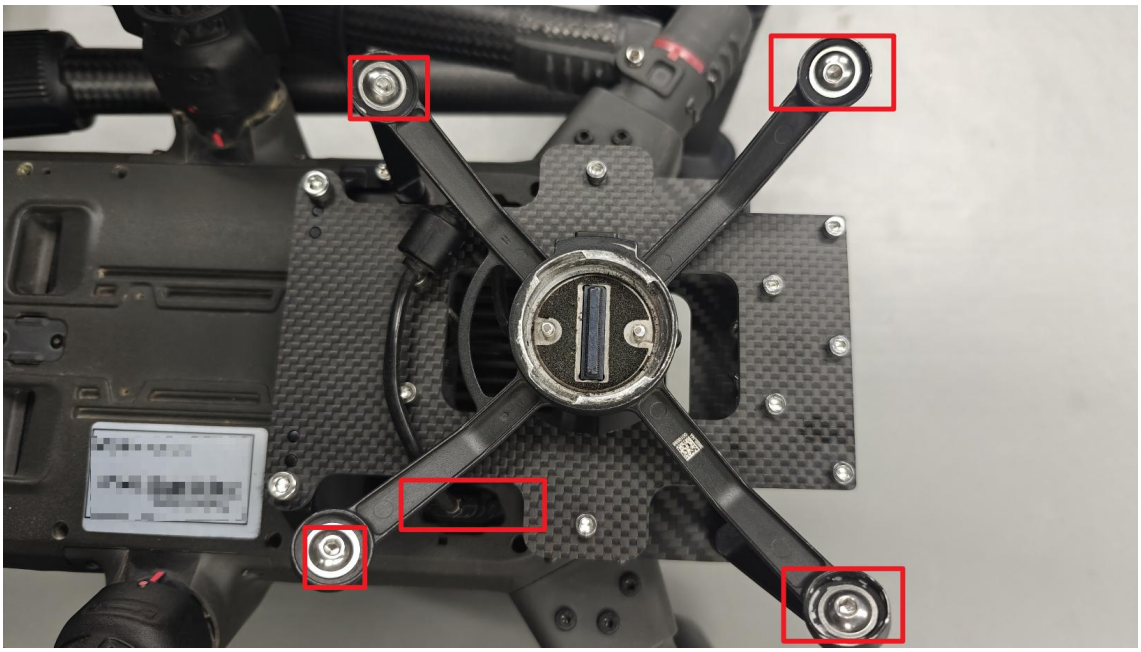
Bottom Screw Position Diagram



Front Screw Position Diagram

③ Install Mounting Plate

Install the mounting plate by reversing the removal procedure. After tightening the four screws securing the gimbal to the mounting plate, connect the mounting plate's Type-C communication cable and tighten the cable screws.



3.2.Replace GNSS Module

Unscrew the three original GNSS fixing screws on the back of the device, remove the antenna, install the airborne kit antenna adapter module, and secure it with screws. Ensure correct module orientation.



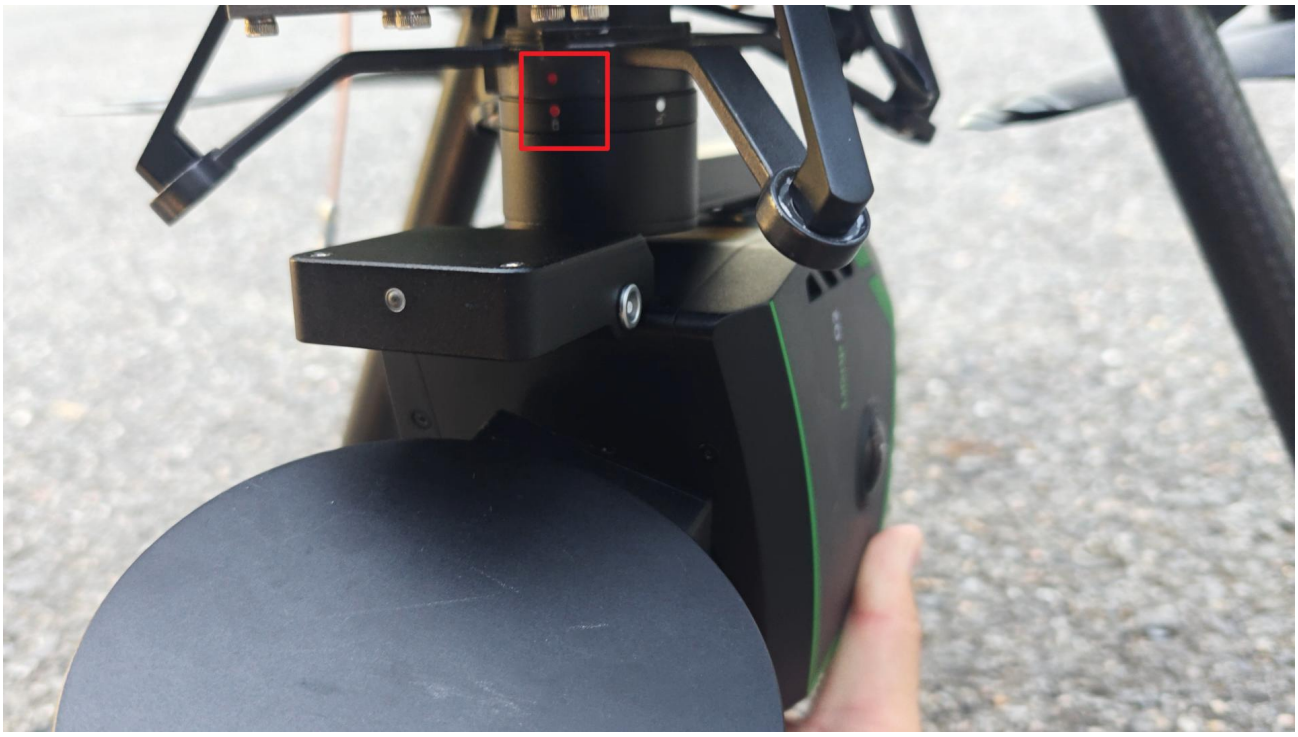
3.3.Install the Skyport Adapter

Mount the Skyport adapter onto the device via the device power slot, then close the locking handle and tighten the fixed knob to secure it.



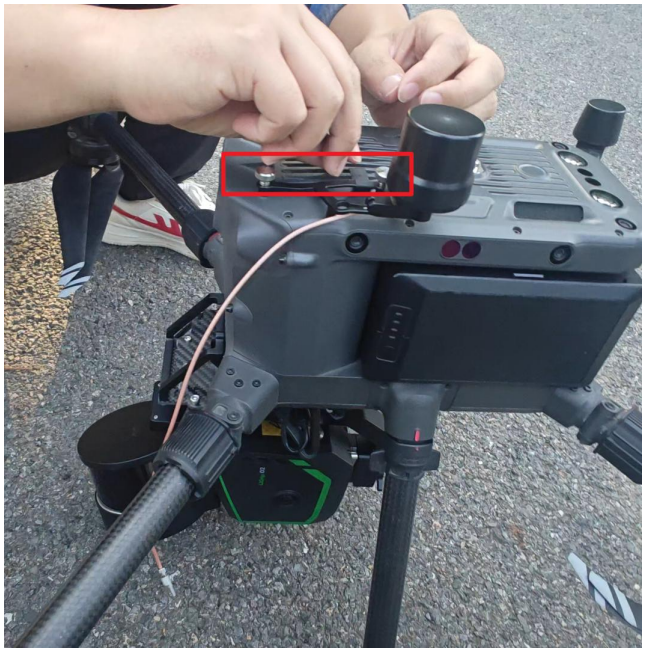
3.4.Install the device onto the drone

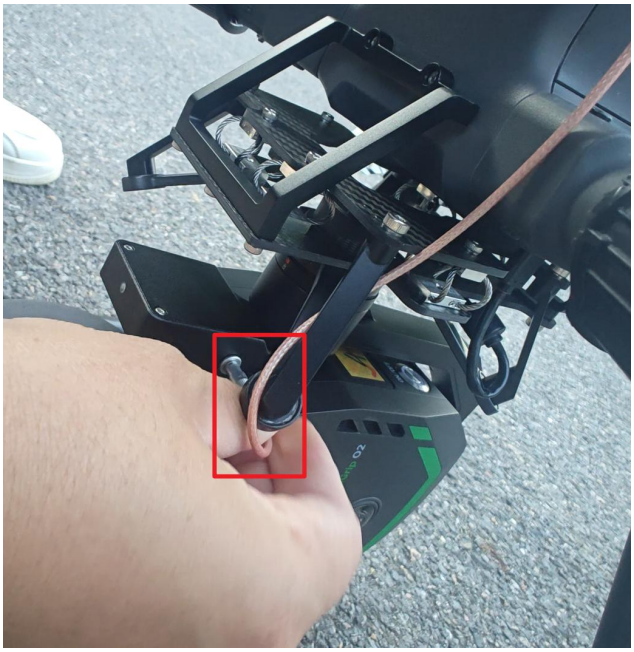
Align the white dot on the Skyport adapter with the red dot on the mount power port, insert, then rotate until the red dots align.



3.5.Install the GNSS Antenna

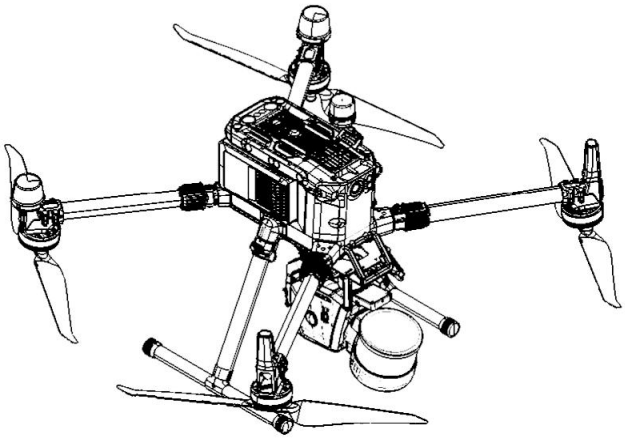
Secure the GNSS antenna with screws, ensuring the GNSS antenna module remains on the middle left side of the device body without changing its position. Insert the GNSS feeder cable into the side port of the antenna adapter module. This completes the airborne kit installation.





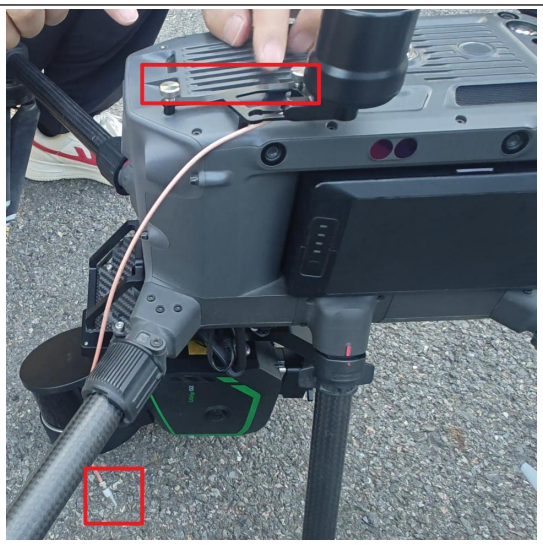
Installation Completion Diagram:

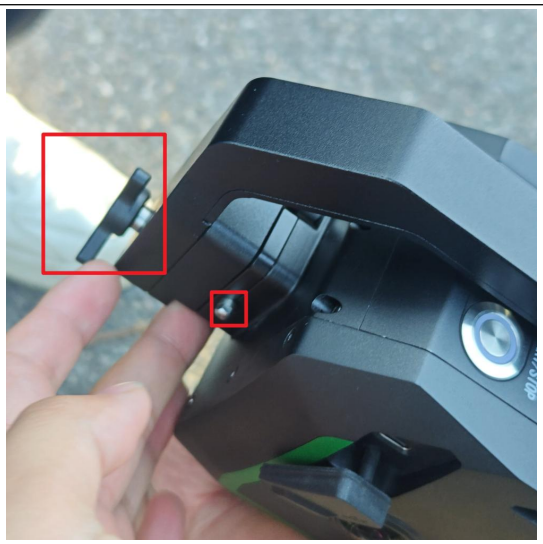




4.Airborne Kit Removal

Removal is performed in the reverse order of installation and consists of the following four steps: ① Remove the GNSS Antenna; ② Detach the device from the drone; ③ Disconnect the Skyport Adapter from the main device; ④ Remove the GNSS Adapter Module.

	
① Loosen the feeder cable and fixing screws, then remove the GNSS Antenna.	② Rotate the main device until the white dot aligns with the red dot, then remove the device.

	
③ Loosen the fixed knob, open the locking handle, press the anti-drop button, and slide to separate the main device.	④ Unscrew the GNSS Adapter Module screws and remove the adapter module.

*The shock-reducing gimbal and damper plate do not require removal. They feature a universal design compatible with the drone and can be reused directly for subsequent operations.