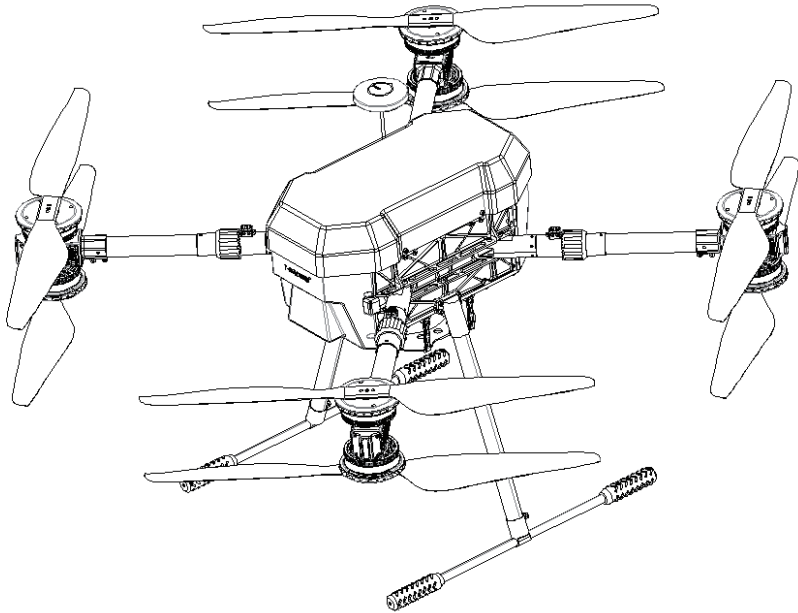


# MX860

Long Flight Time Flight Platform



## PRODUCT INTRODUCTION

Being a platform of ultra-light, long endurance and multiple applications, this aircraft can be employed for various missions with corresponding equipment including aerial photography, transportation, urban management, mapping and surveying, meteorological monitoring, surveillance and geo-exploration etc.

The frame is made of quality aviation aluminum and carbon fiber for strength and achieve and extreme lightweight. Foldable arms and the landing gear and propeller with quick release for portability and quick assembly.

## TECHNICAL FEATURE

1. Ultra-light materials and overall structure optimization to obtain longer flight time.
2. Low center of gravity design makes the aircraft more reliable.
3. Strengthen the overall protection capacity and ease to use.
4. The arms and landing gear can be folded and disassembled quickly.
5. Chute design for easy installation of battery.
6. No tool required. Only 3 minutes to fly in the outdoor.

## TECHNICAL PARAMETERS

Wheelbase: 860 mm

Folding Size: 433mm\*413.5mm\*250mm

Flight Weight: 9.96kg(With Batteries, Without Payload)

Payload: 9kg

Max Take-off Weight: 19.96kg

Maximum Ascent Speed: 5m/s

Maximum Descending Speed: 3m/s

Maximum Horizontal Flight Speed: 20m/s

GPS Hover Accuracy: Vertical:  $\pm 0.2\text{m}$ ; Horizontal:  $\pm 0.1\text{m}$  (Without RTK)

Hover Time: 3kg $\geq$ 49mins; 5kg $\geq$ 40mins

Protection: IP52

Maximum Tolerable Wind Speed: 14m/s

Working Temperature:  $-15^{\circ}\text{C}\sim 50^{\circ}\text{C}$

## DISCLAIMER

The use of this product has a certain operating difficulty and danger, prohibited under the age of 18 to use. Keep out of reach of children. Please be careful when operating this product in places with children.

Before using this product, please read this document carefully to understand your legitimate rights and interests, responsibilities and safety instructions; Otherwise, it may bring about property loss, safety accident and hidden danger of personal safety. Once you use this product, you shall be deemed to have understood, admit and accepted all terms and contents of this statement. User undertakes to be responsible for his or her actions and all the consequences arising therefrom. User agrees to use the product only for legitimate purposes and agrees to these Terms and other relevant policies and guidelines.

T-DRONES assumes no responsibility for any losses arising from users' failure to use the products as per this Manual.

To the extent permitted by law, T-DRONES is not liable for any indirect, punitive or incidental damages, including losses suffered by you as a result of your purchase, use or inability to use this Product.

T-DRONES shall not be liable for any third party damage to persons or property caused by flight accidents as a result of thorough understanding of the relevant specifications and careful use of this device. T-DRONES reserves the right of final interpretation of the above terms to the extent permitted by laws and regulations. T-DRONES reserves the right to update, modify, or terminate the distribution of the contents of this Manual and of this Disclaimer without prior notice.

## PRECAUTIONS

### Unboxing warning:

For the safety and steady operation of drones during assembly and calibration, please make sure all parameters are at the proper values before takeoff.

### Inspections before takeoff:

Please carry out proper debugging and checks on every part of the drone. Any minor neglect may result in severe damages or accidents.

**Frame check:**

1. Before power on the system, please check on the appearance and condition of the mechanical parts and propellers. If there are stains and cracks on the propellers, please replace them with new ones. Make sure: the rotation direction of the propellers are correct; propellers are tightened; no interference in rotation when turning them by hand.

2. Please make sure that: the motor installation is tight. If it is not loose, stop flying and fix the motor installation with appropriate tools; there is no jamming with the motor when rotated by hand; the motor coil is clean; and there is no obvious bend with the shaft.

3. Please make sure the frame is firm and the screws are not loose.

4. Please make sure the battery is installed correctly, and it is sufficiently charged.

5. Please make sure the center of gravity of the UAV is correct.

**Ground station check:**

1. The ground station is paired with the drone. First plug in the negative pole of the power port, click pairing and plug in the positive pole, ground station will display pairing.

2. To avoid damage, please make sure if series or parallel circuits are required when connecting batteries.

3. Unlock and pull the throttle slightly to check if the motors rotate normally after pairing.

4. Check on all the electronic devices and make sure they works normally.

5. Calibrate the magnetic compass as per the manual.

6. Test flight to see if the aircraft proceed as per the preset route or if the route requires any adjustment.

7. During the test flight, it is necessary to observe the status of the UAV lights and the number of GPS stars displayed by the ground station in advance to make a timely prediction.

8. Make sure the remote control distance of the flight is six to seven meters on the left and right sides of the UAV. Avoid standing directly behind the tail of the UAV.

9. After completion, power on and let GPS adapt to the weather, so that the UAV can adapt to the weather during operation and fly.

10. Before take-off, the number of GPS stars must be 17 or more, and make sure the surrounding conditions are favourable for take-off.

**In flight:**

1. The pilot must always pay attention to the UAV's attitude, flight time, aircraft position and other important information.
2. When flying at a distance, the security person is required to report the real-time status of the UAV through the intercom.
3. It is necessary to ensure that the UAV has enough power to return safely.
4. When flying beyond the visual range, it is necessary to closely monitor the UAV attitude, altitude, speed, battery voltage, number of GPS satellites and other important information displayed in the ground station.
5. After takeoff, pay attention to the flight status of the UAV, grasp the flight data of the UAV in real time, and ensure that the flight data indicators are in good condition.
6. If the UAV encounters a major failure and inevitably crashes, it must first ensure the safety of personnel.

**After landing:**

1. After landing, ensure that the remote control is locked, and then cut off the power supply of the UAV.
2. Check the battery power. Inspect UAV appearance and equipment loaded.
3. Tidy up the equipment after the demonstration.

**Precautions:**

1. When debugging the UAV, it is necessary to ensure that the propeller is not installed on the motor (it is forbidden to debug the aircraft when the propeller is installed on the motor, otherwise accidents may occur).
2. Close takeoff is strictly prohibited. Keep a distance of more than 5 meters from the UAV when taking off.
3. It is strictly prohibited to suddenly push the throttle to take off to avoid uncontrollable accident.
4. It is strictly forbidden for non-test personnel to move the remote control to avoid accidents caused by misoperation.
5. Under NO circumstances should anyone touch the UAV in landing.
6. It is strictly prohibited to pick up the UAV when the propellers are rotating after the aircraft lands.

## MX860 ASSEMBLY

### 1. Content (Figure 1)

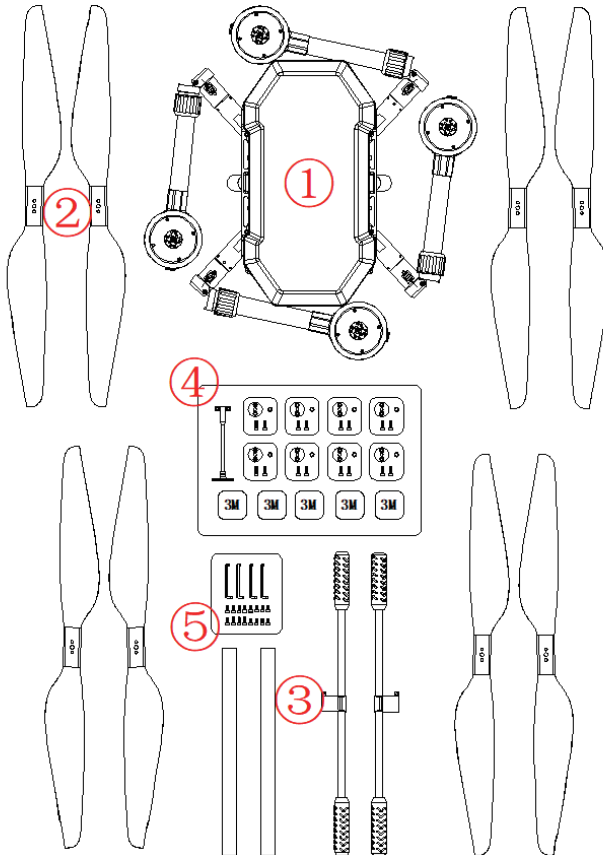


Figure 1 (Drone Parts)

- ① Body: 1 pc
- ② Propeller: 4 pairs
- ③ Landing Gear: 2 sets
- ④ Motor Accessories: 1 bag (GPS stick\*1, 3M tape\*5, motor accessories\*8)
- ⑤ Gimbal Parts: 1 bag (gimbal hook\*4, M3\*5 screw\*4, M3\*6 screw\*4, M3\*8 screw\*4)

2. Take out the frame and spread (Figure 2)

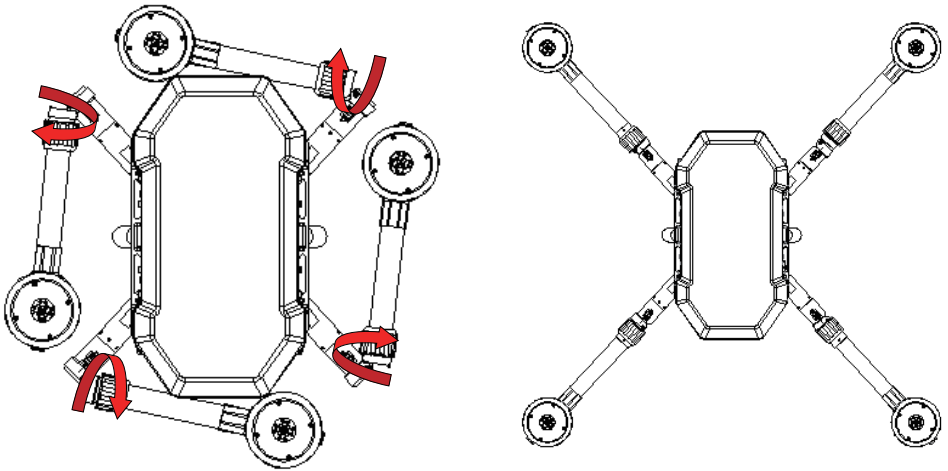


Figure 2 (Spread The Arms)

3. Spread the arms to 180 degrees and turn the folding rings as per the instruction and secure the arms (Figure 3) (Make sure the arms are lined up with the frame, otherwise, they might get stuck and cause damage to the thread. )

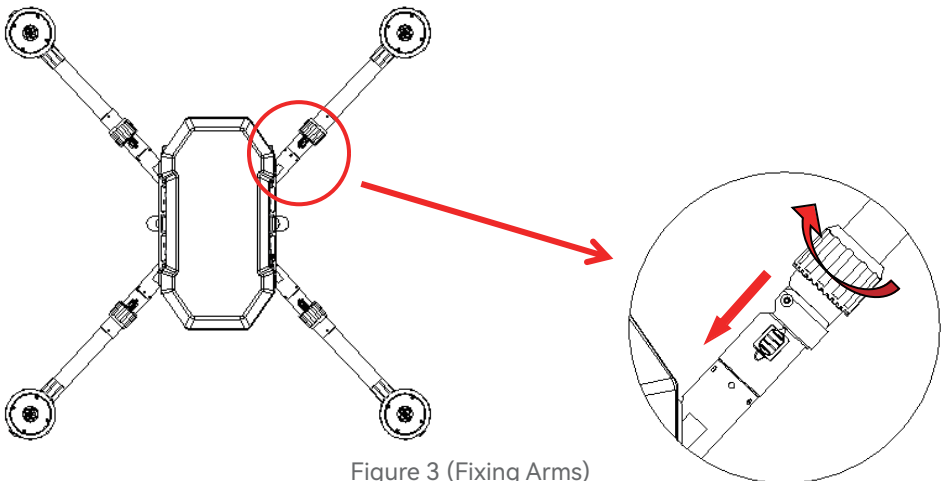


Figure 3 (Fixing Arms)

4. Assemble the landings gears to the frame as per Figure 4

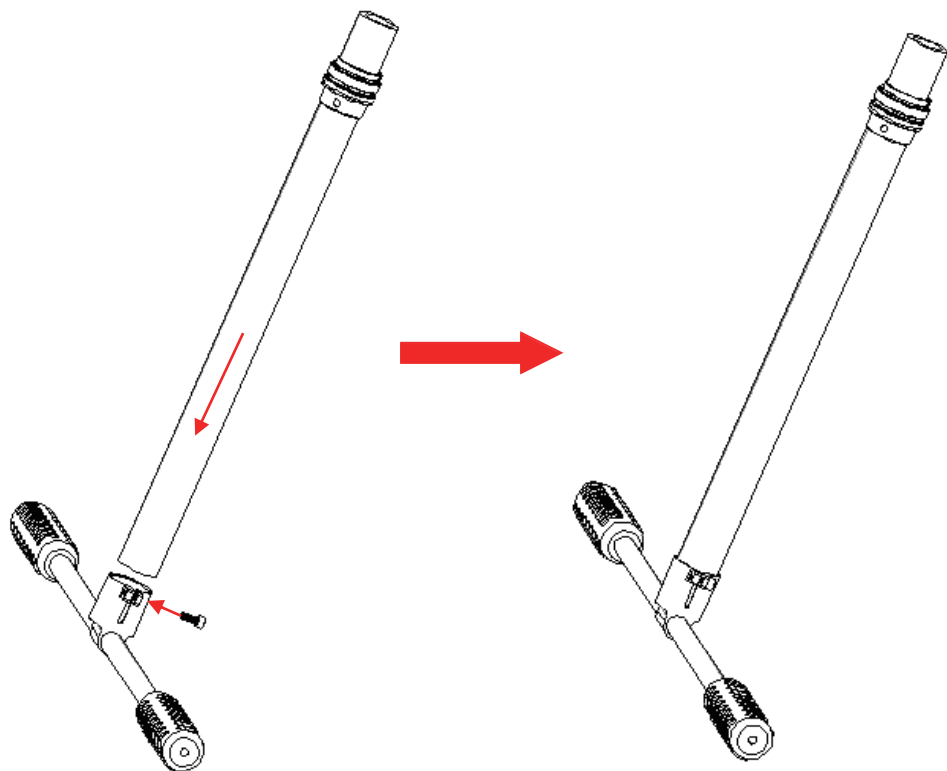


Figure 4 (Landing Gears Assembly)



5. Attach the landings gears to the frame as per Figure 5. Assembly completes as shown Figure 6 (Please be aware of the limiting structure on the landing gear, and make sure they are in place before secure the rings. )

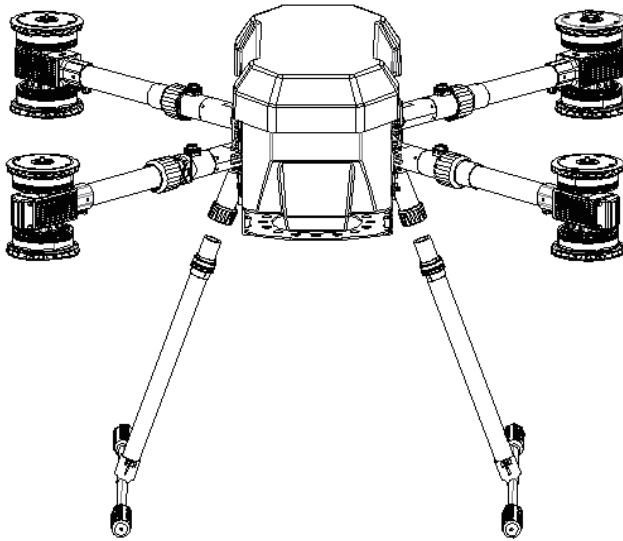


Figure 5 (Attach The Landing Gears)

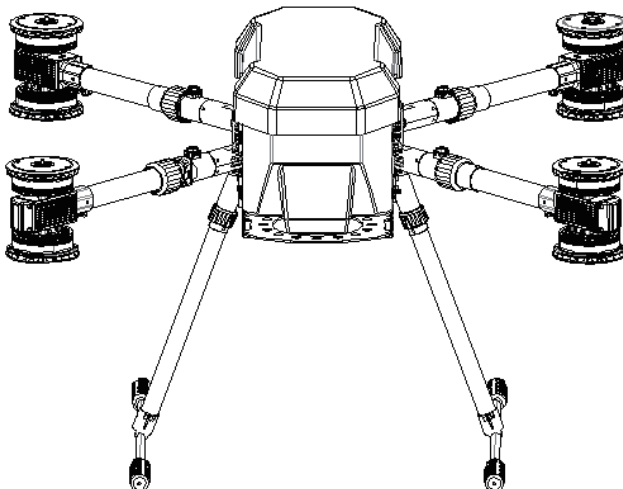


Figure 6 (Landing Gears Assembled)

## FC INSTALLATION (PIXHAWK)

1. Remove the upper cover of the frame (Figure 7)

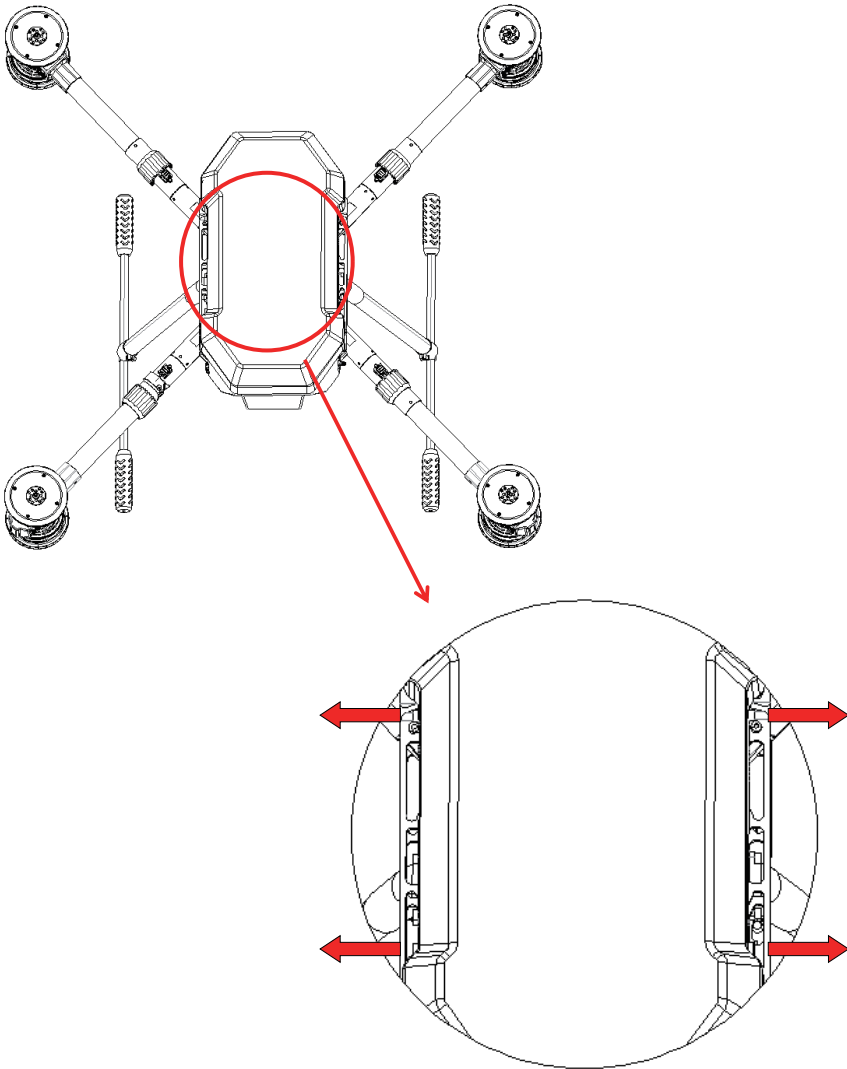


Figure 7 (Remove The Cover)

2. Install the flight control components according to Figure8

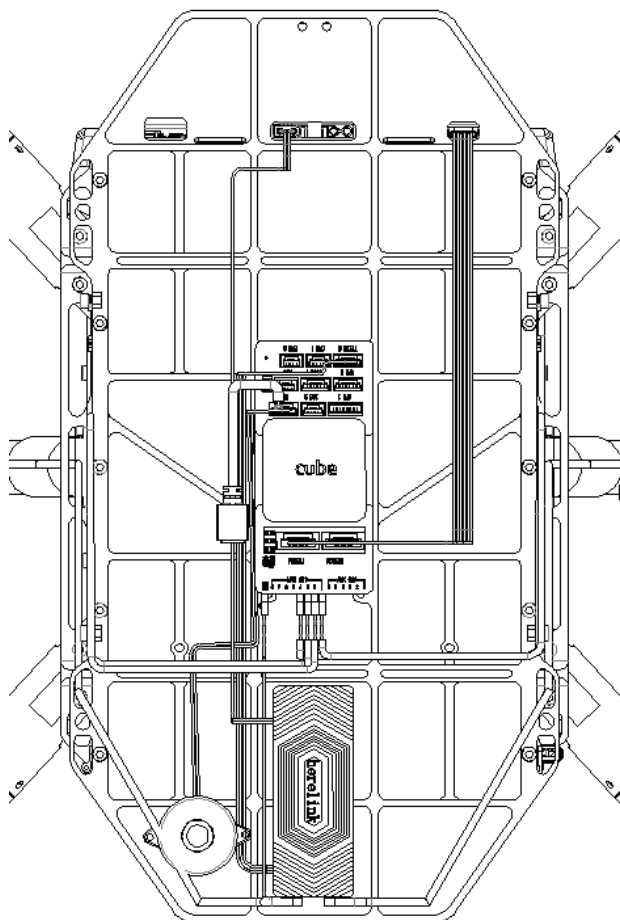


Figure 8 (Flight Control Installation)

- Use the 3M tape to fix the video transmission to the upper the body (figure 8), and the same to fix the antenna to the landing gear, as shown in (figure 9)

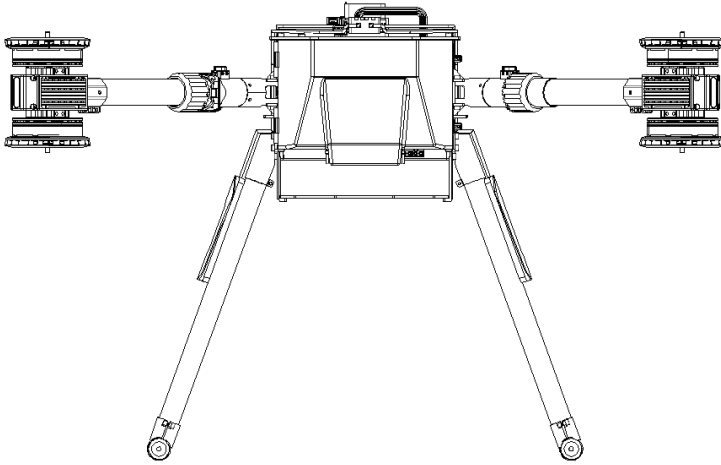


Figure 9 (Video Transmission And Antenna Fixing)

- Use the 3M tape to fix GPS up to GPS holder, and fix to body (figure 10)

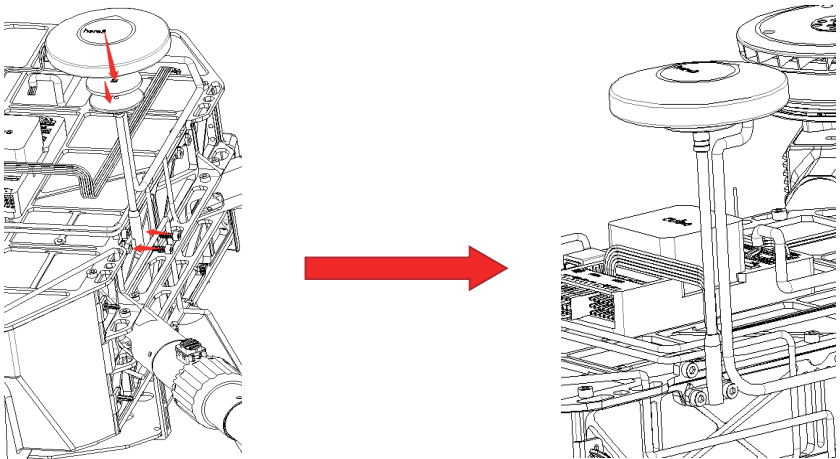


Figure 10 (GPS Installation)

5. After the installation and debugging the flight control, install the propeller according to Figure 11. completed in Figure 12

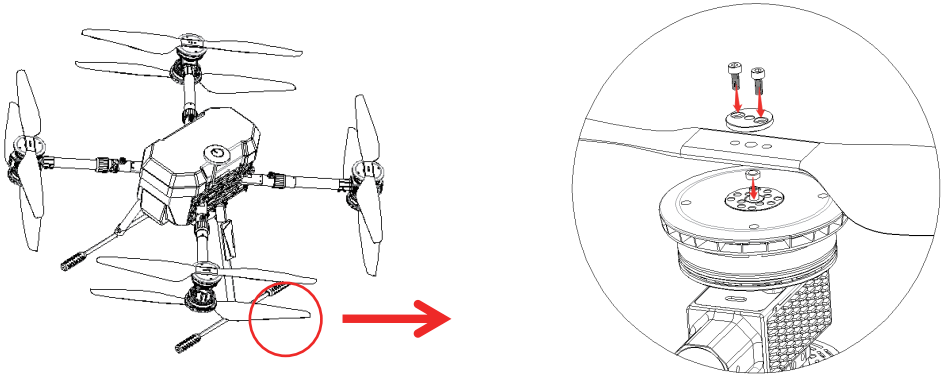


Figure 11 (Mounting Propellers)

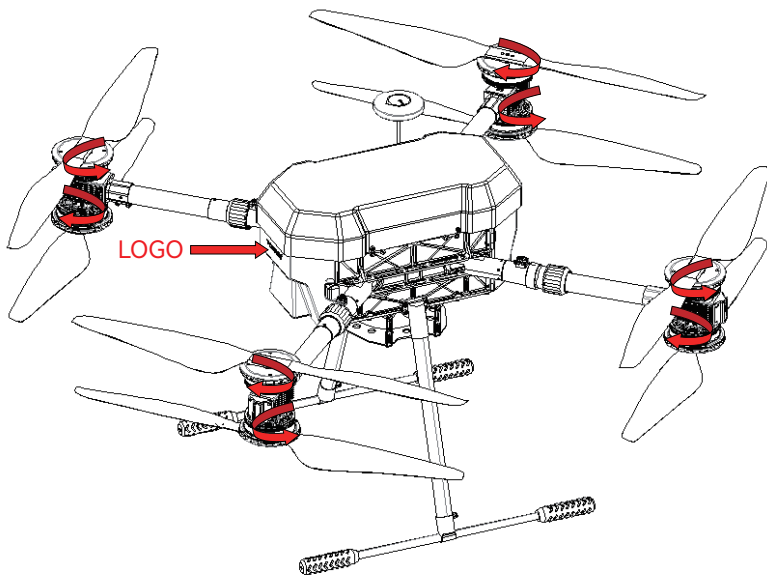


Figure 12 (Installation Complete)

## COMPONENTS

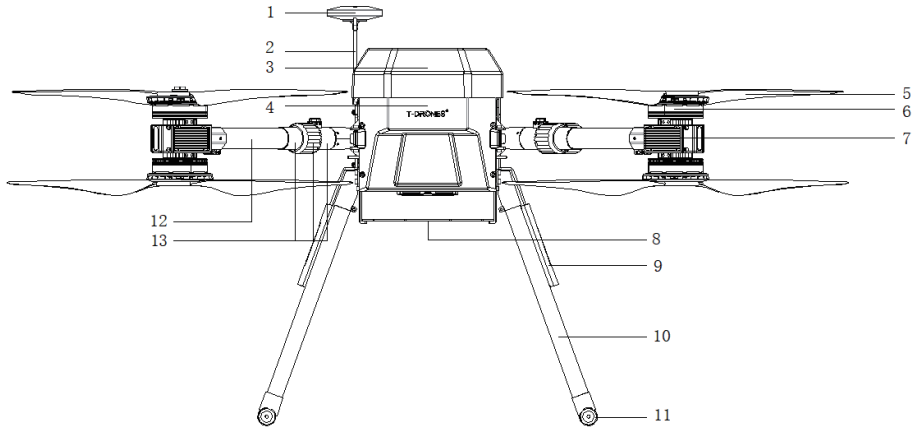


Figure 13 (Front View Sizes)

- ① GPS
- ② GPS Holder
- ③ Body Shell
- ④ PDB Cover
- ⑤ Propeller
- ⑥ Motor
- ⑦ Motor Holder
- ⑧ Mounting Board
- ⑨ Data&video Transmission
- ⑩ Landing Gear Boom
- ⑪ Damping Sleeve
- ⑫ Arms
- ⑬ Folding Parts

## DIMENSIONS

### 1. Wheelbase (Figure 14)

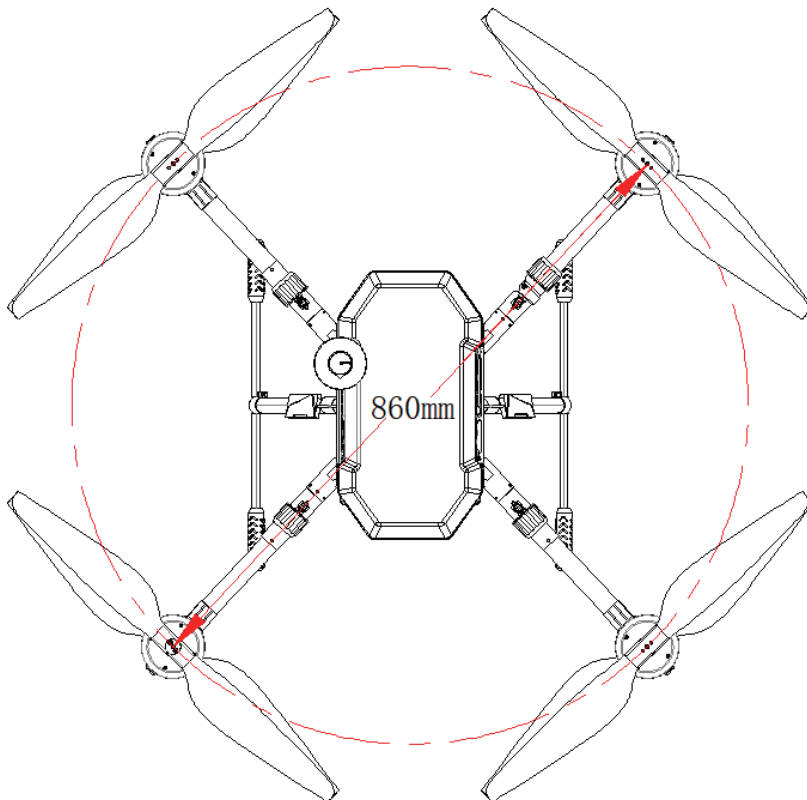


Figure 14 (Top View)

## 2. Other sizes (Figure 15 &amp; 16)

- ① FC installation height: 56mm
- ② Battery case: 154mm\*98mm
- ③ Inner size for gimbal: 34mm
- ④ Mounting height for gimbal: 252mm
- ⑤ Height of MX860: 511mm

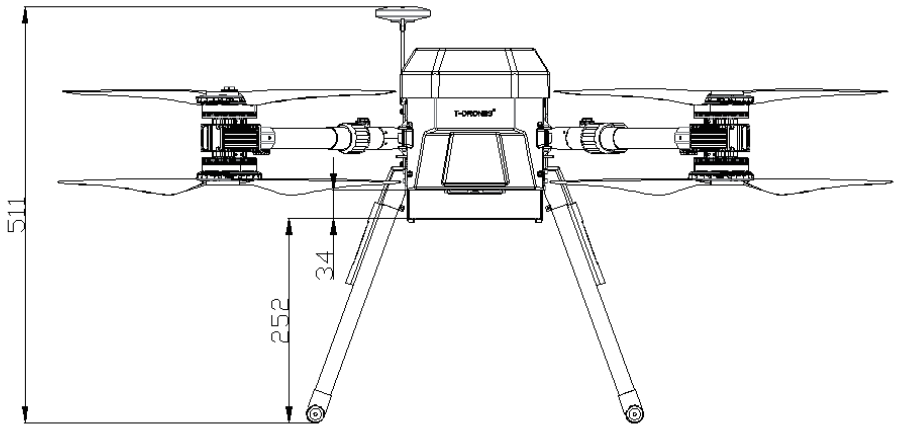


Figure 15 (Front View)

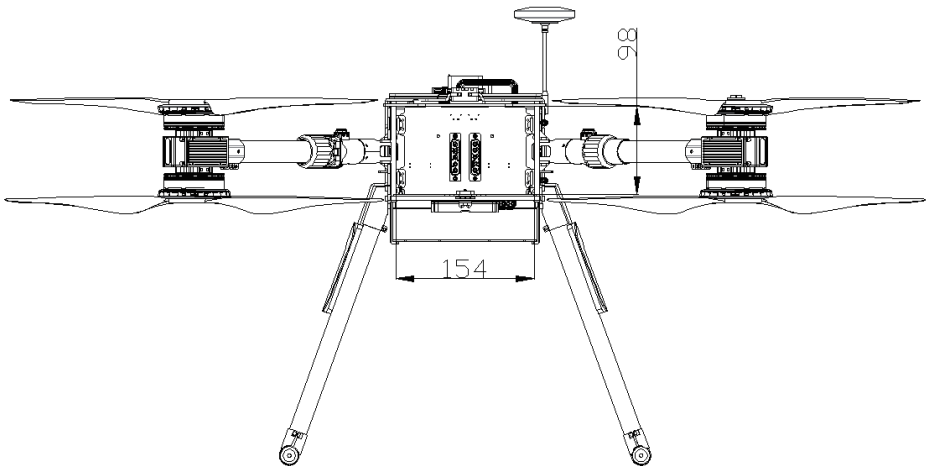


Figure 16 (Back View)