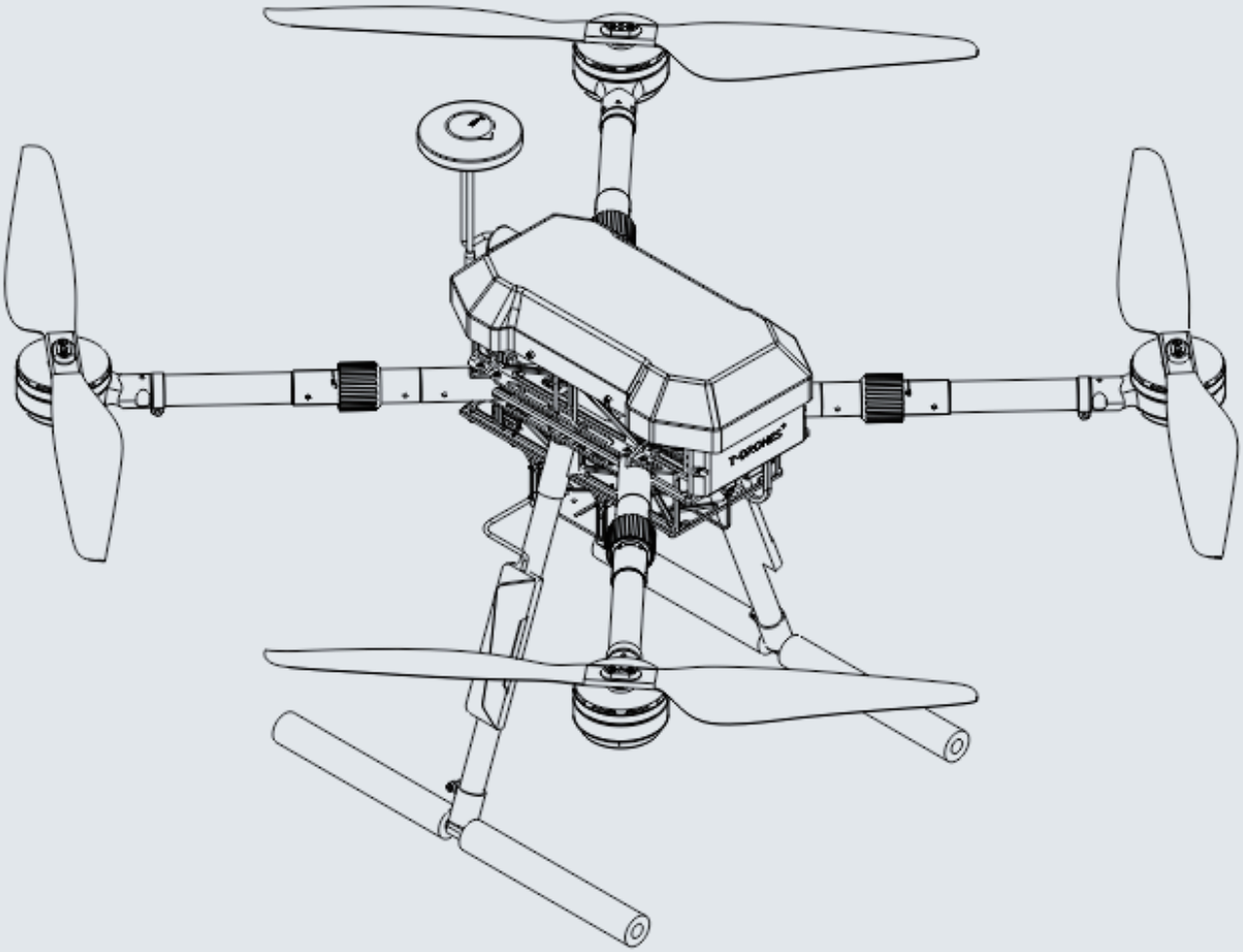
M690B Folding Version

2021-06

USER MANUAL V1.2



TECHNICAL SUPPORT

01 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, mapping and surveying, meteorological monitoring, surveillance, military supervision and geoexploration etc. Custom solutions are also available.

02 FEATURES

- Ultra–light materials and structural optimization to obtain longer flight time.
- The low center of gravity design makes the aircraft more reliable.
- The special–shaped design of the arm root makes the main structure safer and more reliable.
- The arms and landing gears can be folded and disassembled quickly.
- Chute design for easy installation of battery.
- No tools required. Only 10 minutes to get ready to fly.

03 SPECIFICATIONS

Wheelbase	710mm	Folding	CW
AUW	4.68kg	Payload	1kg
Flight Time	0.5kg Payload ⩾ 71mins; 1kg Payload ⩾ 60mins	Flight Range	10km
Flight Altitude	100~1000m (Typical); 6500m asl. (Max.)	Flight Speed	10~35km/h (Typical); 65km/h (Max.)
Wind Resistance Level	Force 5	Propulsion System	T–MOTOR 5505 KV350 & 45A IESC & NS18*6.1
Battery	New solid 6S 22Ah	FC	Compatible with A3, PIX and Micropilot

04 DISCLAIMER

Due to the difficulty and danger in operation of this product, it is prohibited for people under 18 years old to use it. Please do keep out of children's reach, and be cautious when operating this product in places where children are present.

Before using this product, please read this document carefully to understand your legal rights, responsibilities and safety instructions; otherwise, property losses, safety accidents and personal safety hazards may be caused. Once you use this product, it is deemed that you have understood, approved and accepted all the terms of this statement. The user is responsible for his/her actions and all consequences arising therefrom. The user promises to use this product only for legitimate purposes, and agrees to the terms and other related policies and guidelines.

T–DRONES shall not be responsible for any losses caused by users not using the product in accordance with this manual.

Within the framework permitted by the law, T–DRONES shall not be liable for any indirect, punitive, or incidental damages (including the losses suffered by you due to the purchase, use or inability to use this product).

When using this product, it is necessary to fully understand the relevant specifications and regulations, and to use it with caution. T–DRONES shall not be liable for any third–party personal or property damage

caused by a flight accident.T–DRONES has the final right to interpret the above permitted by laws and regulations. T–DRONES reserves the right to update, revise or terminate this manual and the disclaimer without prior notice.

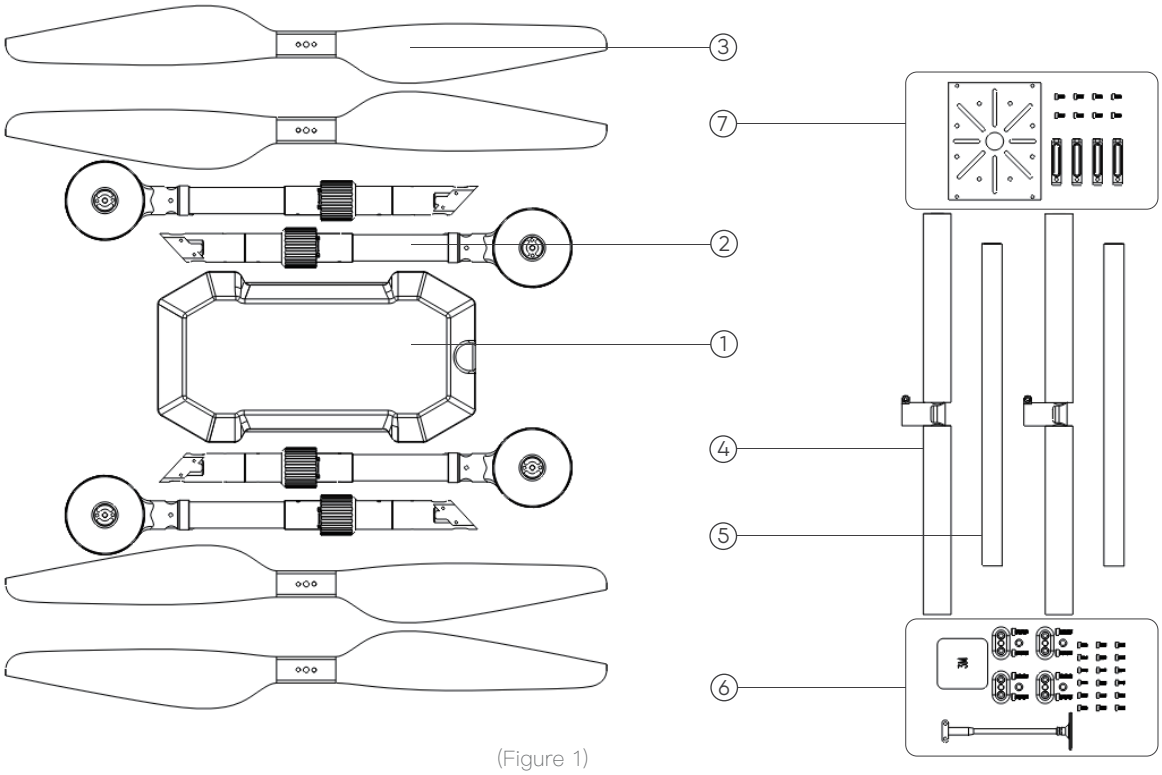
05 PRECAUTIONS

Rotating props on operating M690B can cause serious injuries. Please make sure to keep a safe distance from the aircraft.

- ALWAYS make sure to stay away from insecurity factors, such as obstacles, people and power lines.
- NEVER get close to rotating motors and props to avoid injuries.
- NEVER overload the aircraft.
- ALWAYS make sure that motors and props are correctly mounted.
- ALWAYS make sure all parts are in good condition before flying.
- ALWAYS make sure the aircraft is well balanced if you are to fly without payload.

06 ASSEMBLY

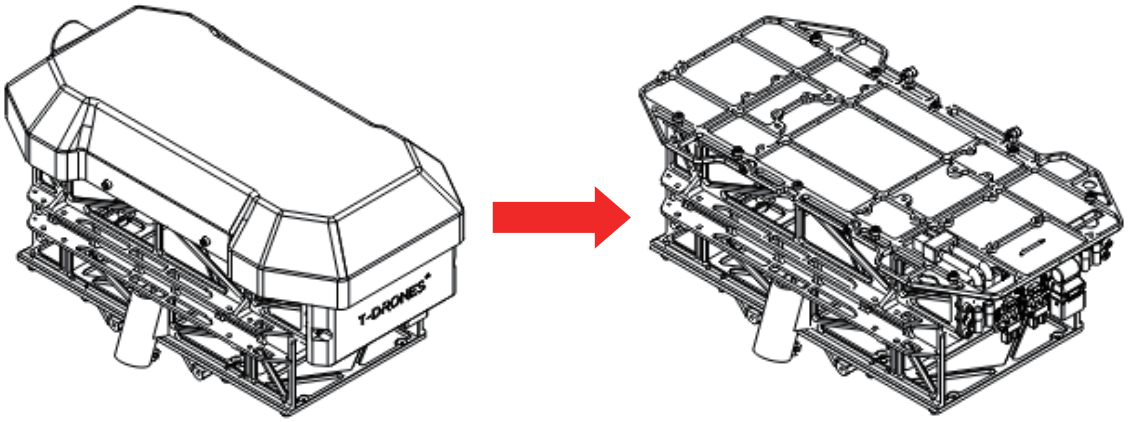
1.Content (Figure 1)



(Figure 1)

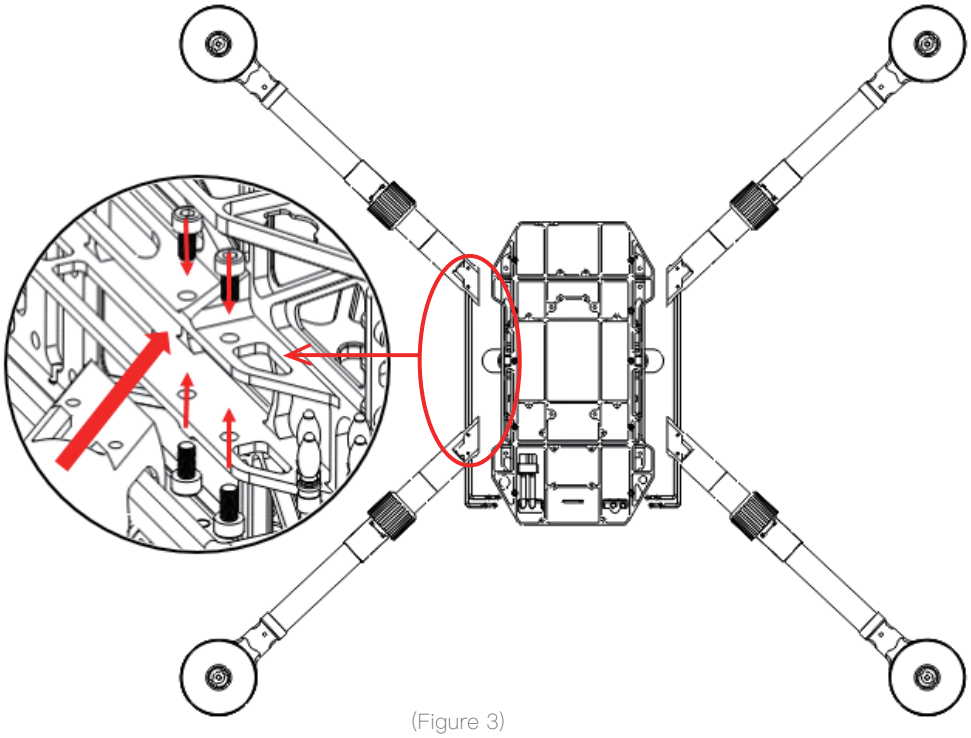
① Body: 1PC
② Arm: 4 PCS
③ Propeller: 2 Pairs
④ Landing gear parts: 2 sets
⑤ Landing gear tube: 2 pcs
⑥ Motor accessories: 1 bag
⑦ Gimbal parts: 1 bag

2.Remove the body Shell and PCB Cover. (Figure 2)



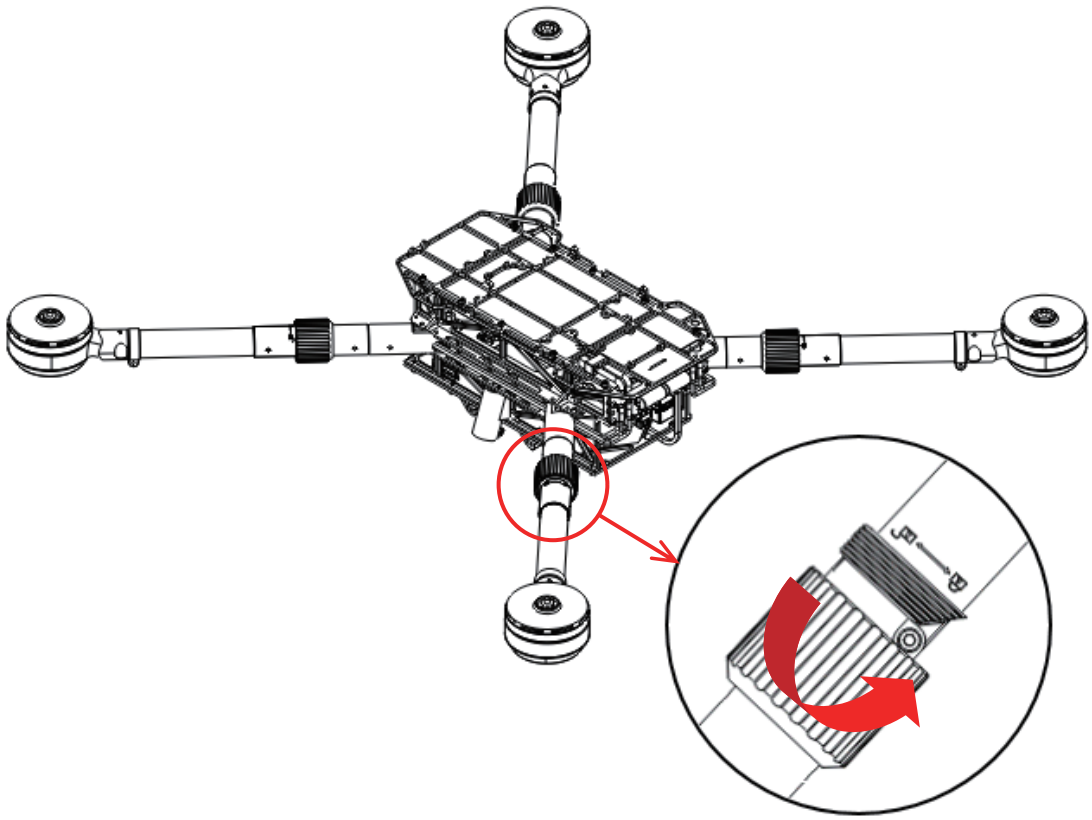
(Figure 2)

3.Assemble the arms onto the body (Figure 3), and assembly completes as per Figure 4.



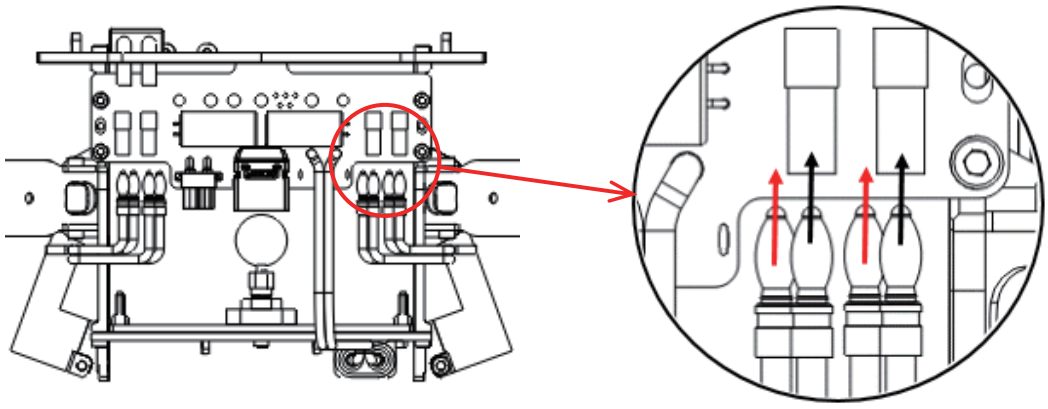
(Figure 3)

4.Turn the folding rings as per the instruction and secure the arms. (Figure 4)



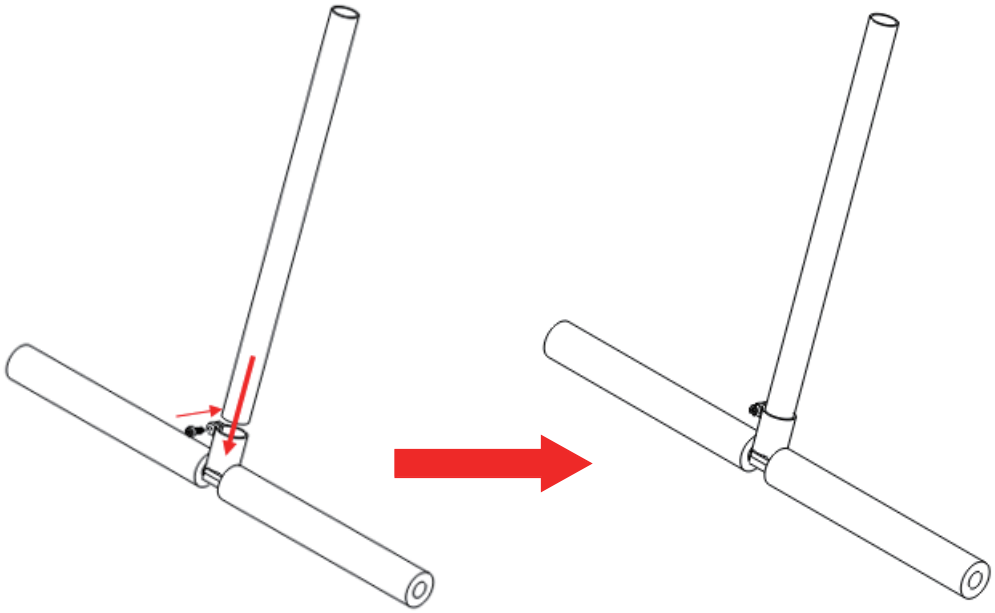
(Figure 4)

4.Connect the connectors from the arms to the power distribution board. Please make sure the colors and the poles correspond. (Figure 5)

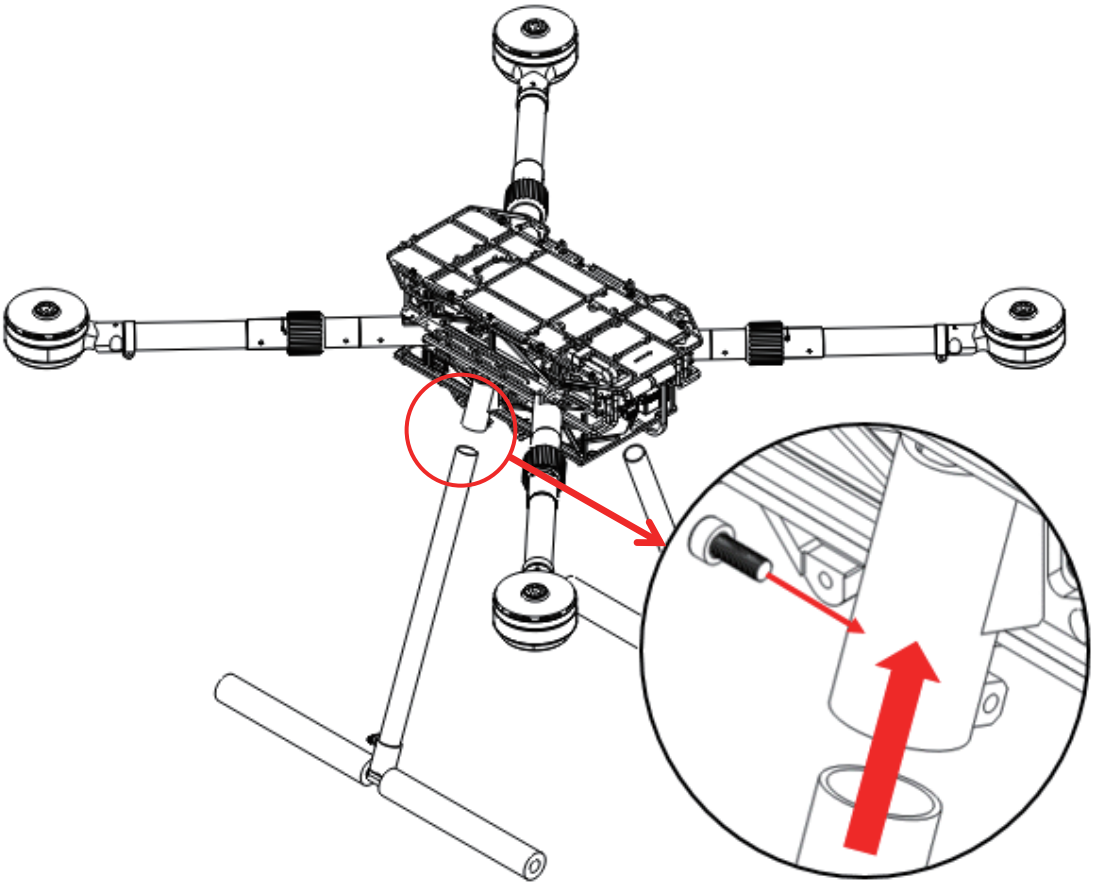


(Figure 5)

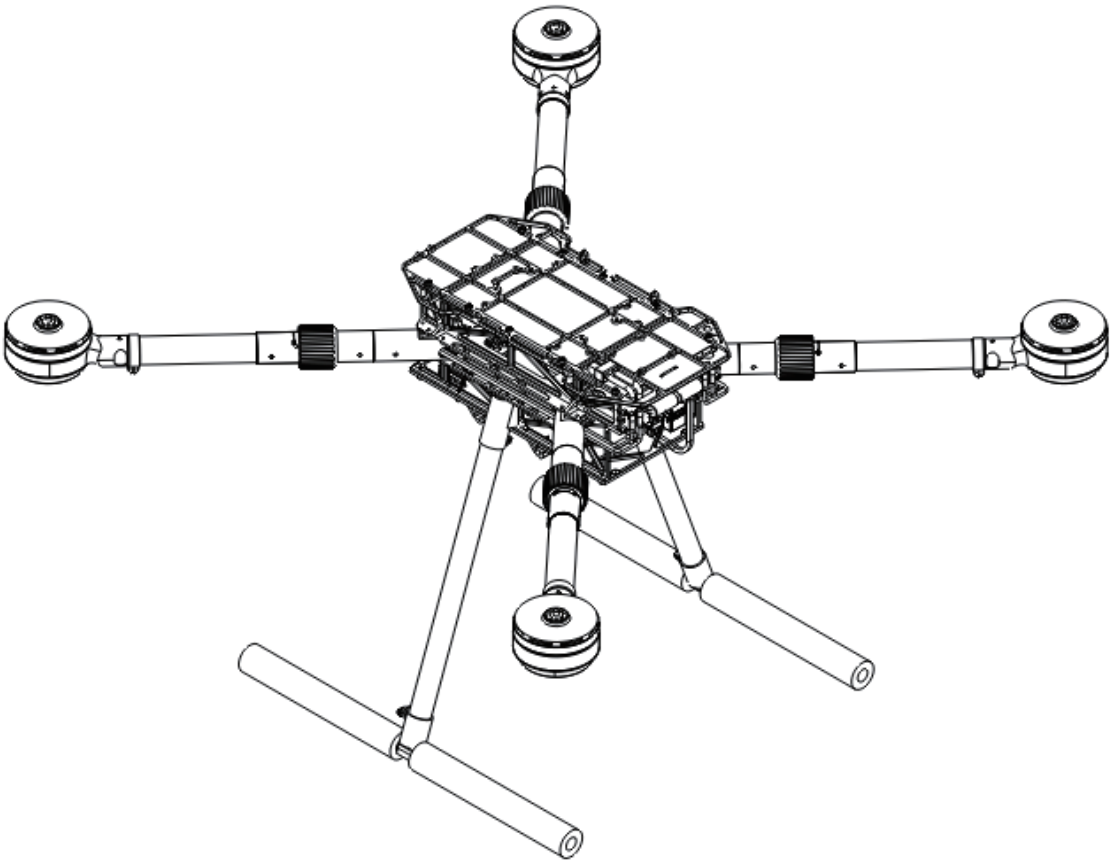
5.Assemble the landing gears and attach them to the body as per Figure 6 and Figure 7. Assembly completes as per Figure 8.



(Figure 6)

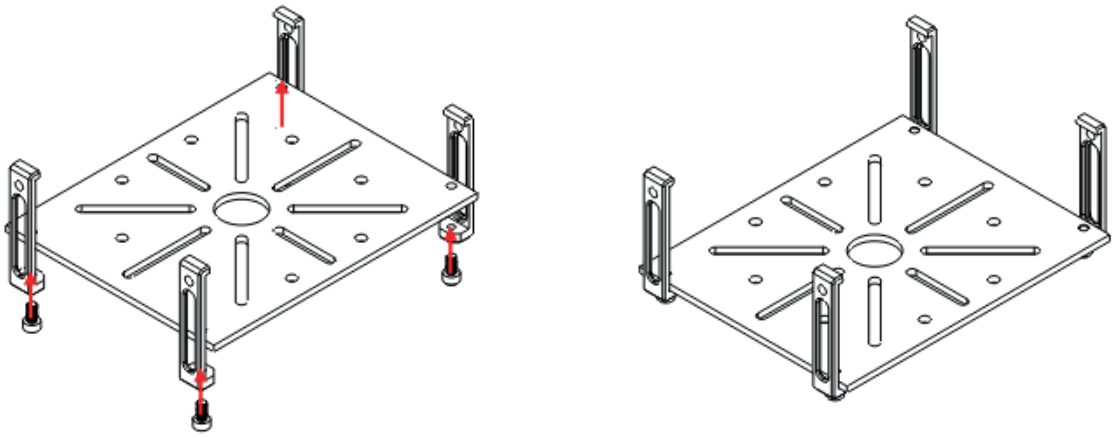


(Figure 7)

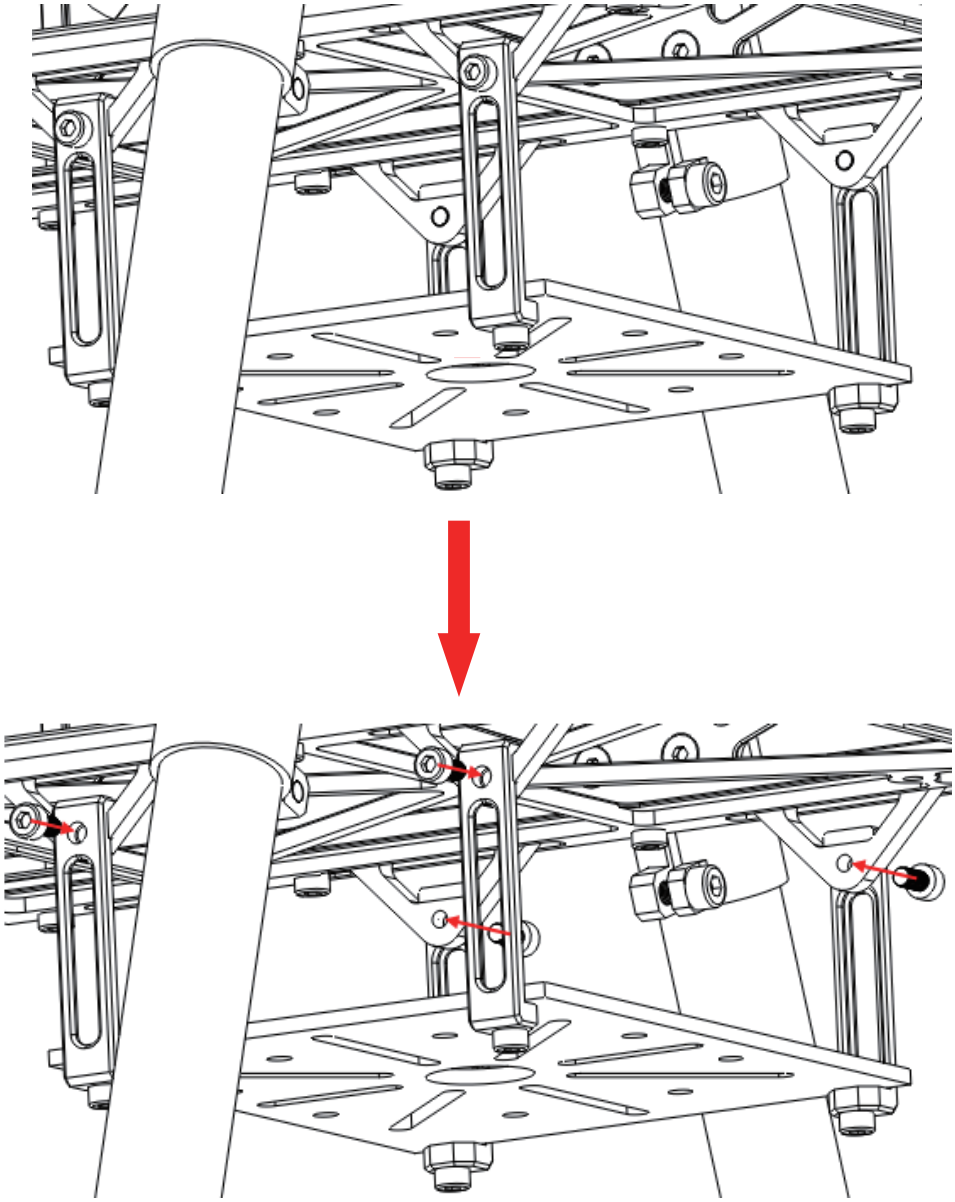


(Figure 8)

6.Assemble the gimbal with the gimbal parts (Figure 9) and mount it to the body. (Figure 10)



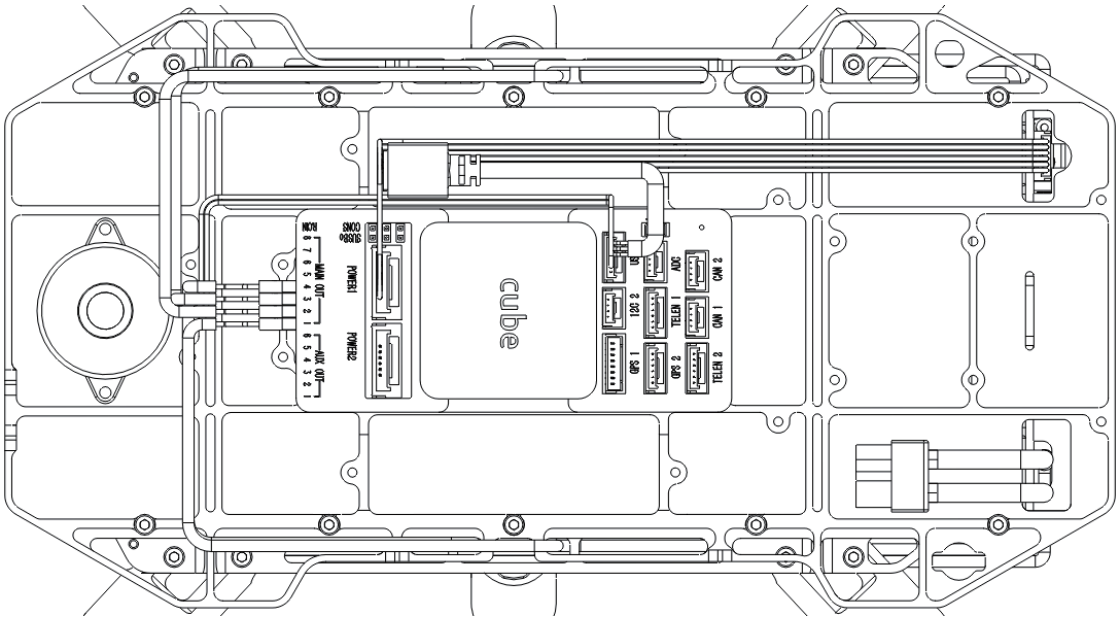
(Figure 9)



(Figure 10)

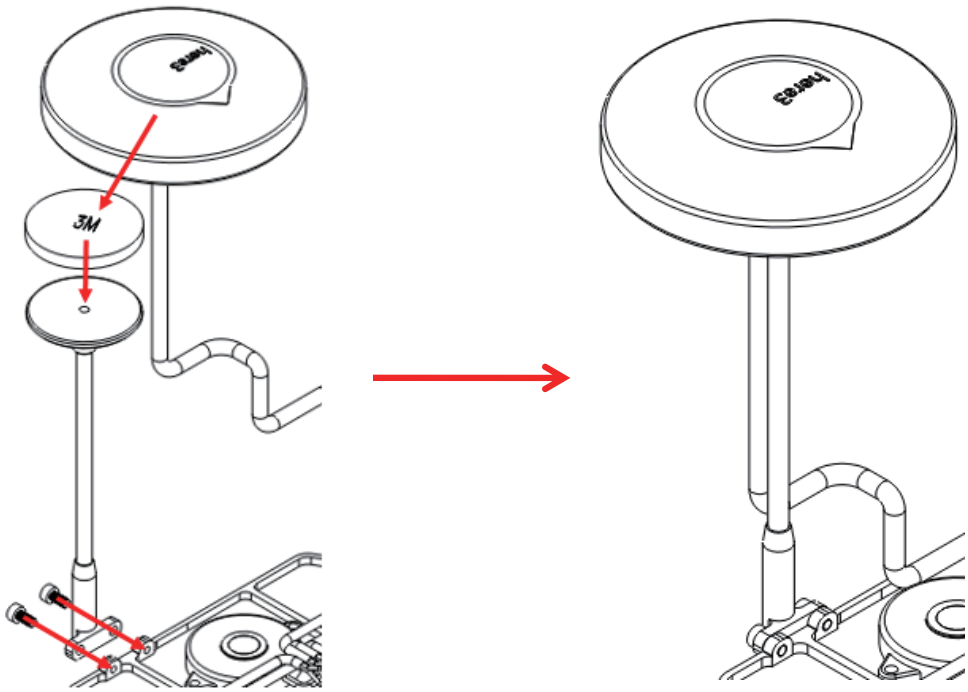
07 FC INSTALLATION (Pixhawk 2)

1.Assemble the FC as per Figure 11



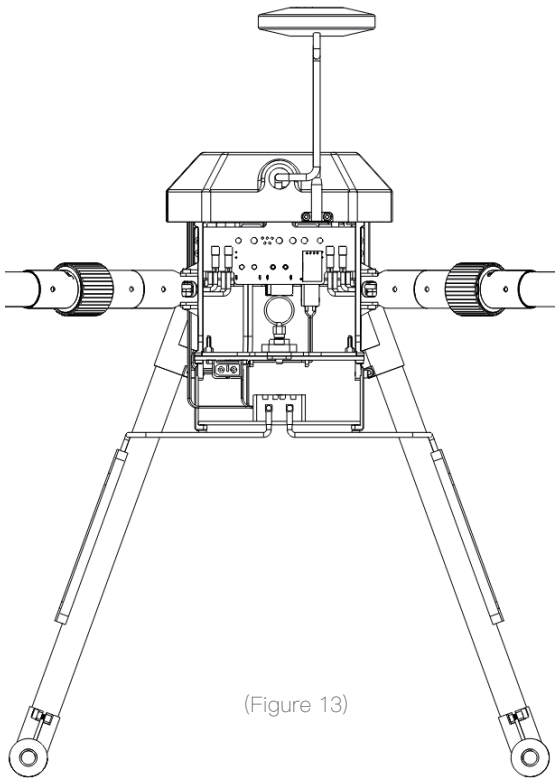
(Figure 11)

2.Stick the GPS with a 3M tape to the holder and fix the holder onto the body.(Figure 12)



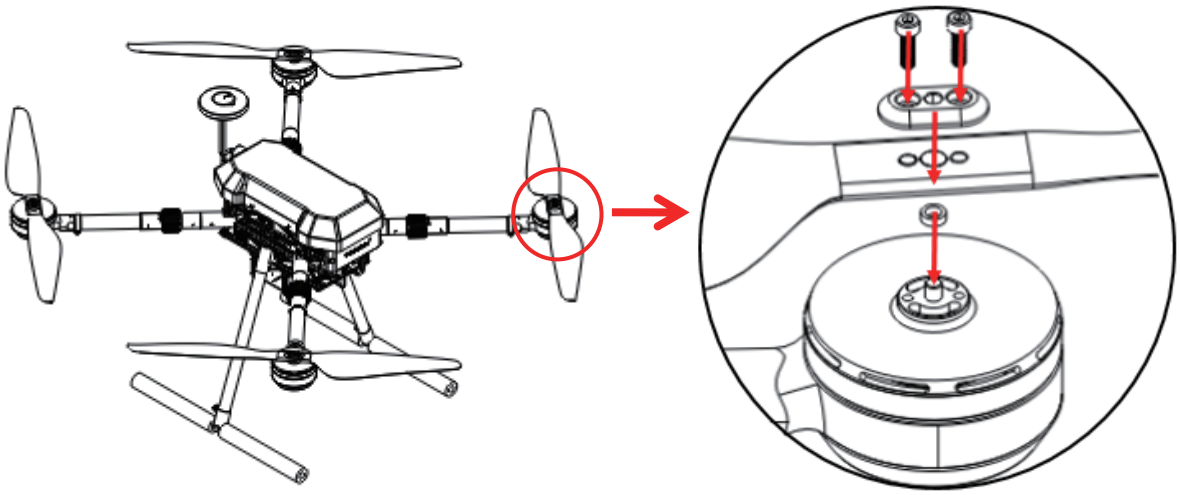
(Figure 12)

3.Fix the image transmission onto the carbon plate of the gimbal. Then fix the antenna to the landing gear as shown. (Figure 11)

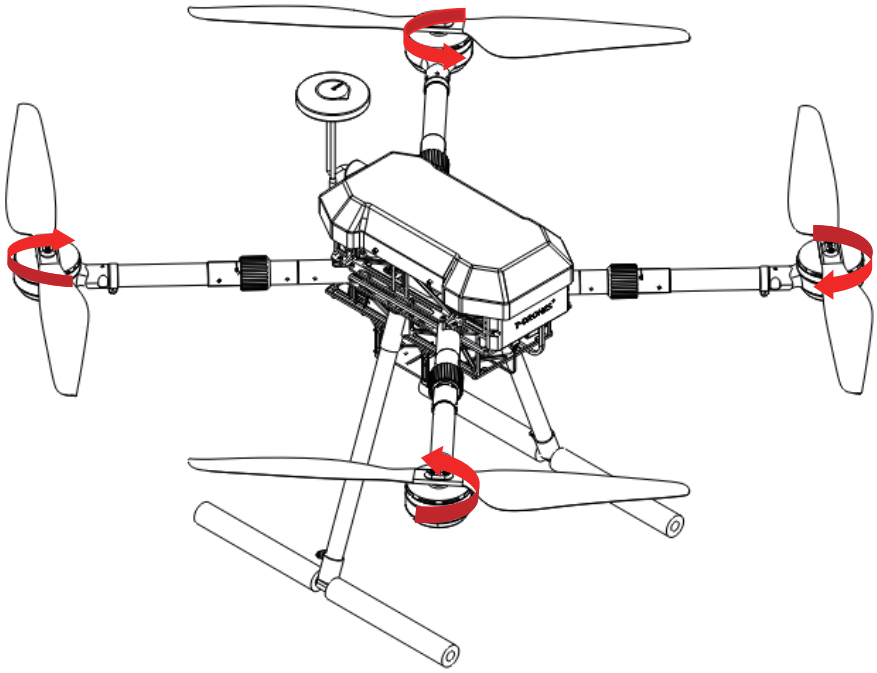


(Figure 13)

4.Install the propellers as per Figure 12 after calibration of the FC. Propeller installation completed as shown. Figure 13.

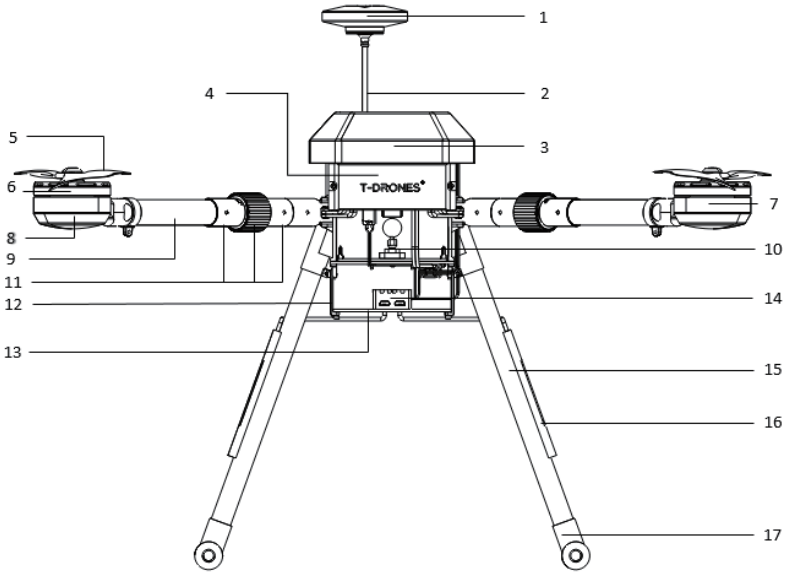


(Figure 14)



(Figure 15)

07 COMPONENTS (Figure 16)

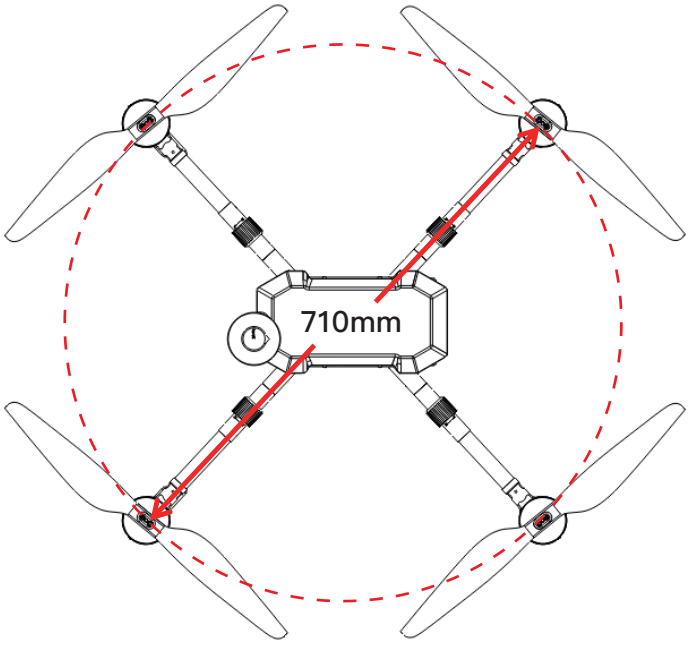


(Figure 16)

1. GPS 2. GPS Holder 3. Frame Shell 4. PDB Cover 5. Propeller 6. Motor
7. Motor Mount 8. LED Cover 9. Carbon Fibre Tube 10. Folding Sets 11. Battery Tray
12. Gimbal Hook 13. Carbon Fibre Plate for Gimbal 14. Image Transmission 15.Antenna
16. Landing Gear 17. Shock Absorber

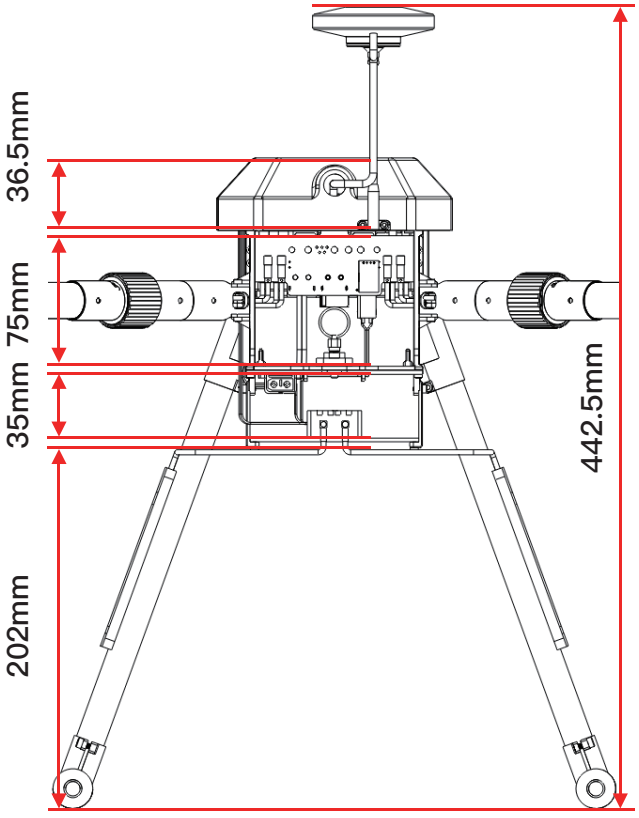
08 DIMENSIONS

1.Wheelbase (Figure 17)



(Figure 17)

1.Other Sizes (Figure 18)



(Figure 18)

① FC installation height：36.5mm

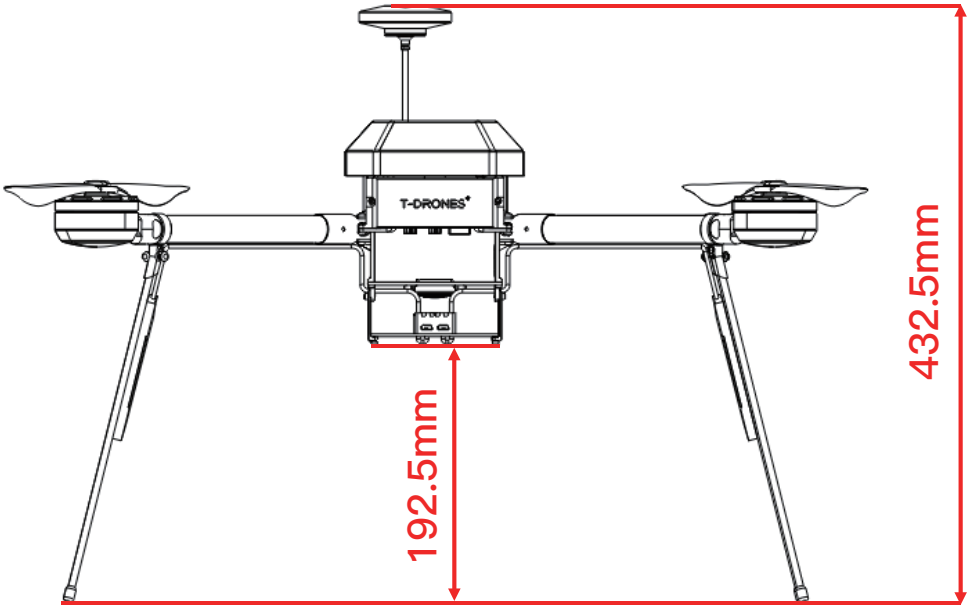
② Battery case: 76mm*75mm

③ Inner size for gimbal: 35mm

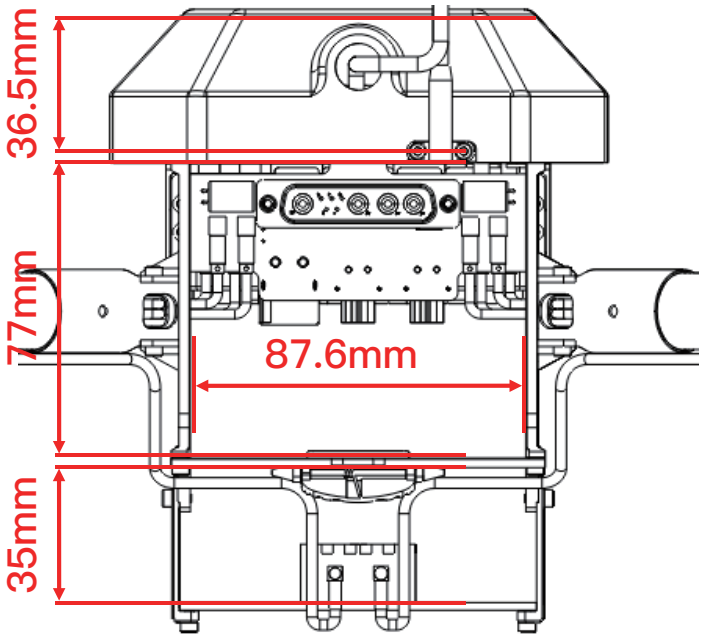
④ Mounting height for gimbal: 202mm

⑤ Height of M690A: 442.5mm

2.Other Sizes (Figure 19 & 20)



(Figure 19)



(Figure 20)

① Height of M690A: 432.5mm

② FC installation height： 36.5mm

③ Battery case: 87.6mm*77mm

④ Inner size for gimbal: 35mm

⑤ Mounting height for gimbal: 192.5mm