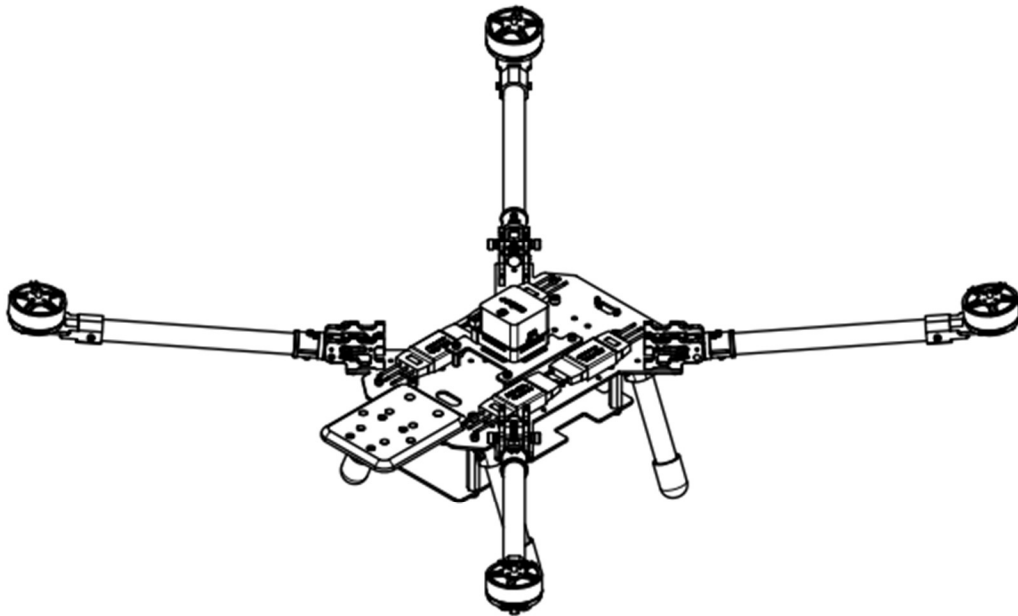


# axl 30XL DIY Drone Kit

User Manual

V2.0 | 25.03





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## Overview

The axl 30XL Drone Kit is an all-in one, high-performance, fold-arm configuration of the axl 30 series, built for hobbyists, educators, researchers and drone enthusiasts who demand enhanced performance, portability and control.

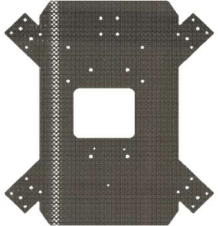
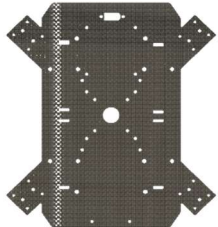

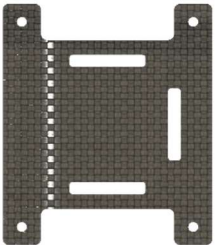

Building on the lightweight carbon-fiber airframe of the original version, the axl 30XL includes all essential propulsion components - motors, ESCs, propellers - and a Flight Controller (FC) for enhanced stability, precision flight control, and advanced mission-capability.


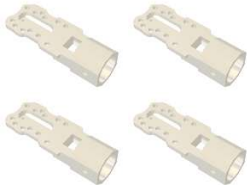


Its fold-arm design uses precision-machined aluminium folding arm tube-joints that allow compact storage and transport, while still maintaining structural rigidity and performance. The aircraft-grade aluminium motor mounts ensure durability and accurate motor alignment, delivering stable, responsive flight even under demanding conditions.



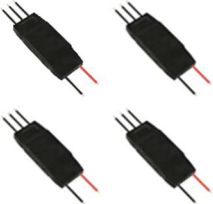

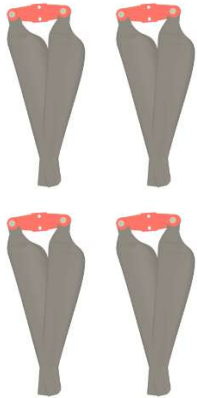
Versatile enough for applications ranging from FPV flying and aerial photography to surveying, mapping, surveillance and exploration, the axl 30XL's fold-arm, modular and customizable layout makes it ideal for both educational and professional environments.


This manual will guide you through the components and assembly process of axl30 XL

## What's in the Box

Component	Quantity	Image
Carbon fiber frame panel (top)	1	
Carbon fiber frame panel (bottom)	1	
Carbon fiber Battery Mount	1	
Carbon fiber FC Mount	1	
Z16 Folding Arm Tube Joint	4 Pcs	

Arm (294mm Carbon Fiber tube)	4	
Aluminium Standoff/Spacer (10mm)	4	
Aluminium Motor Mount	4 Pcs	
Leg Mount	4	
Leg (100mm Carbon Fiber tube)	4	

Leg Foot	4	
Camera Mount	1	
ESC	4 Pcs	
Motor	4 Pcs (with Allen bolts)	
Propeller	2 Set (2 CW, 2 CCW) (with Allen bolts)	

FC	1	
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Bolts & Nuts		
Component		Quantity
Z16 Fold	M2.5×22 mm Allen Bolts and nuts	4
	M2.5x8 mm Allen Bolts	32
Motor Mount	M3×25 mm Allen Bolts and nuts	4
Leg Mount	M3×25 mm Allen Bolts and nuts	4
	M3x10 mm Allen Bolts and nuts	8
Flight Controller Tray	M3×6 mm Allen Bolts	8
	10 mm Spacer	4
Battery Tray	M3×6 mm Allen Bolts	8
	10 mm Spacer	4
Camera Mount	M3×10 mm Allen Bolts and nuts	2



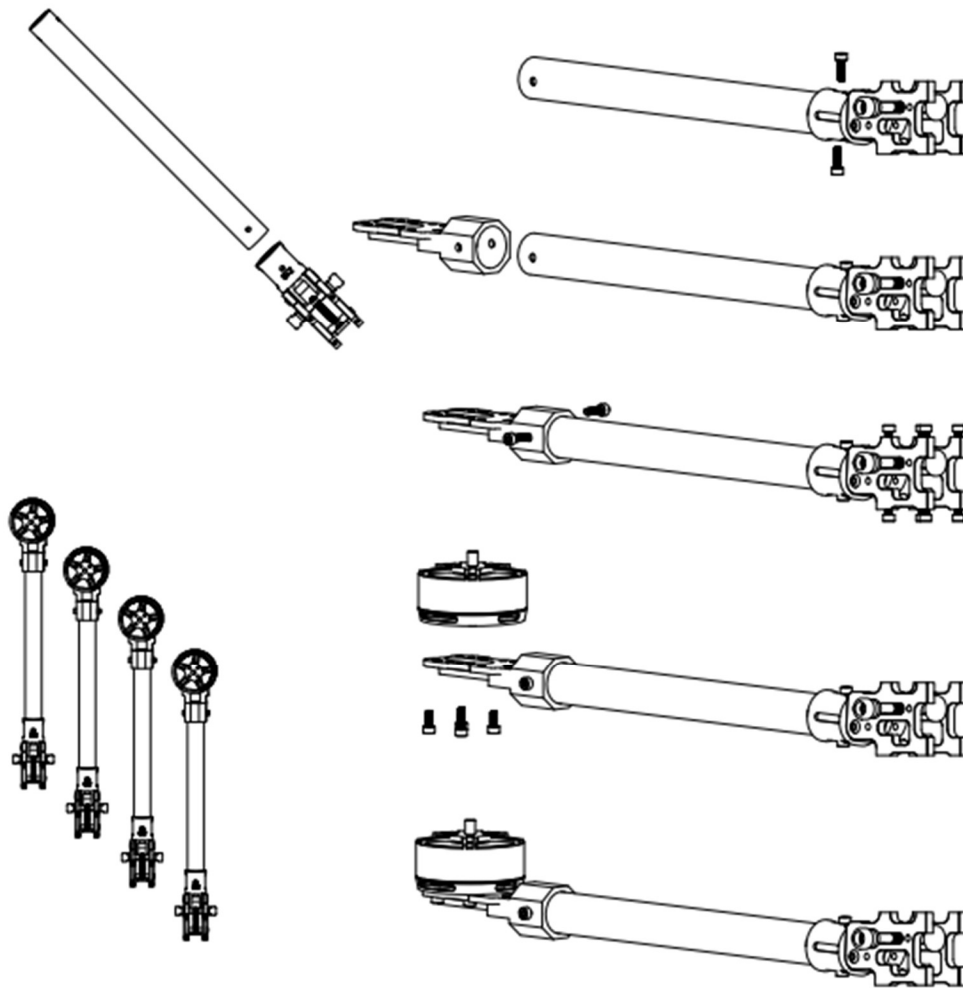
## Tools You'll Need

- Allen hex key set
- Nose Player

## Step By Step Assembly

### Step 1:

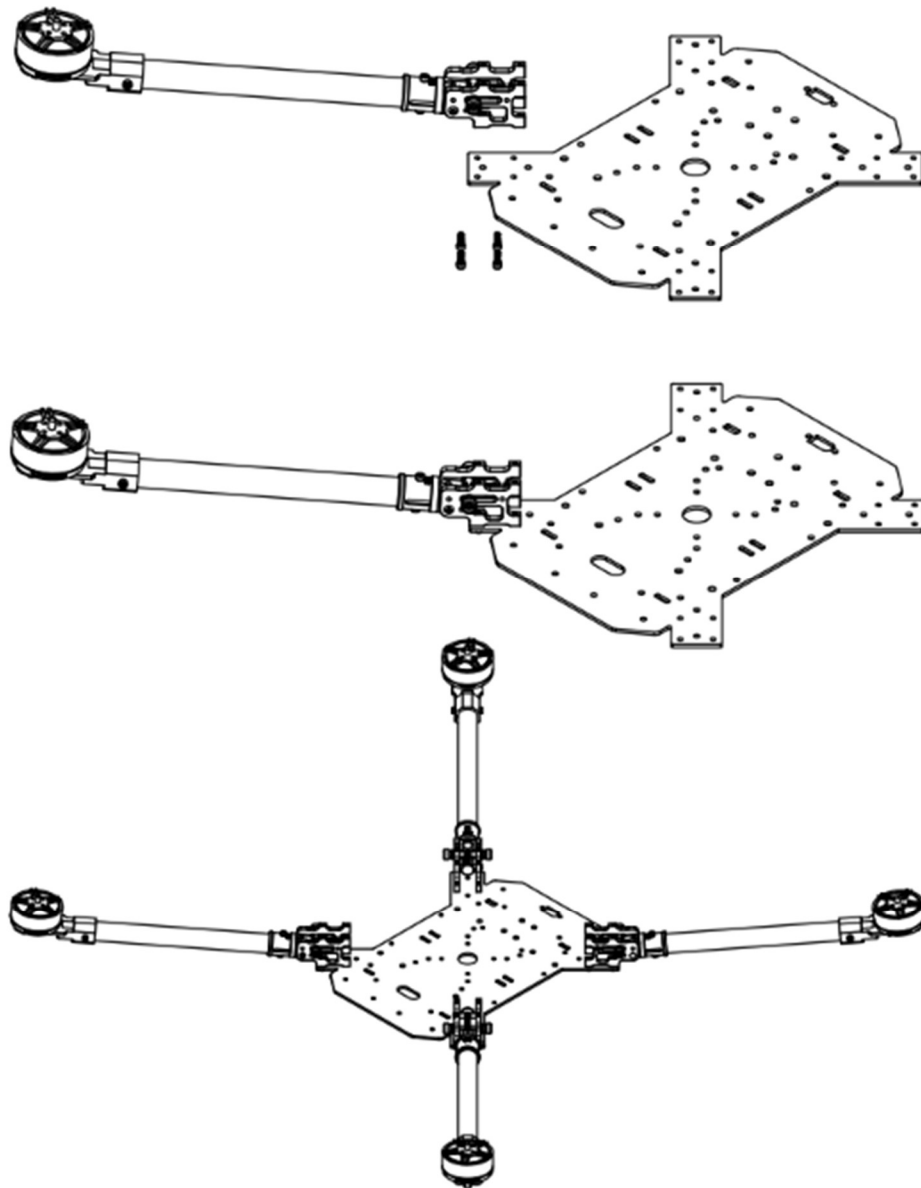
Fix the Z16 aluminium folding arm tube joint to the 170 mm carbon fibre tube using provided M2.5x22mm Allen bolt and nut. Secure the aluminium motor mount with M3x25 mm Allen bolt and nut. Mount the motor using four provided Allen Bolts M3x6 mm



Follow the same procedure to assemble the remaining three arms.

**Step 2:**

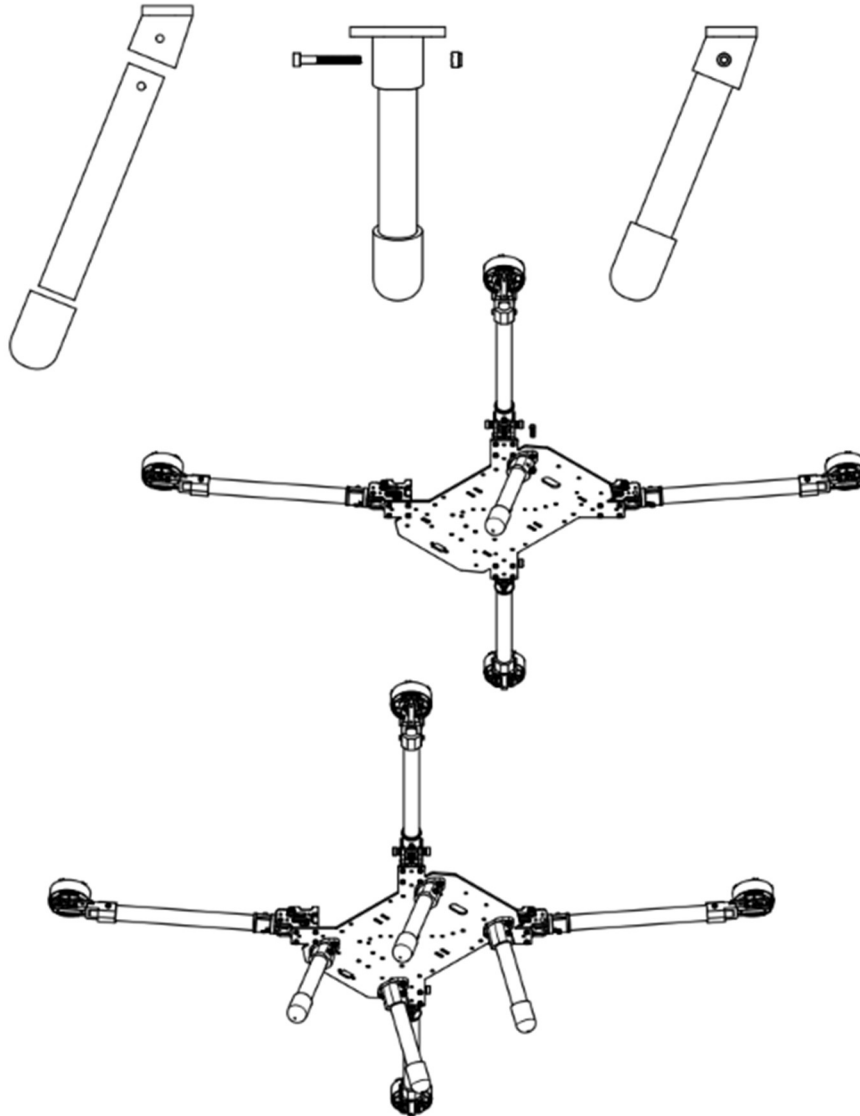
The motor-mounted carbon fibre tube arm is securely fixed to the 2 mm thick carbon fibre bottom panel using four M2.5x8 mm long Allen Bolts.



Repeat the same procedure for fixing the remaining three arms to the bottom panel.

### Step 3:

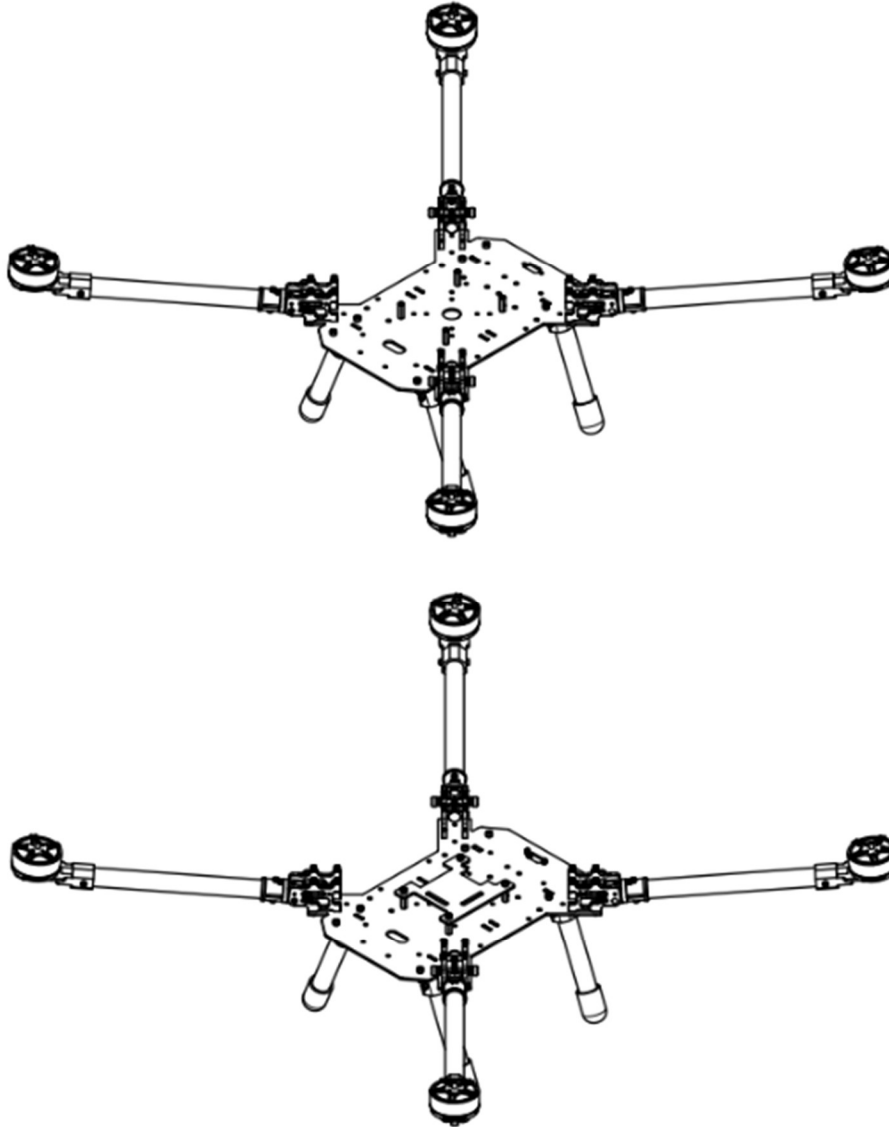
Insert the 100 mm rod (leg) into the foot. A secure attachment is established between the rod and the leg mount using a M3 x 25 mm Allen bolt and nut. Attach the landing gear to the bottom side of the bottom panel using two M3 x 10 mm Allen bolts and nuts.



Repeat the same procedure for the remaining three landing gears.

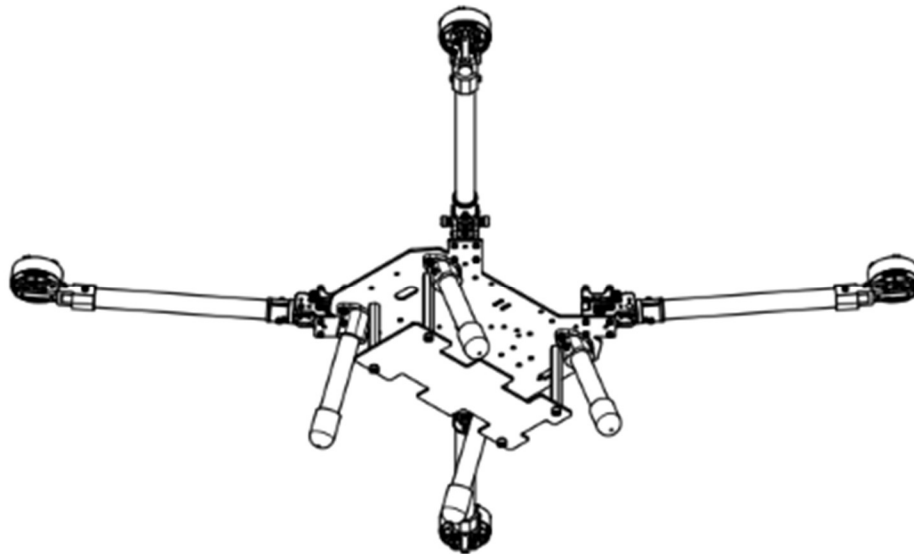
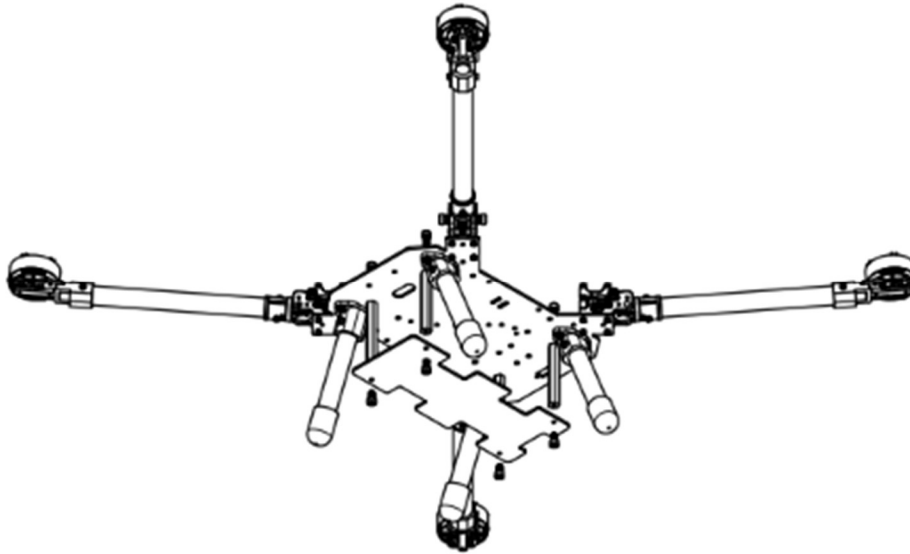
**Step 4:**

Fix four 10 mm long M3 standoffs to the centre of the bottom panel (carbon fibre sheet) using four M3x6 mm Allen Bolts. Then mount the FC mount panel onto the standoffs using the same four M3x6mm Allen Bolts.



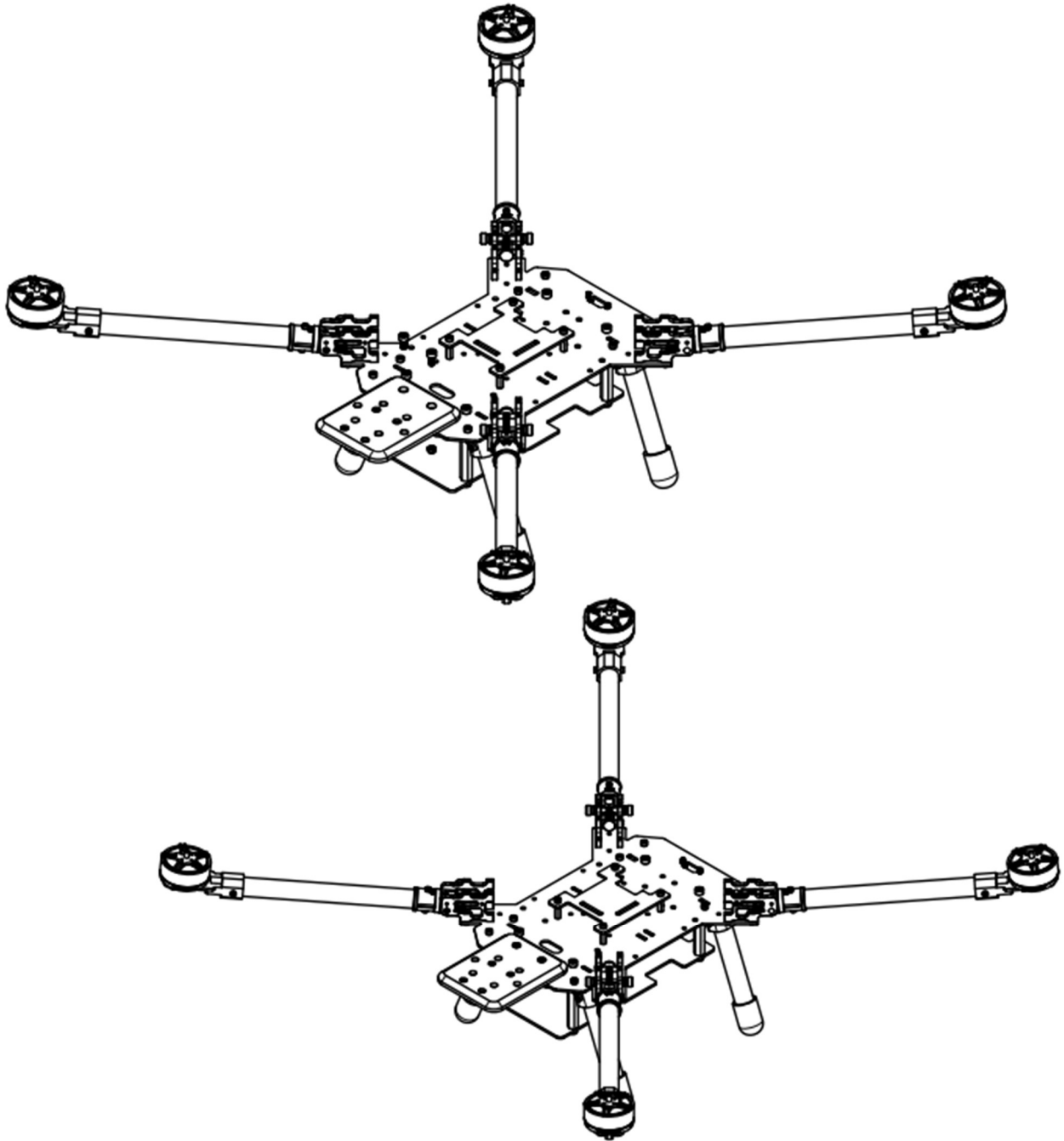
**Step 5:**

The 10mm long aluminum spacers are securely attached to the bottom side of the bottom panel (carbon fiber sheet) using four M3x6mm Allen Bolts. These spacers are then mounted onto the battery mount panel, which is a 2mm thick carbon fiber sheet, and tightened with four M3x6mm Allen Bolts.



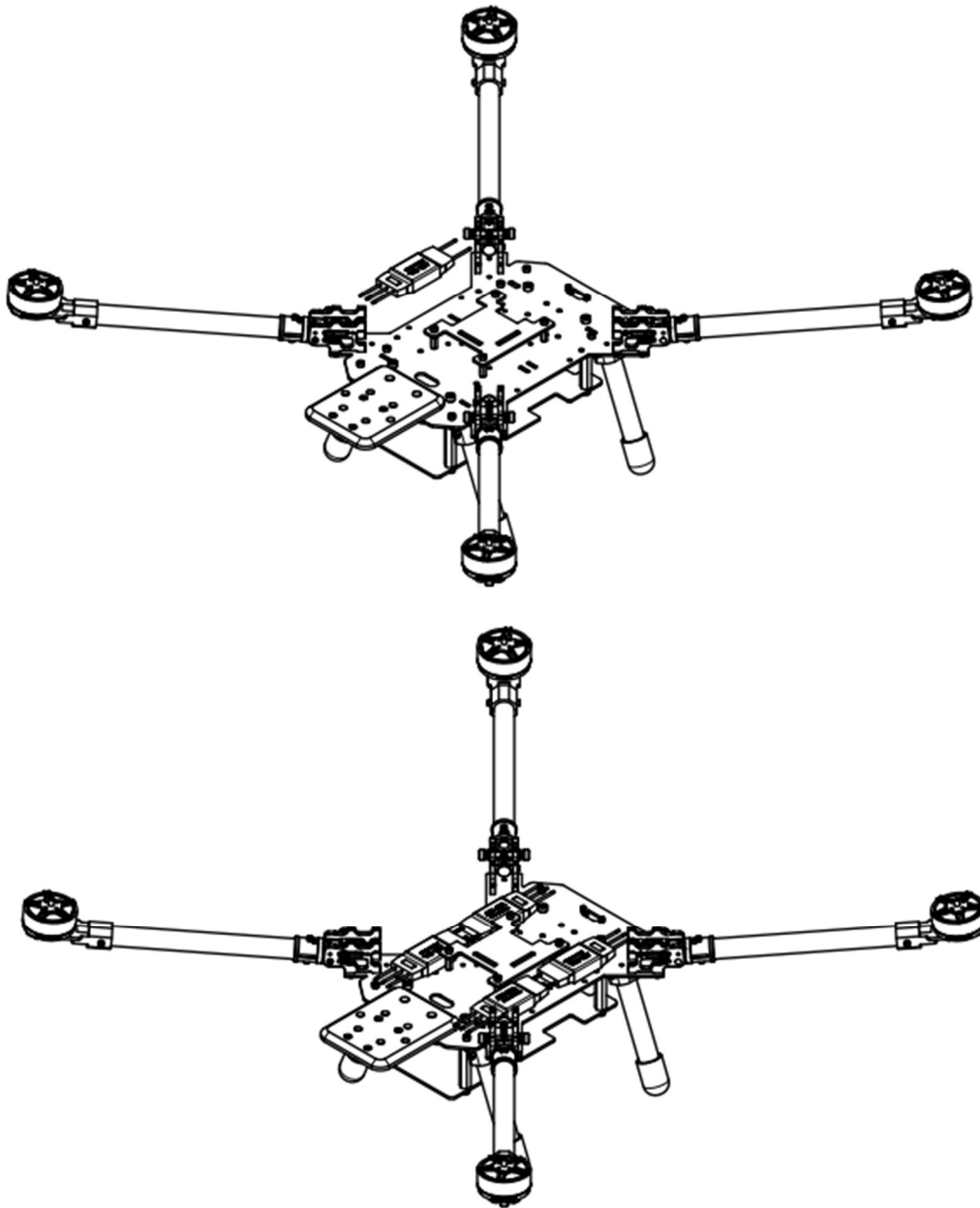
**Step 6:**

The camera mount is fixed on the front of the bottom panel using the two M3x10mm Allen Bolts and nuts.



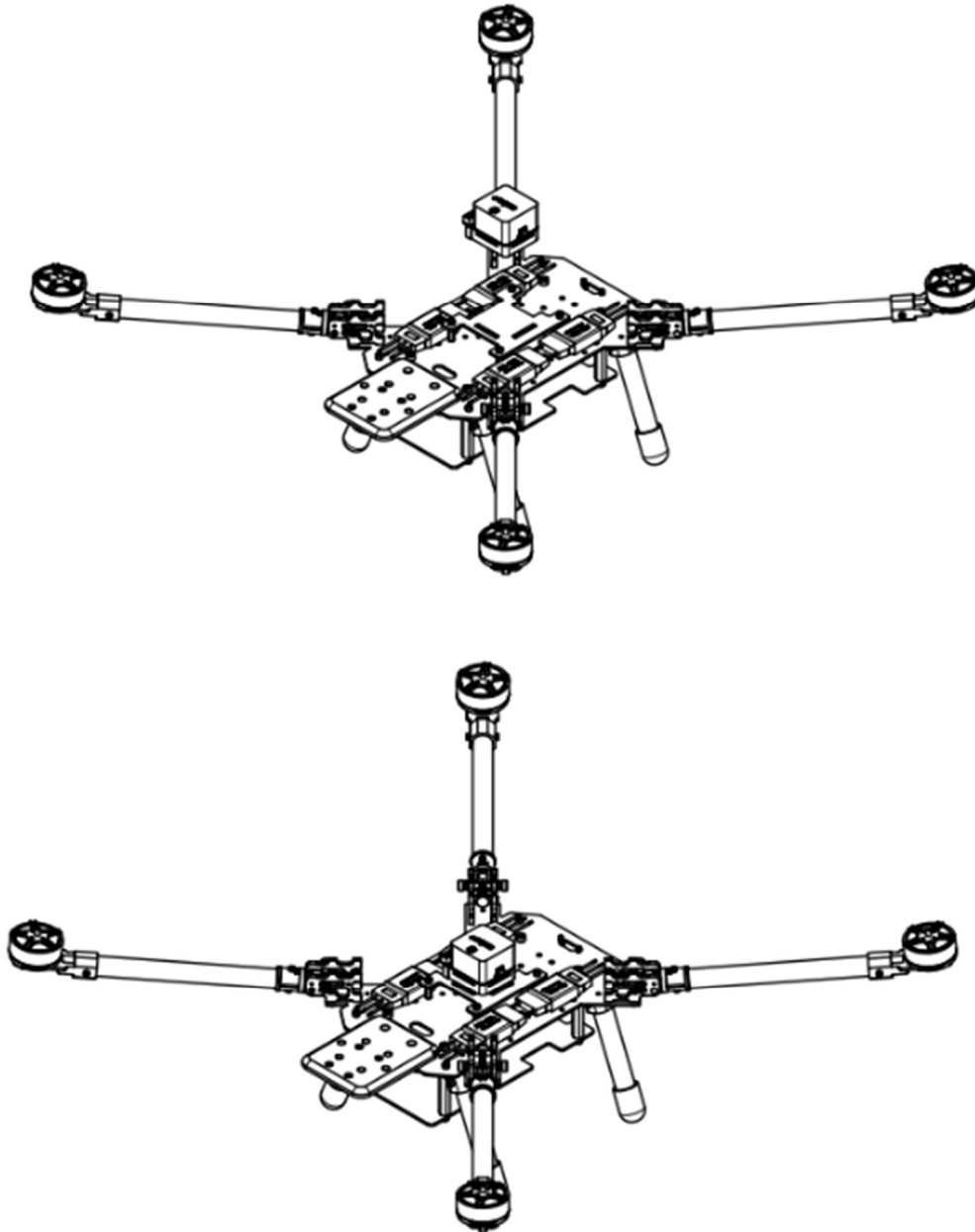
**Step 7:**

ESCs are fixed corresponding to the four motors.



**Step 8:**

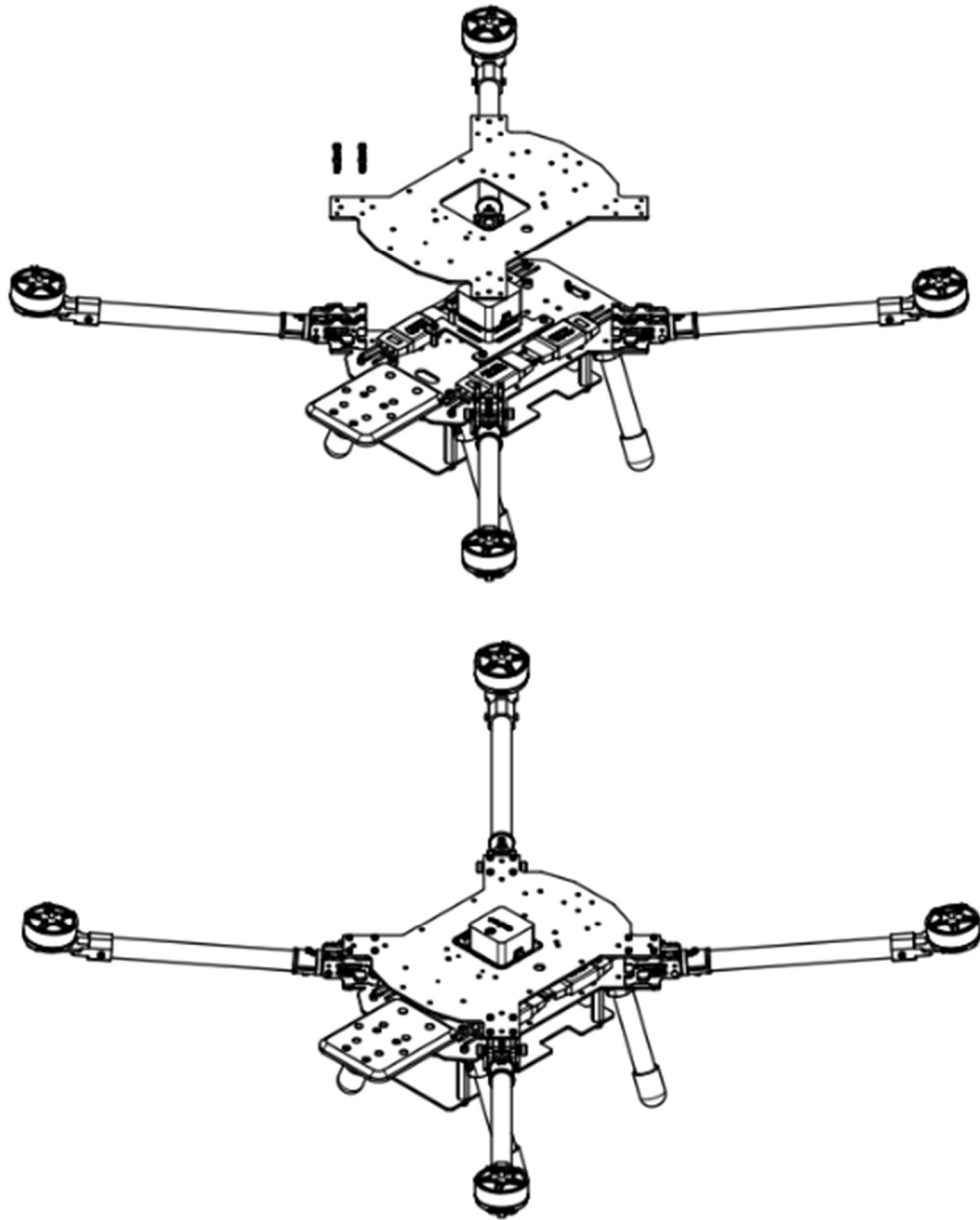
Place the FC onto the FC-mount plate with the arrow pointing forwards, then secure it with double-sided tape.





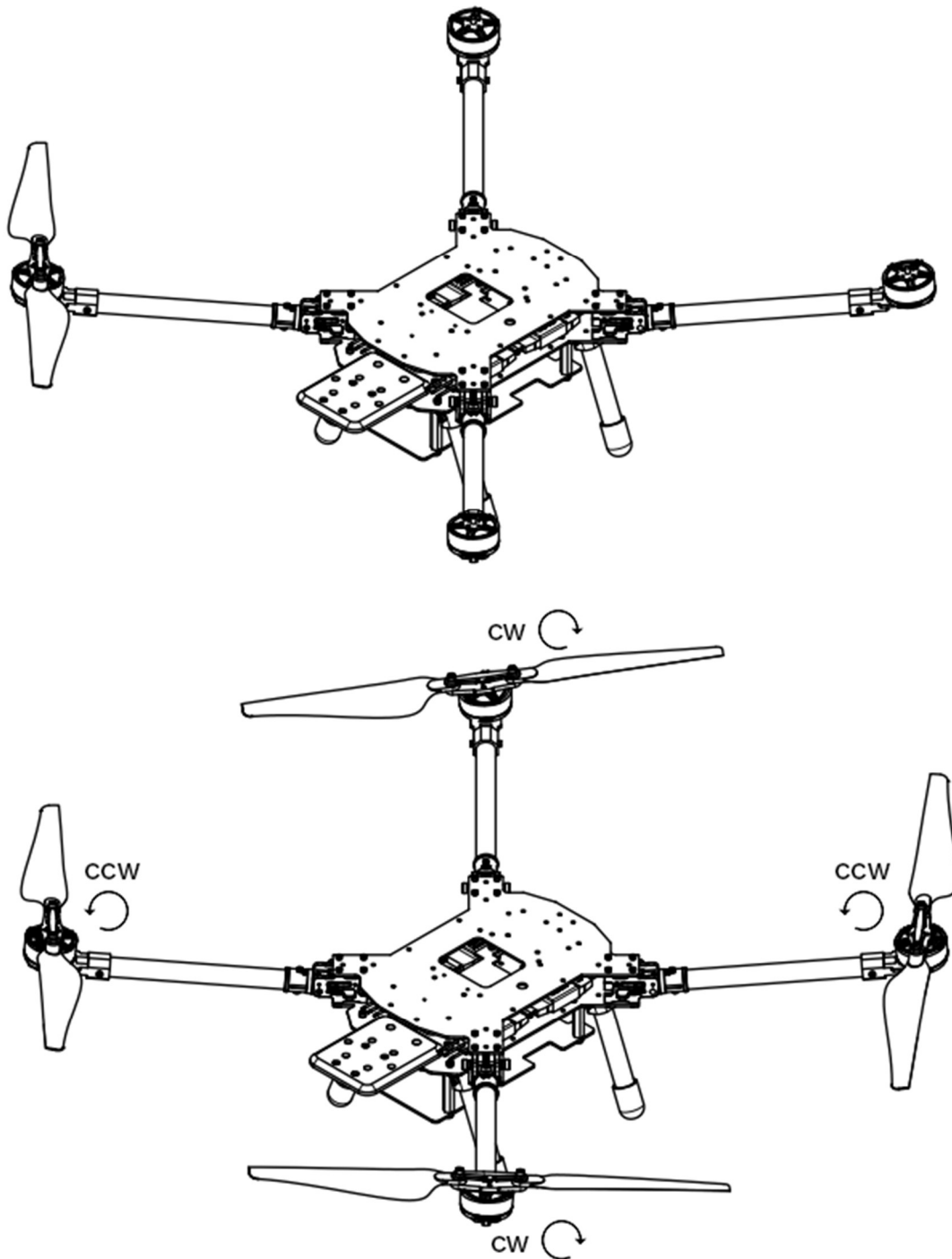
**Step 9:**

The 2mm thick carbon fiber top panel is affixed to the protruding screw of the Z16 fold and secured with the provided four M2.5x8 mm Allen Bolts.



### Step 10:

The propellers are secured using the allen bolts (M2.5x8mm) provided in the propeller set.



## Specifications

Parameter	Value
Total Weight	~1530
Size	509 x 904 x 182 mm (L*W *H)
Frame Material	Carbon Fiber, Hyper ABS, Aluminium
Max load capacity of the frame	~4000g
Propeller	2 Pairs 15-inch nylon fiber Foldable Propeller, Fitting Screw Accessories
Motor	4* 380 KV Motor
ESC	4* 4S - 6S, 30-40 Amps
Flight controller	1* Autonomous Flight controller with Wiring set
Folding Mechanism	4* Z16 CNC Aluminum Folding Arm Tube Joint
Motor Mount	4* Aircraft grade Aluminium Motor Mount

## Storage & Maintenance

- Store frame parts in a cool, dry place, away from direct sunlight, heat, or heavy objects to prevent warping, resin breakdown, or mechanical stress.
- For cleaning, remove loose dirt with a dry soft brush or canned air; use isopropyl alcohol (70–90%) on a lint-free cloth to gently clean stubborn grime—avoid water or harsh chemicals—and ensure all components are completely dry before reassembly.

## Safety guidelines

- **Wear protective gear** during assembly, especially when handling carbon fiber and ABS components. Use gloves and eye protection to prevent injury from sharp edges or splinters.
- **Beware carbon fiber dust:** If cutting or drilling frame parts, do so in a well-ventilated area or use dust collection systems and wear a respiratory mask (HEPA-rated) to avoid inhalation
- **Verify fasteners:** Make sure all M3 screws, nuts, and standoffs are properly tightened. Use thread locker to prevent loosening due to vibration.

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