

C O N T E N T S

01 – BILL OF MATERIAL

02 – REQUIRED TOOLS

03 – ASSEMBLY PROCESS

SECTION 01

BILL OF MATERIAL

QUANTITY PART DESCRIPTION

1	Bottom plate (3mm Matte CF)
2	“Roll bar” plate (1.5mm Matte CF)
1	Front arm brace (2.5mm Matte CF)
1	Front standoff - 19mm (Black 3D Printed Plastic)
1	Rear standoff - 19mm (Black 3D Printed Plastic)
2	Washer (M2.5 Steel)
2	Nylock nut (M2.5 Steel)
2	Socket head screw (M2.5 Silver Aluminum)
2	Antenna tube (Black Plastic)
16	M2 washer (Steel)
1	Phillips head screw (#1 x 1/4" Long Steel)
4	Phillips head (#2 x 1/4" Long Steel)
2	Socket head screw (M2 X 4mm Steel)
8	Socket head screw (M2 X 8mm Steel)
12	Socket head screw (M2 X 6mm Steel)
1	Small Velcro Lipo Strap – Catalyst Machineworks
1	Huge Ego

REQUIRED TOOLS

QUANTITY	TOOL DESCRIPTION
1	1.5mm allen driver or allen wrench
1	2mm allen driver or allen wrench
1	socket driver(s)
1	Small phillips head screw driver
1	Needle Nose Pliers
3	Adult beverage of choice or apple juice if you are under 21

ASSEMBLY PROCESS

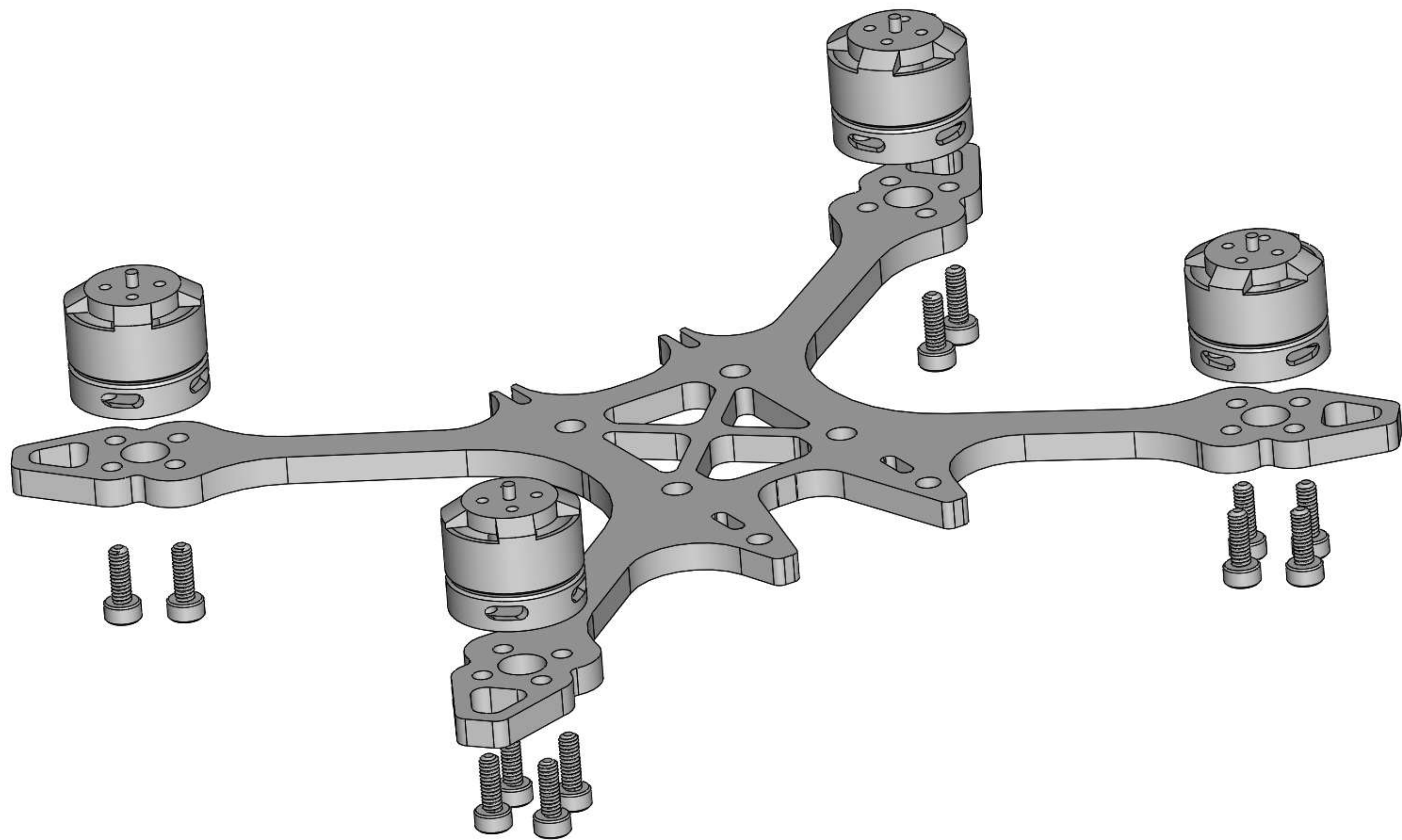
STEP 1

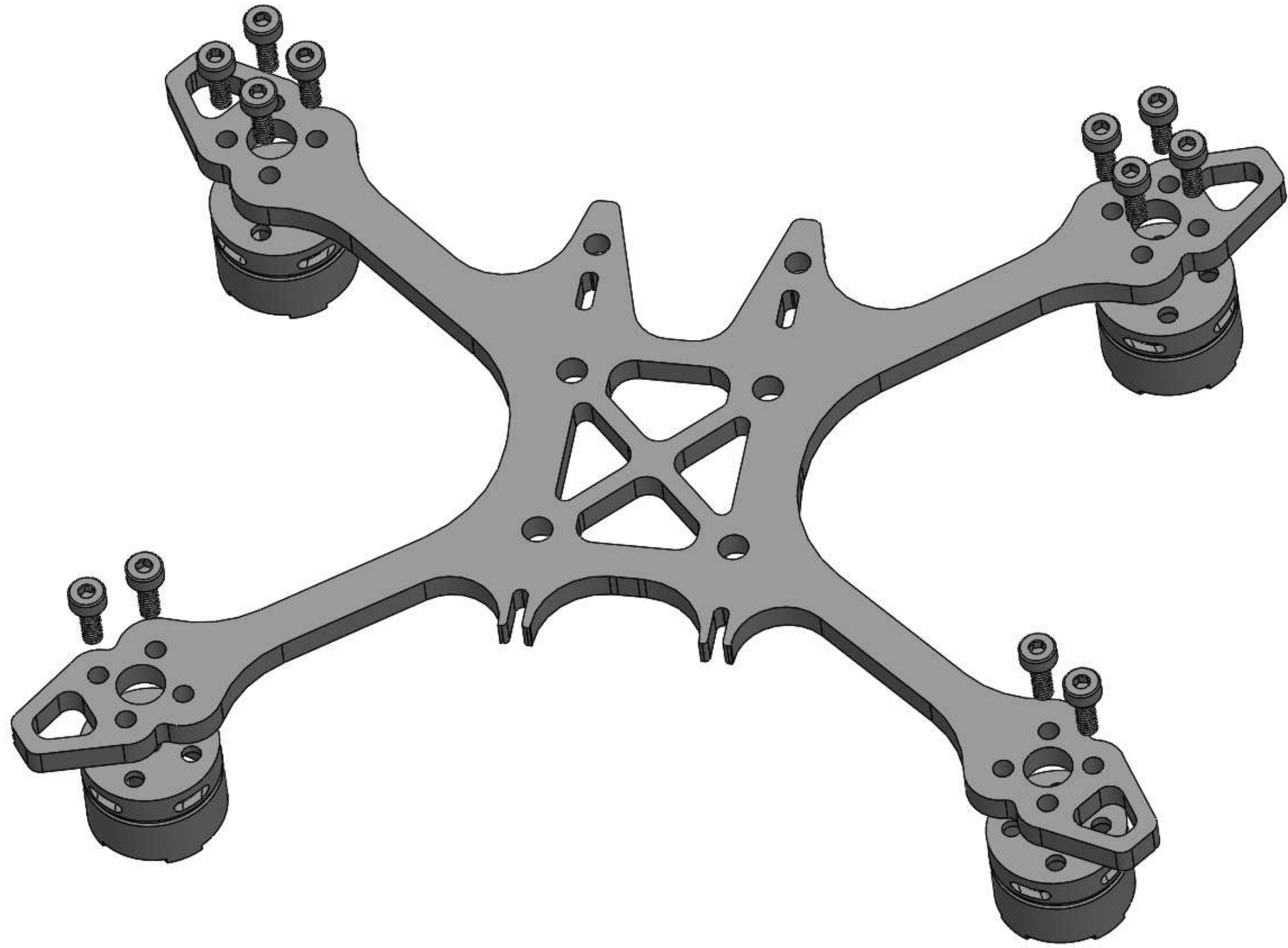
Parts Required:

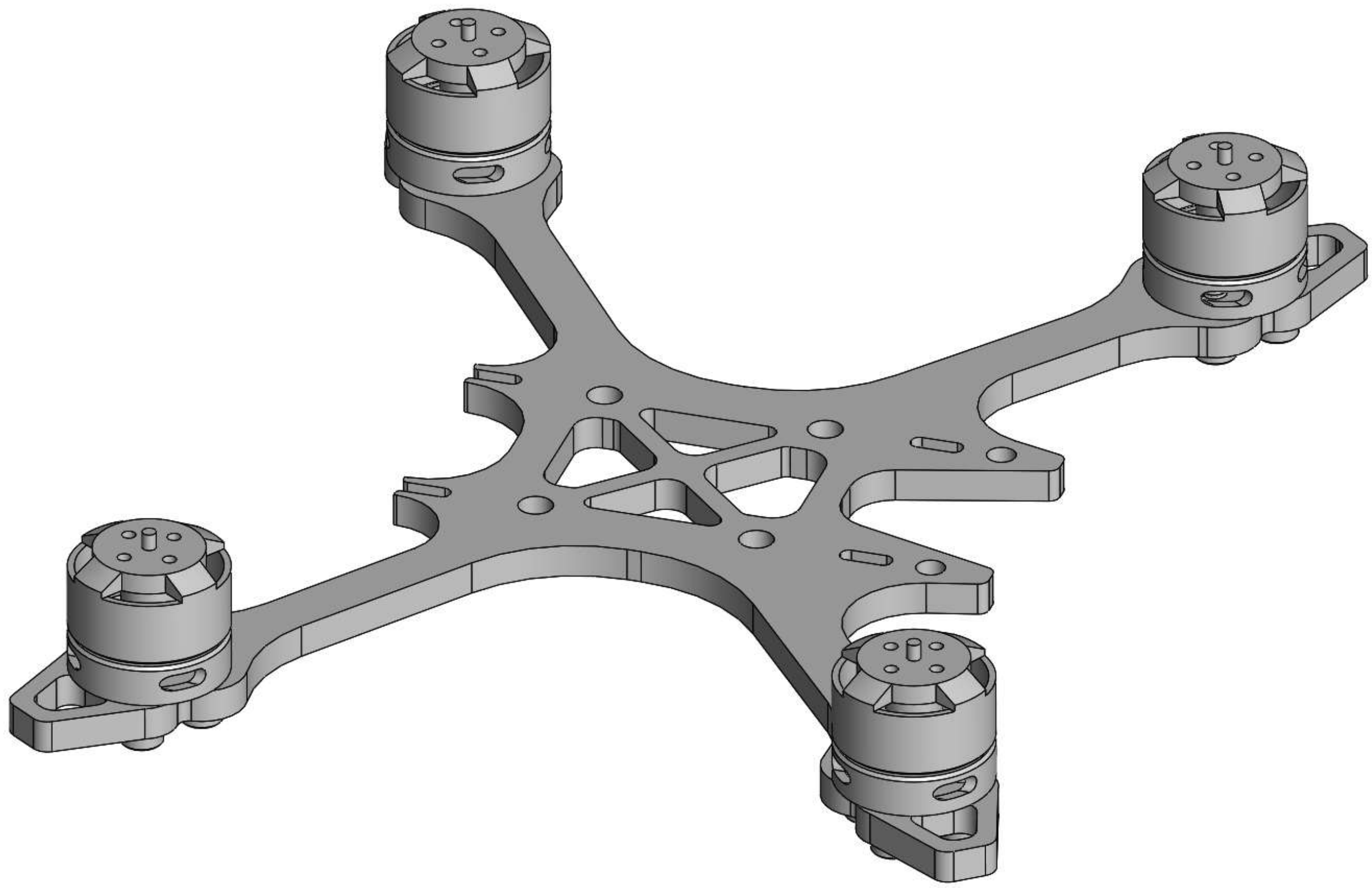
Quantity	Part Description
4	Micro Motor (sold separately)
12	Socket head screw (M2 X 6mm Steel)
12	M2 washer (Steel) <i>*as needed*</i>
1	Bottom plate (3mm Matte CF)

Assembly Process:

Install the motors as shows using the included screws. Pay close attention to how much of the screw is threading into the motor. Make sure the ends of the screws are not touching the windings inside your motors or they will short out! You may need to use the included M2 washers to space the screws. Also keep in mind that most motors come with their own mounting screws. If the screws we include in this kit are not to your liking use the screws included with your motor. Please be aware the washers are not pictured in the pics below.







STEP 2

Parts Required:

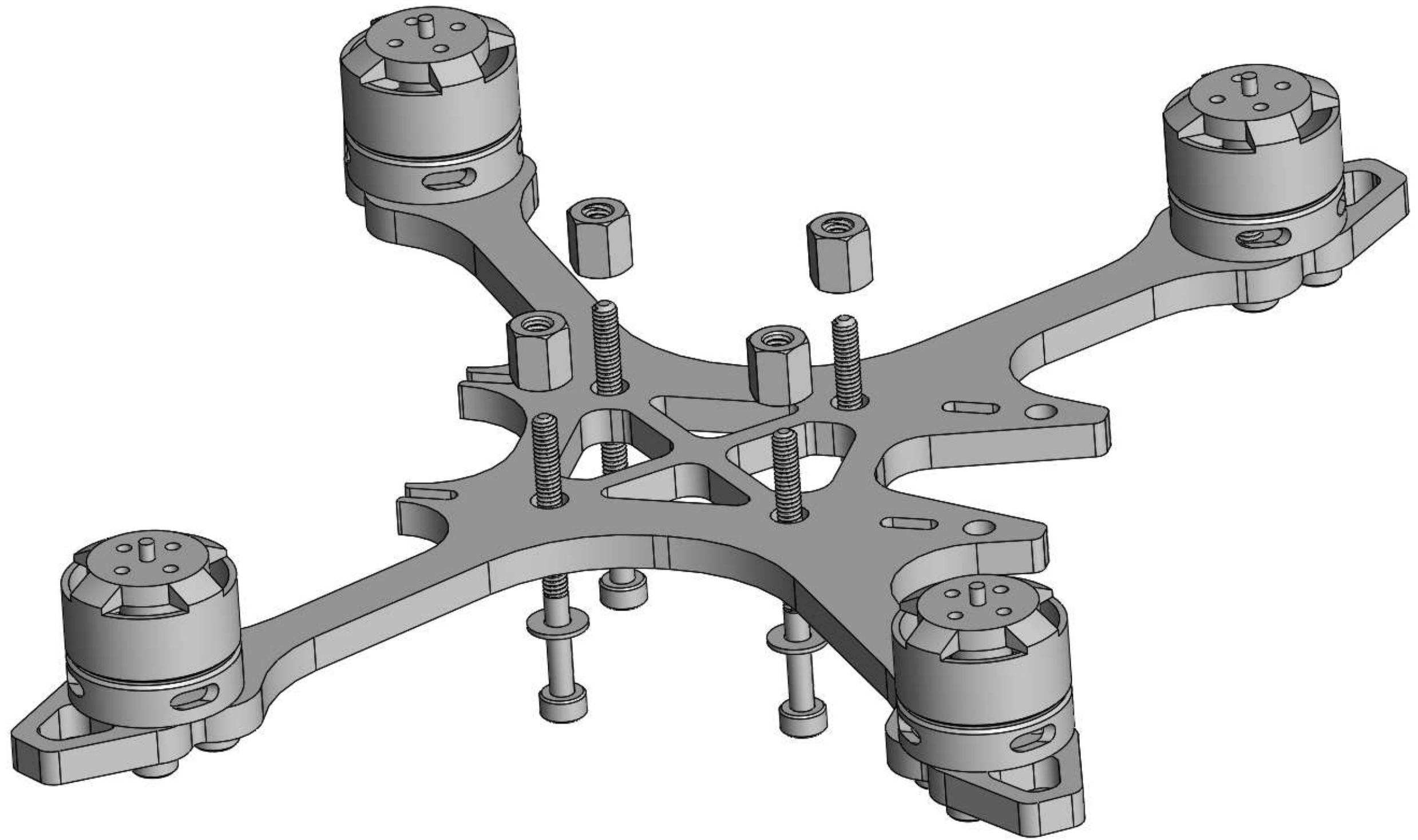
Quantity	Part Description
1	Micro Stack Hardware Set (sold separately)
1	Micro All-in-one ESC (sold separately)
4	M2 washer (Steel) *as needed*

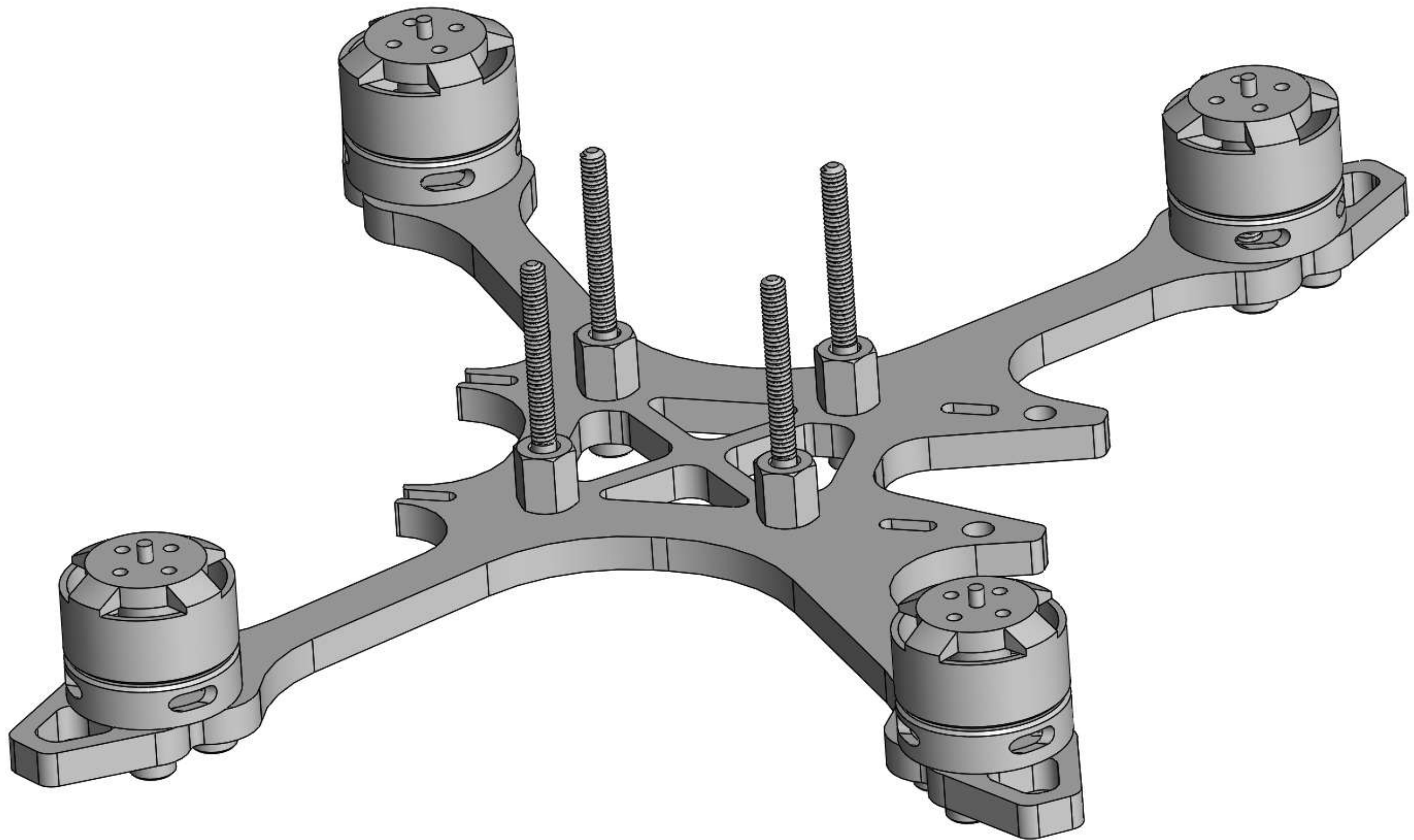
Assembly Process:

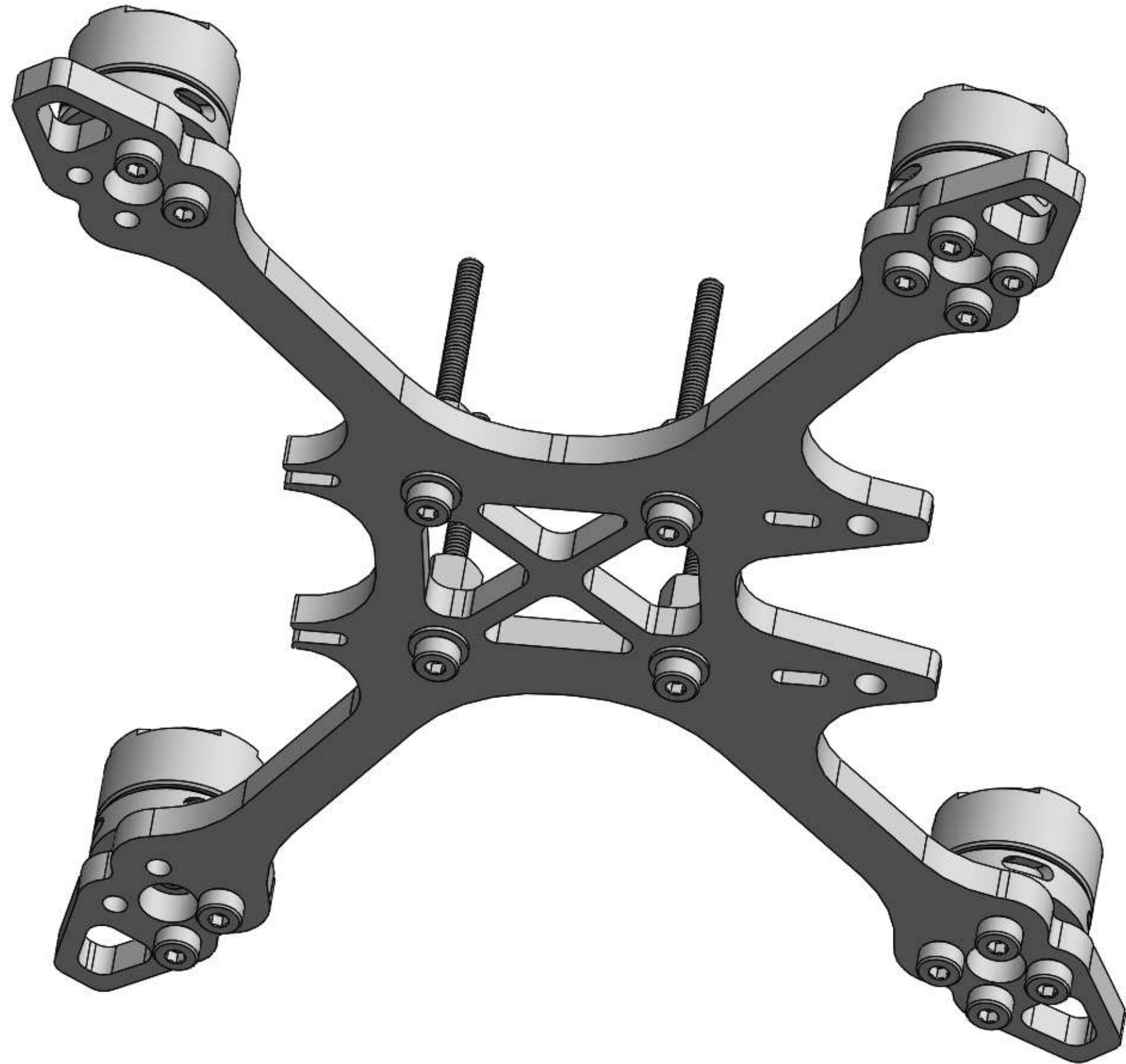
******Wiring procedures will not be covered in this manual. Wires are not detailed for clarity purposes. For help wiring up your electronics reference the wiring schematics detailed on the electronics manufacturer's website******

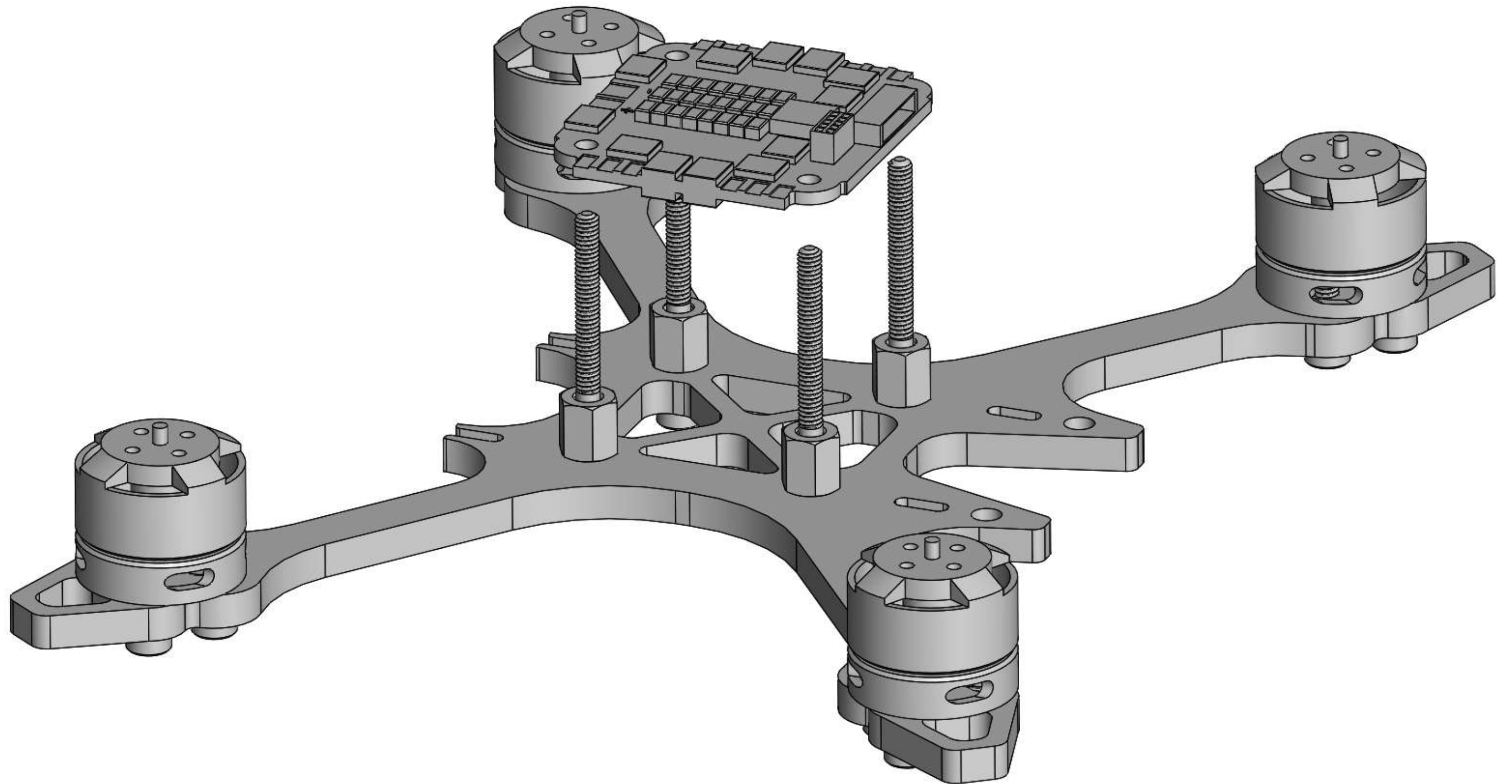
The Massive Droner frame does not include mounting hardware for your micro stack. Most stacks these days include their own mounting hardware. If yours does not you will need to source your own stack mounting hardware. There are simply too many different types of micro electronics stack options in the market for us to provide a hardware set to cover them all. The pictures below show an HGL RC 20mm x 20mm micro FC/ESC/VTX stack. This is a very common choice in today's market and for this reason we are using it as an example for this assembly manual. If you are using a stack other than HGL brand your procedure may vary. This frame will accept both M2 and M3 stack mounting hardware. If you are using M2 hardware be sure to also use the 4 included M2 washers.

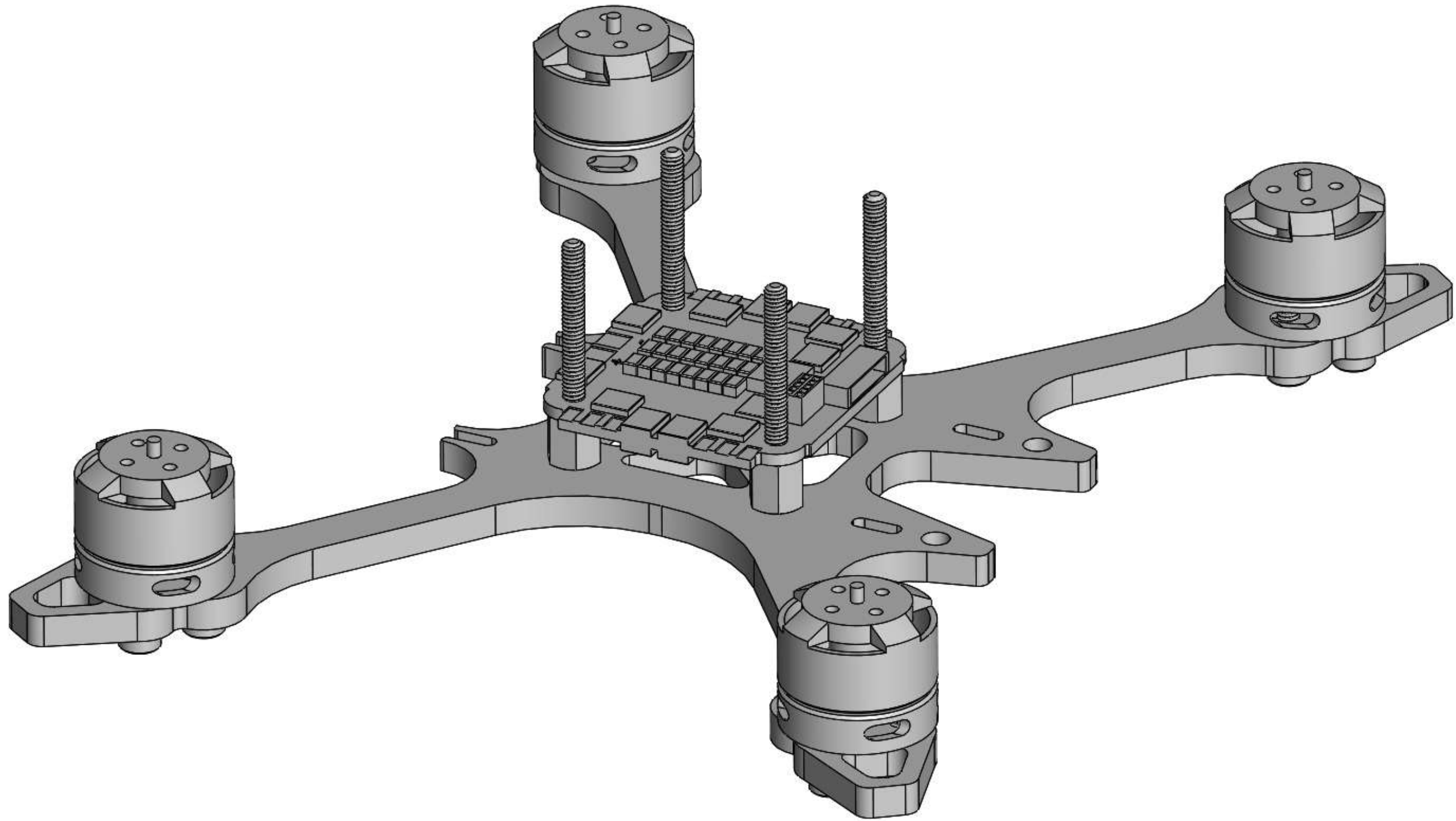
Install the screws, washers, and standoffs as shown to secure the ESC. Cut the motor wires to length and then solder them to the ESC pads.

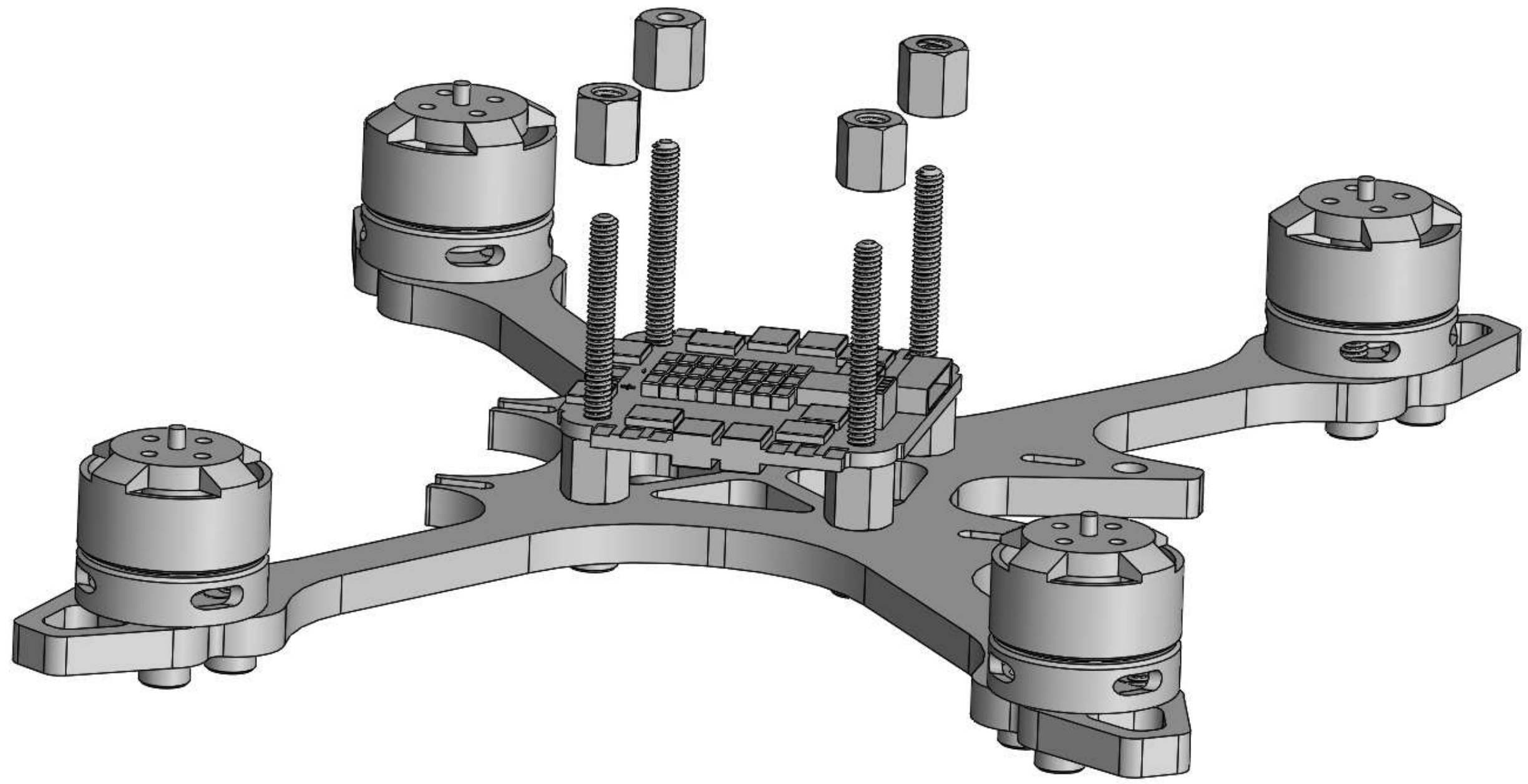


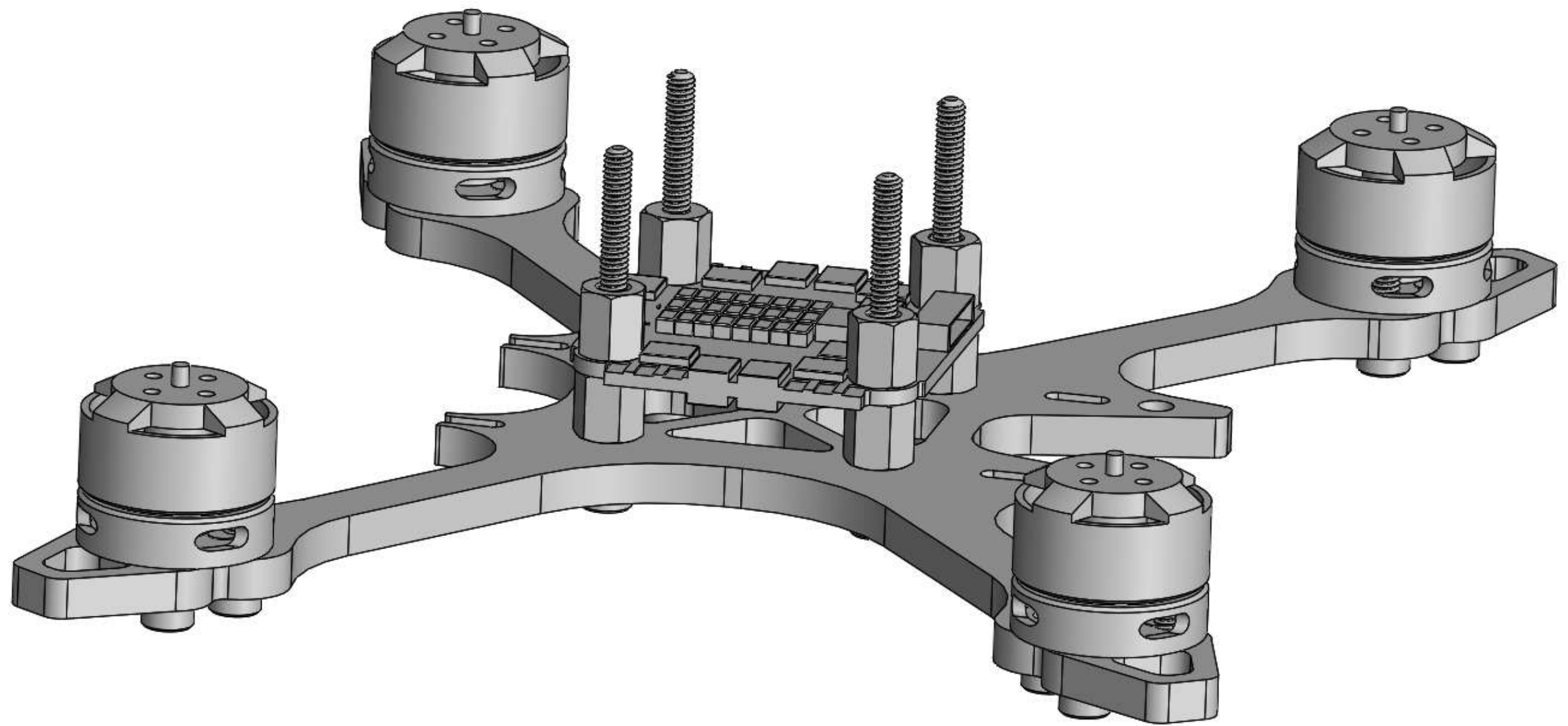












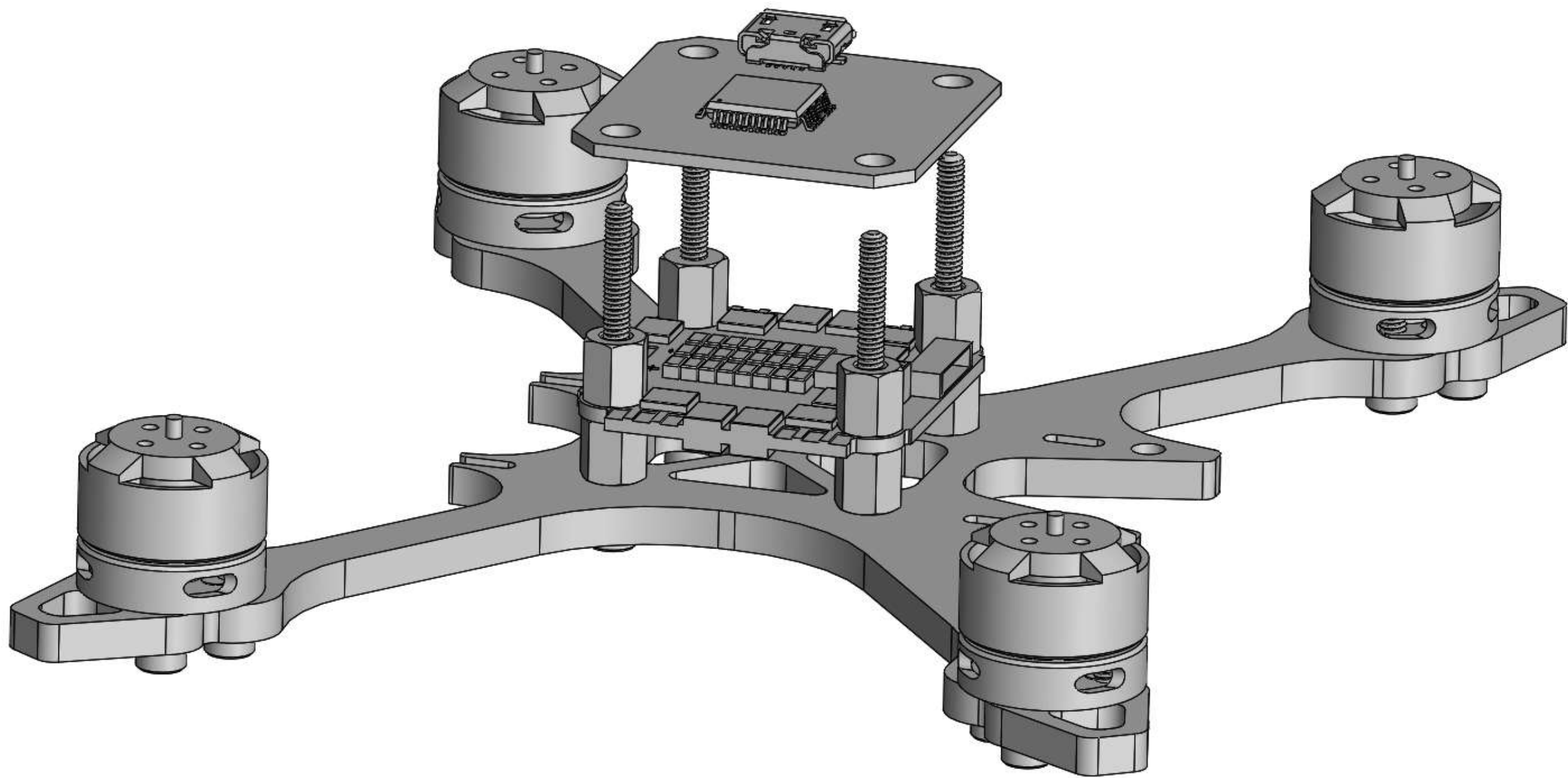
STEP 3

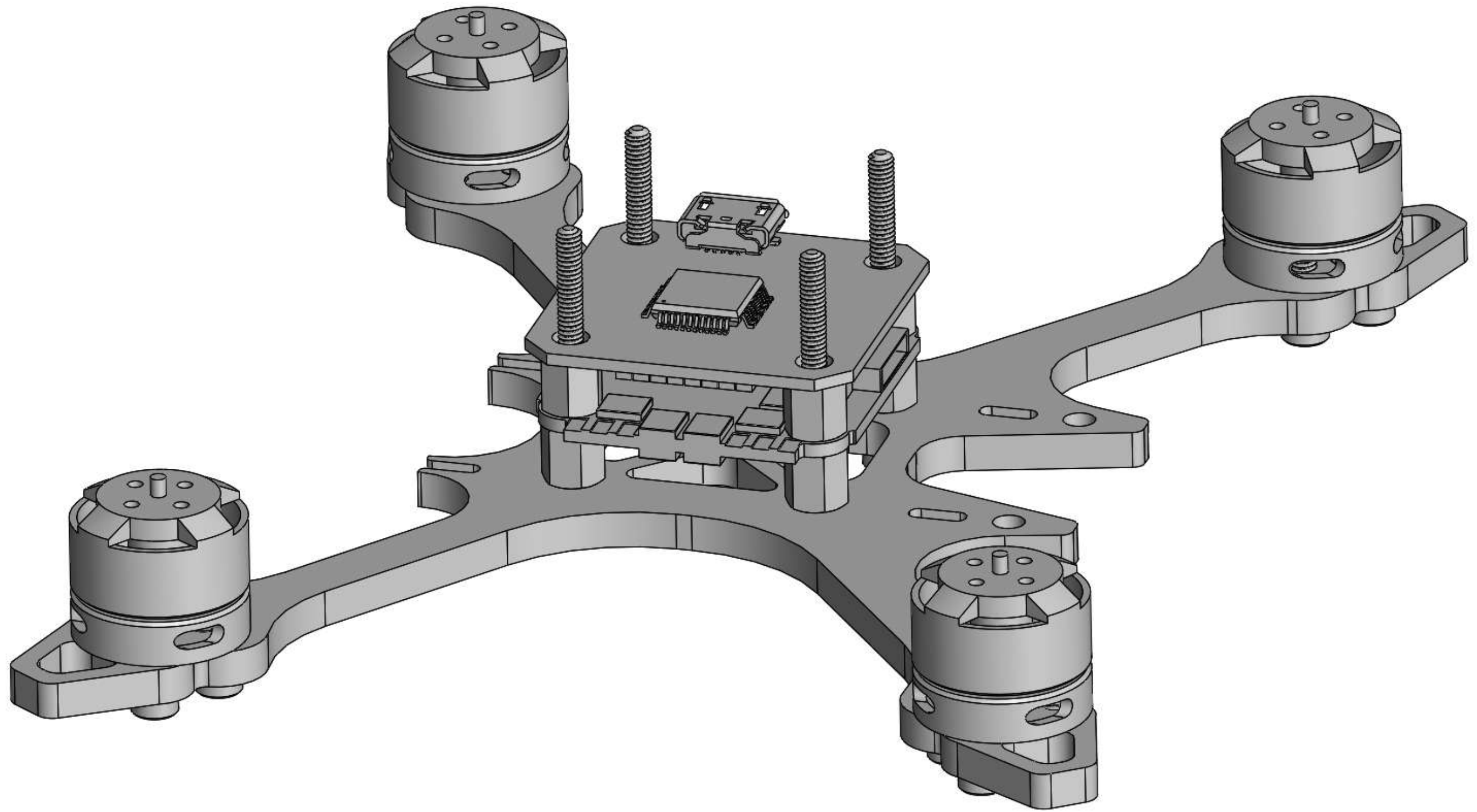
Parts Required:

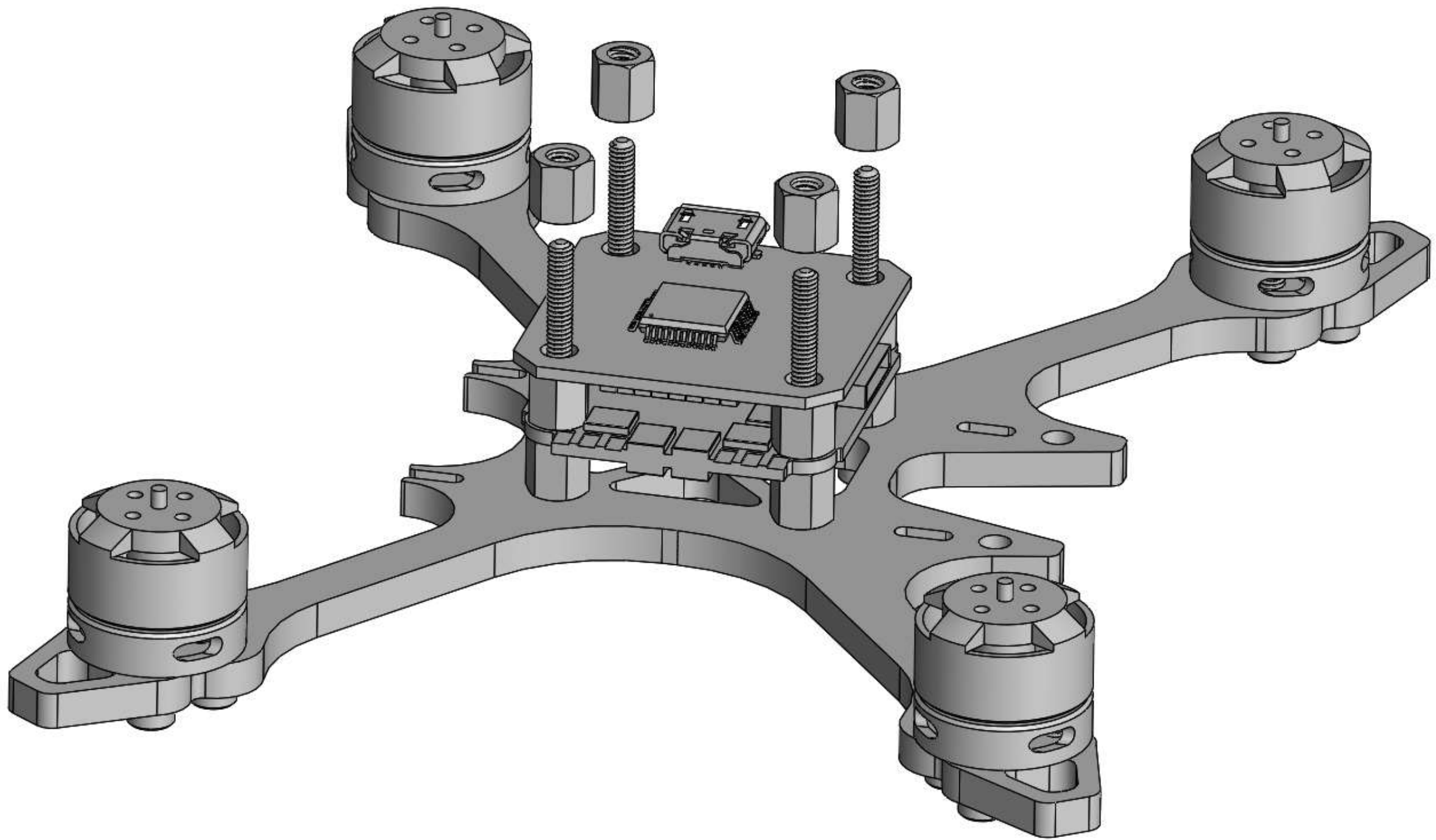
Quantity	Part Description
1	Micro Stack Hardware Set (sold separately)
1	Micro All-in-one FC (sold separately)
1	Micro FPV Video Transmitter (sold separately)
1	Micro Receiver (sold separately)

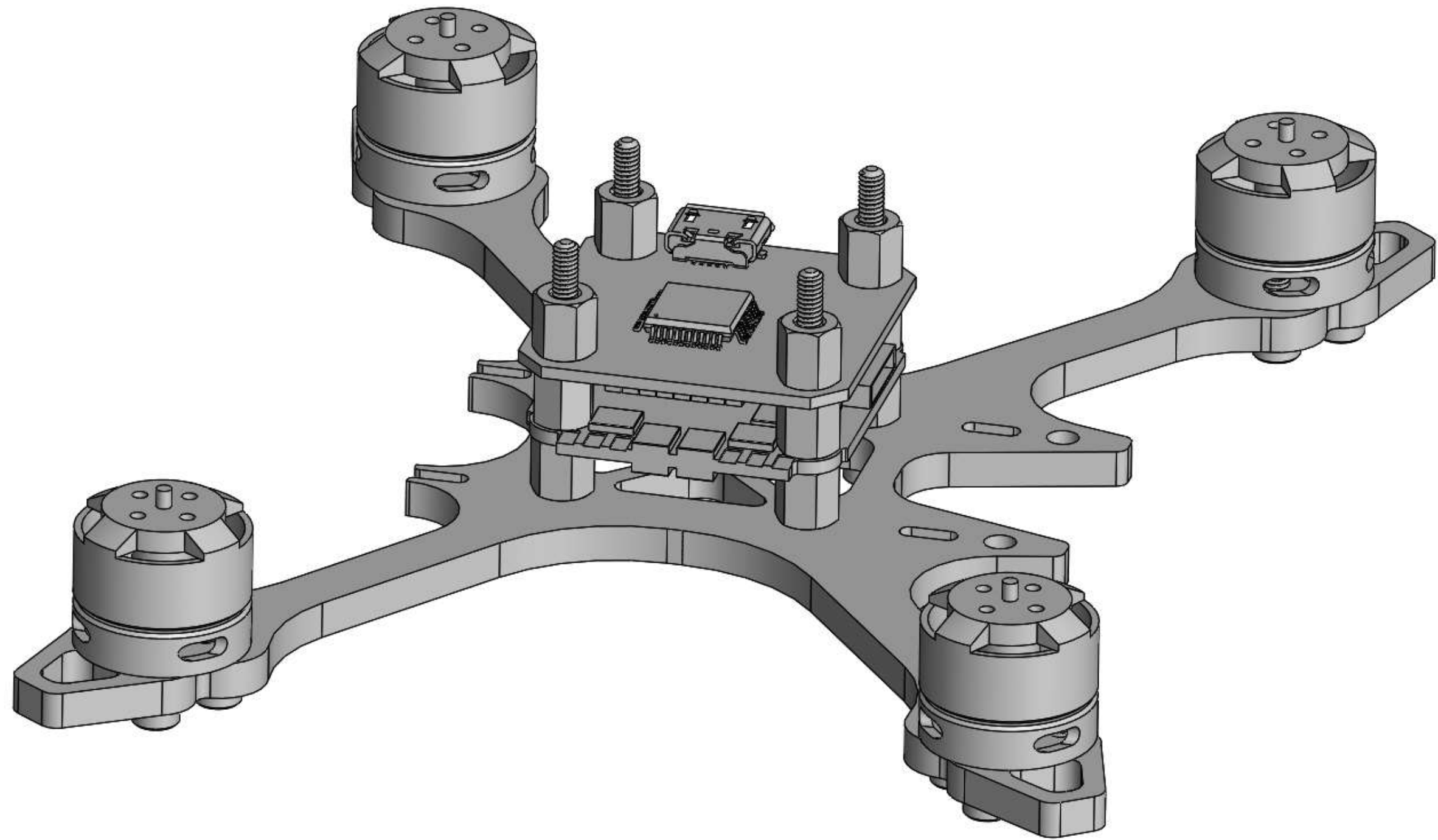
Assembly Process:

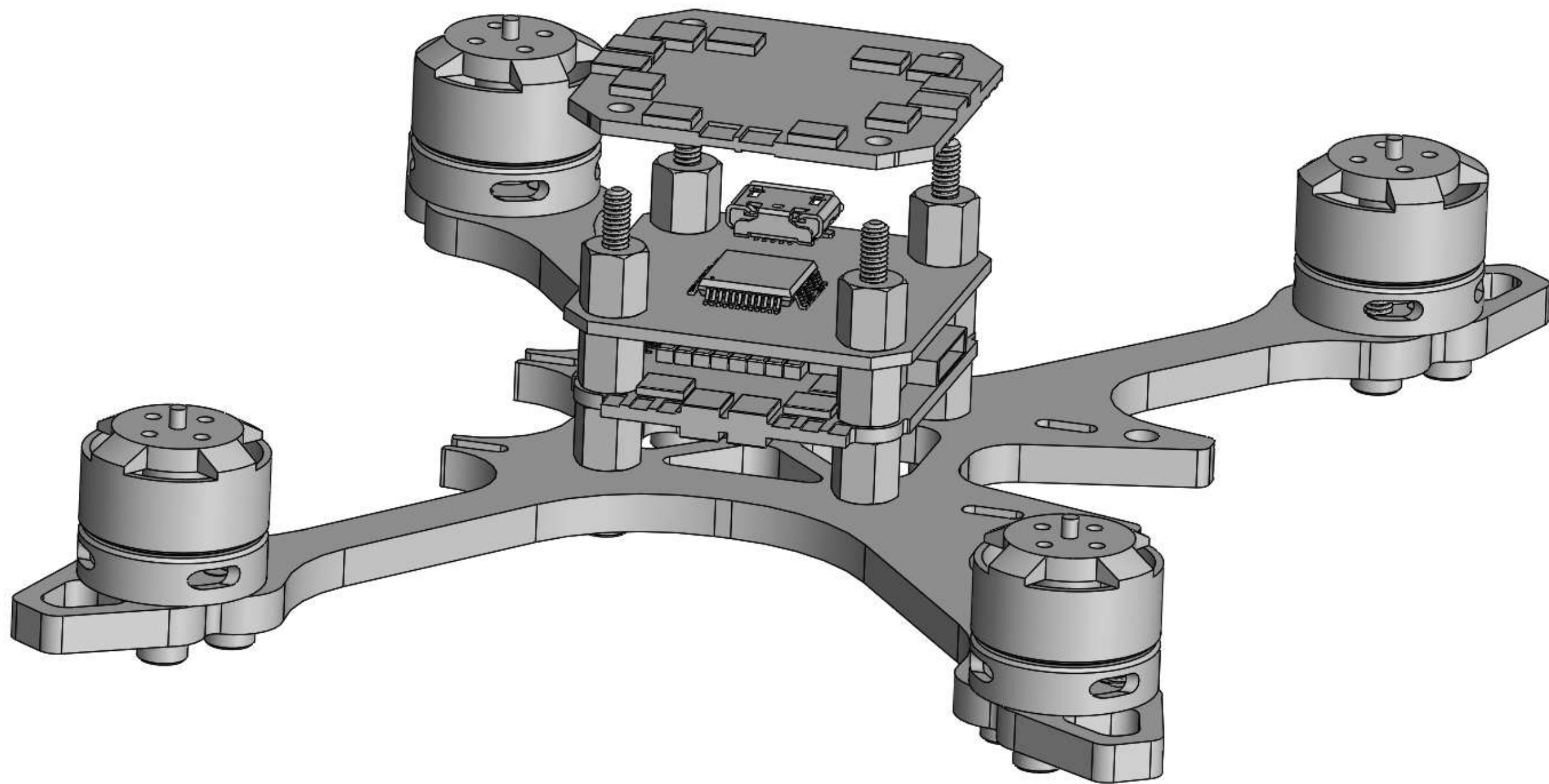
Make all the necessary wiring connections between your ESC, flight controller, video transmitter, and receiver. Install the components as shown below. Please be aware the receiver is not pictured below but should be installed on top of the video transmitter using double sided stick tape.

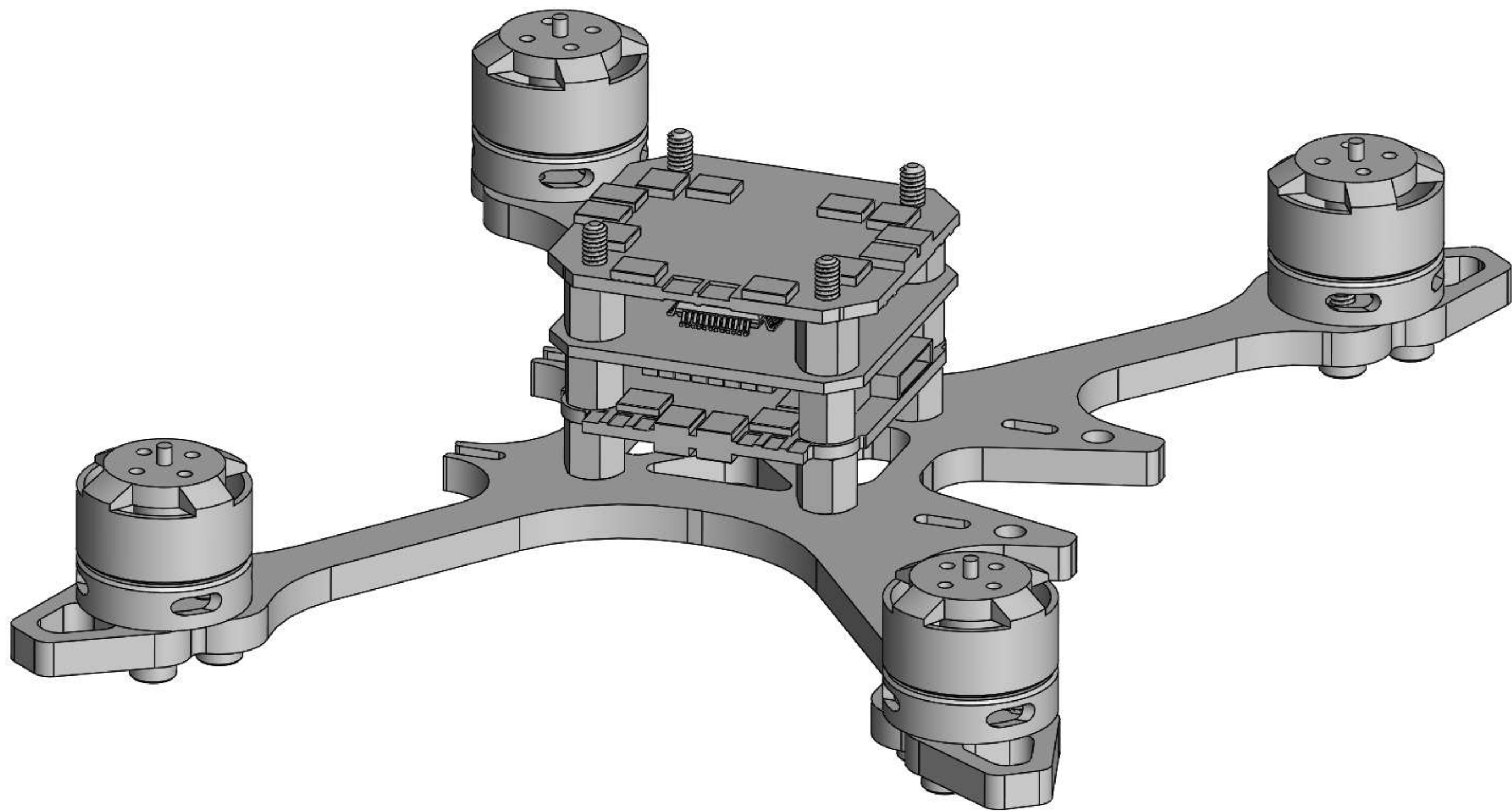


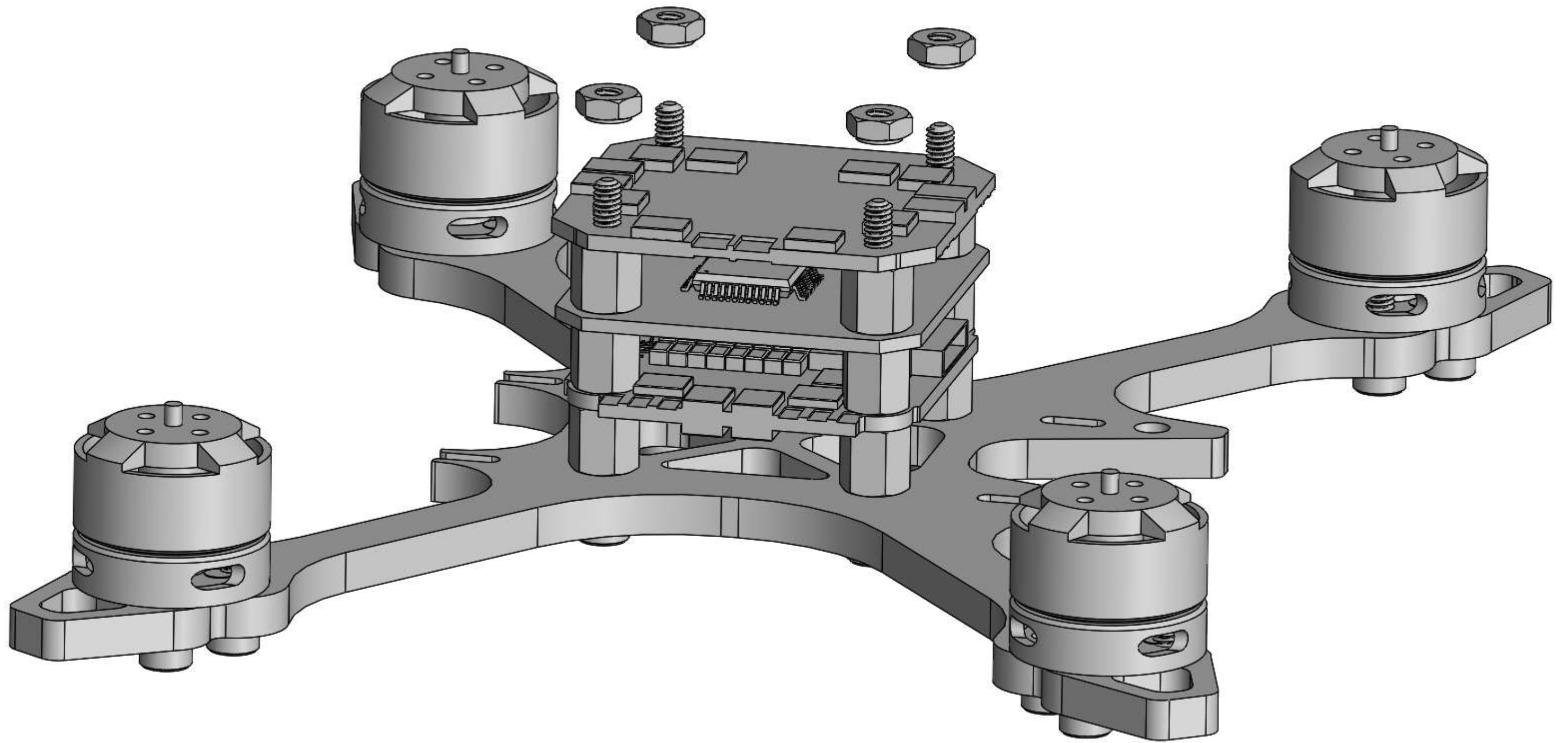


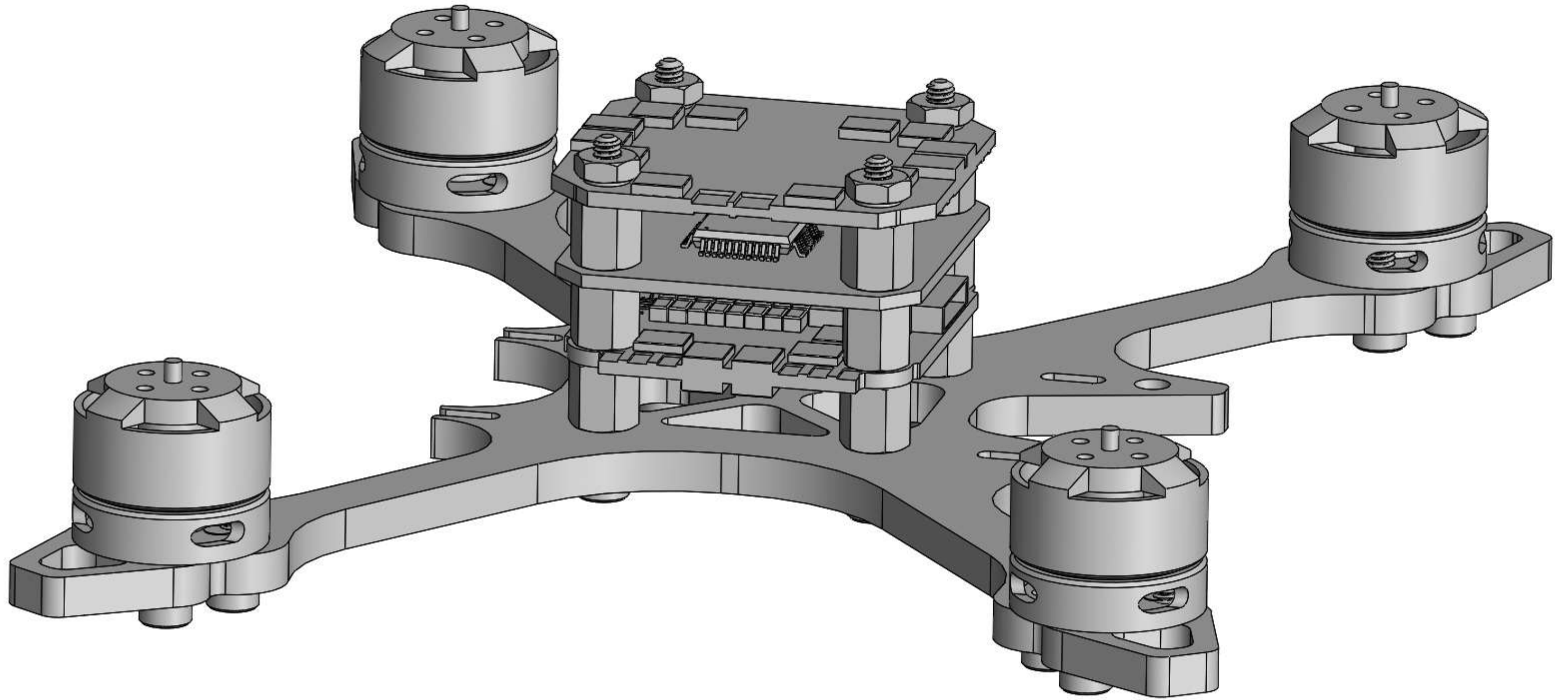












STEP 4

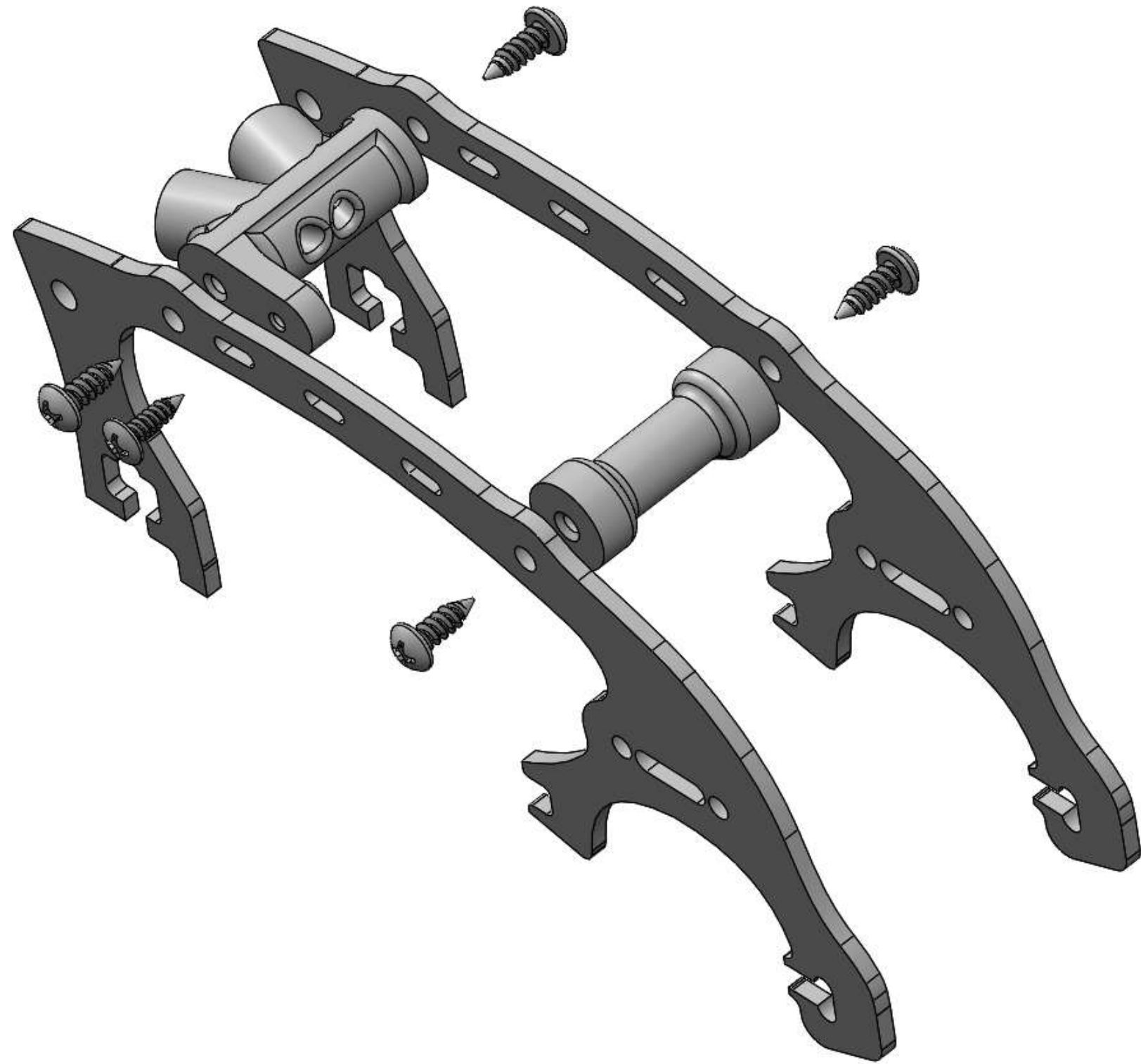
Parts Required:

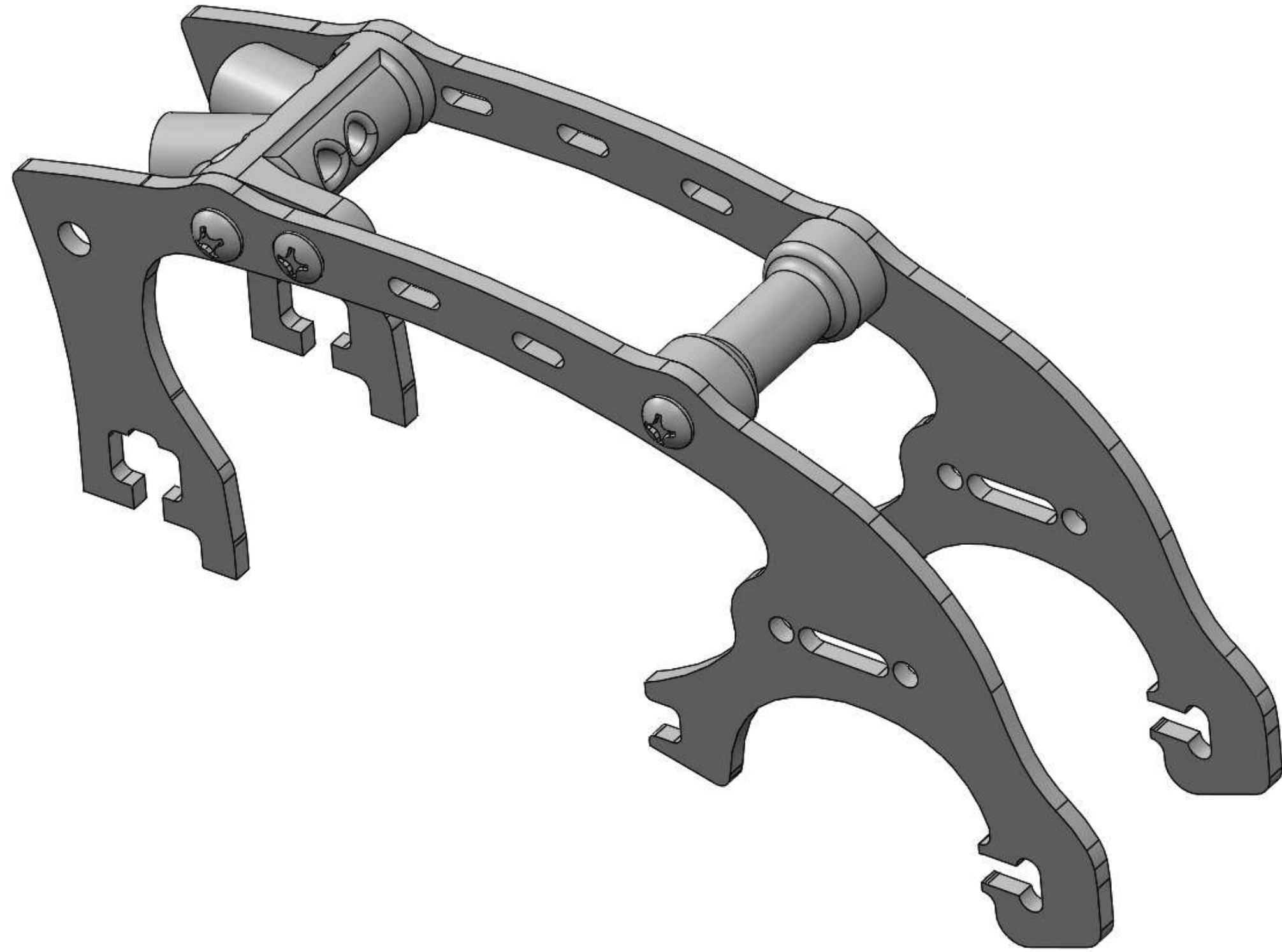
Quantity	Part Description
2	“Roll bar” plate (1.5mm Matte CF)
1	Front standoff - 19mm (Black 3D Printed Plastic)
1	Rear standoff - 19mm (Black 3D Printed Plastic)
1	Phillips head screw (#1 x 1/4" Long Steel)
4	Phillips head (#2 x 1/4" Long Steel)
2	Antenna tube (Black Plastic)

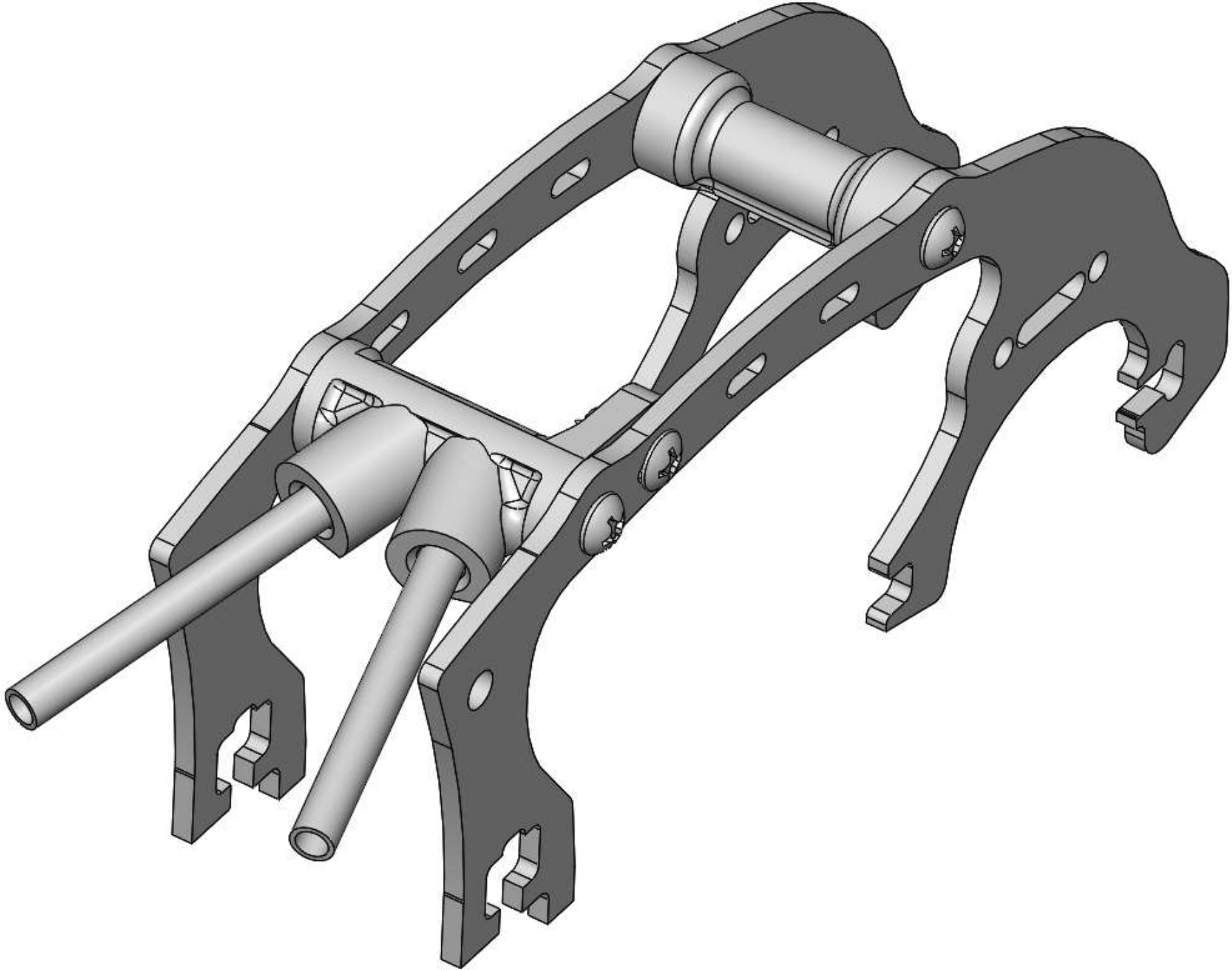
Assembly Process:

There are two ways to assemble the fuselage section of the Massive Droner onto the bottom frame plate. The first method is to pre-assemble the fuselage together and then attach it as one unit to the bottom plate. The alternative method is to join the “Roll bar” plates individually to the bottom plate, then install the standoffs last. Some electronics stacks will only allow for the alternative method. However, most will allow for the first method. For the purposes of this manual we only detail the first method in the pics below.

Join the “Roll bar” plates together using the included standoffs and screws. Press the antenna tubes into the rear standoff as shown. There is a small hole just behind the tube in the carbon fiber plate. Run a small zip tie through this hole and around the tube to help hold it in place securely during crashes.







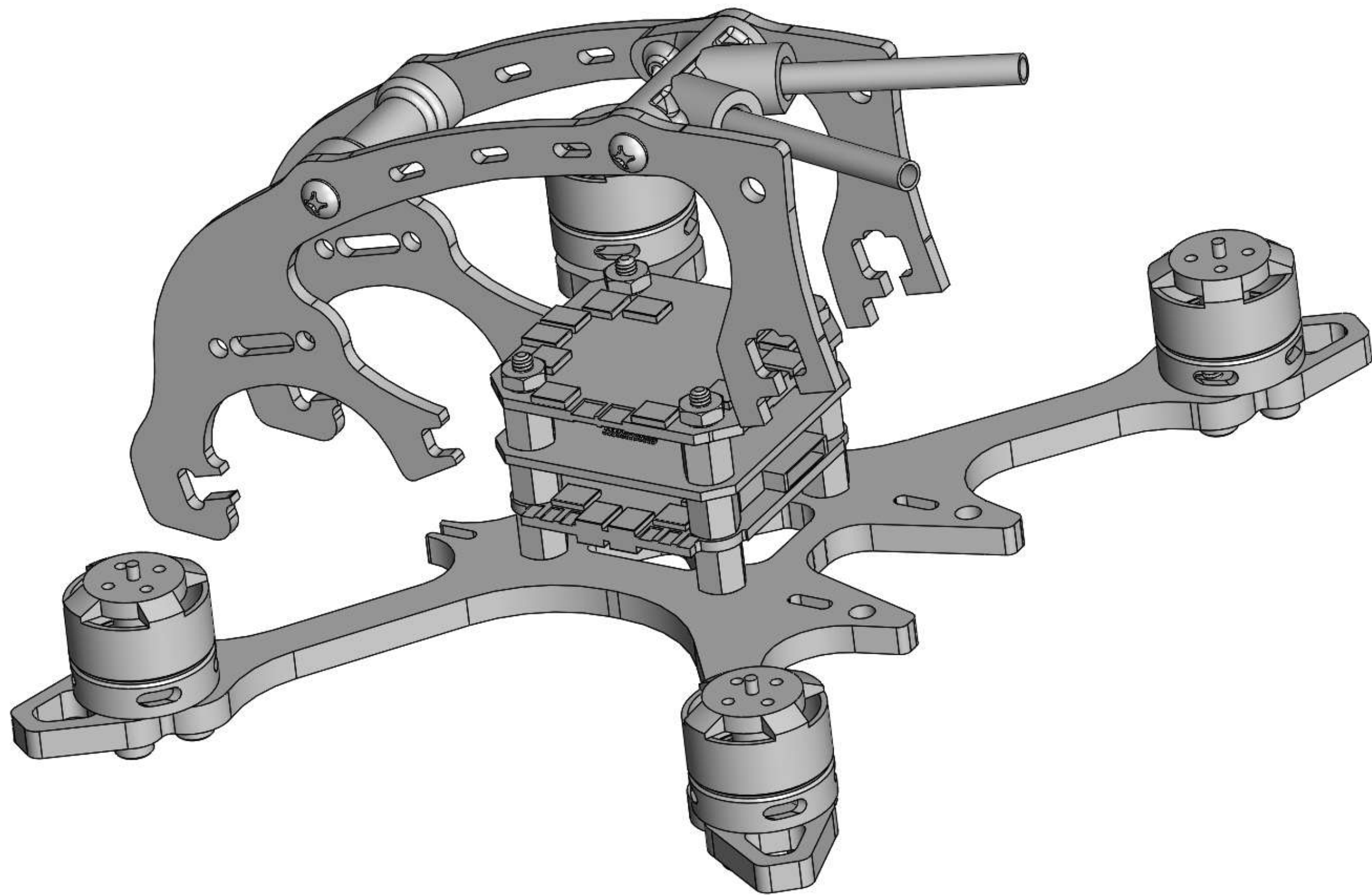
STEP 5

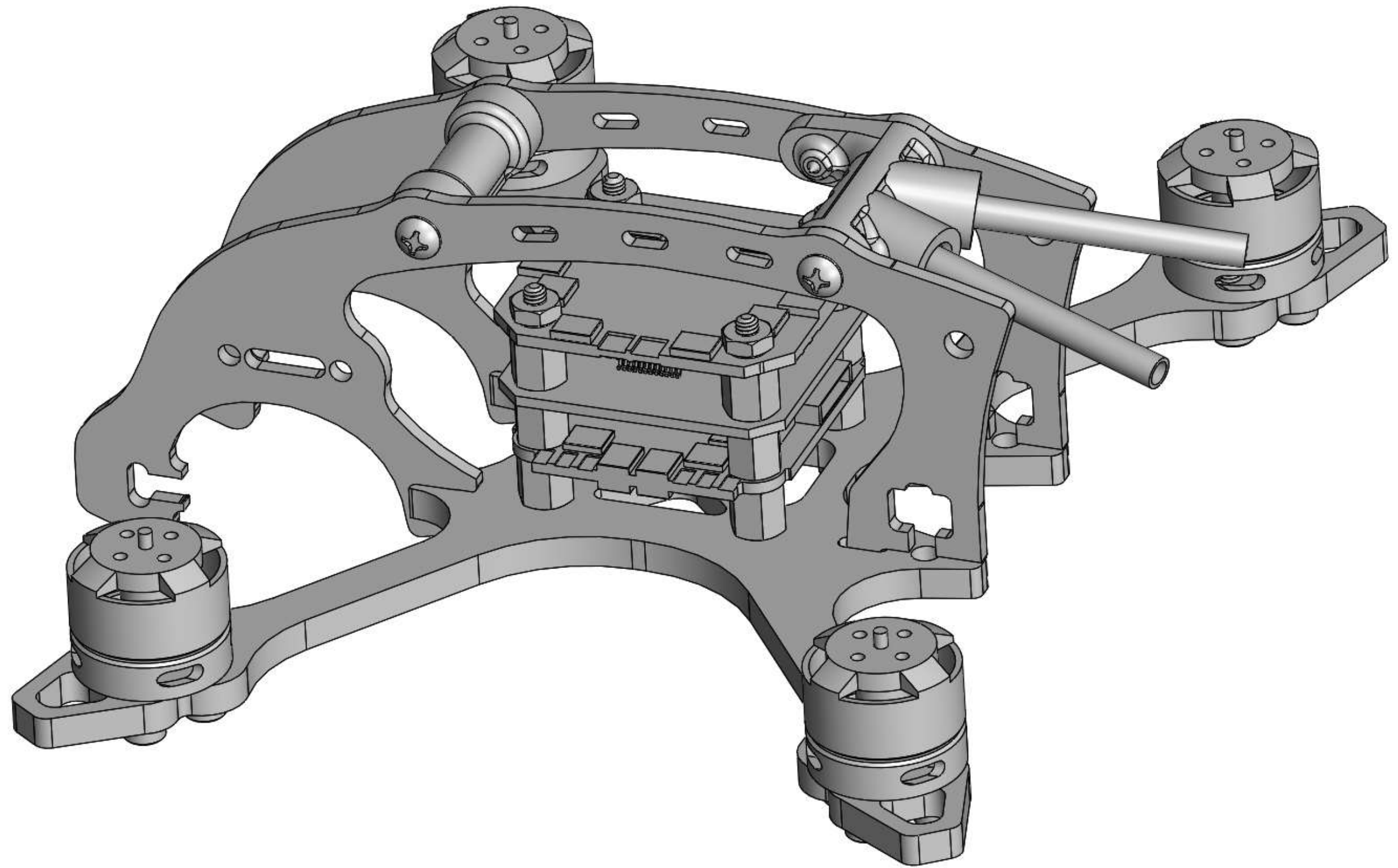
Parts Required:

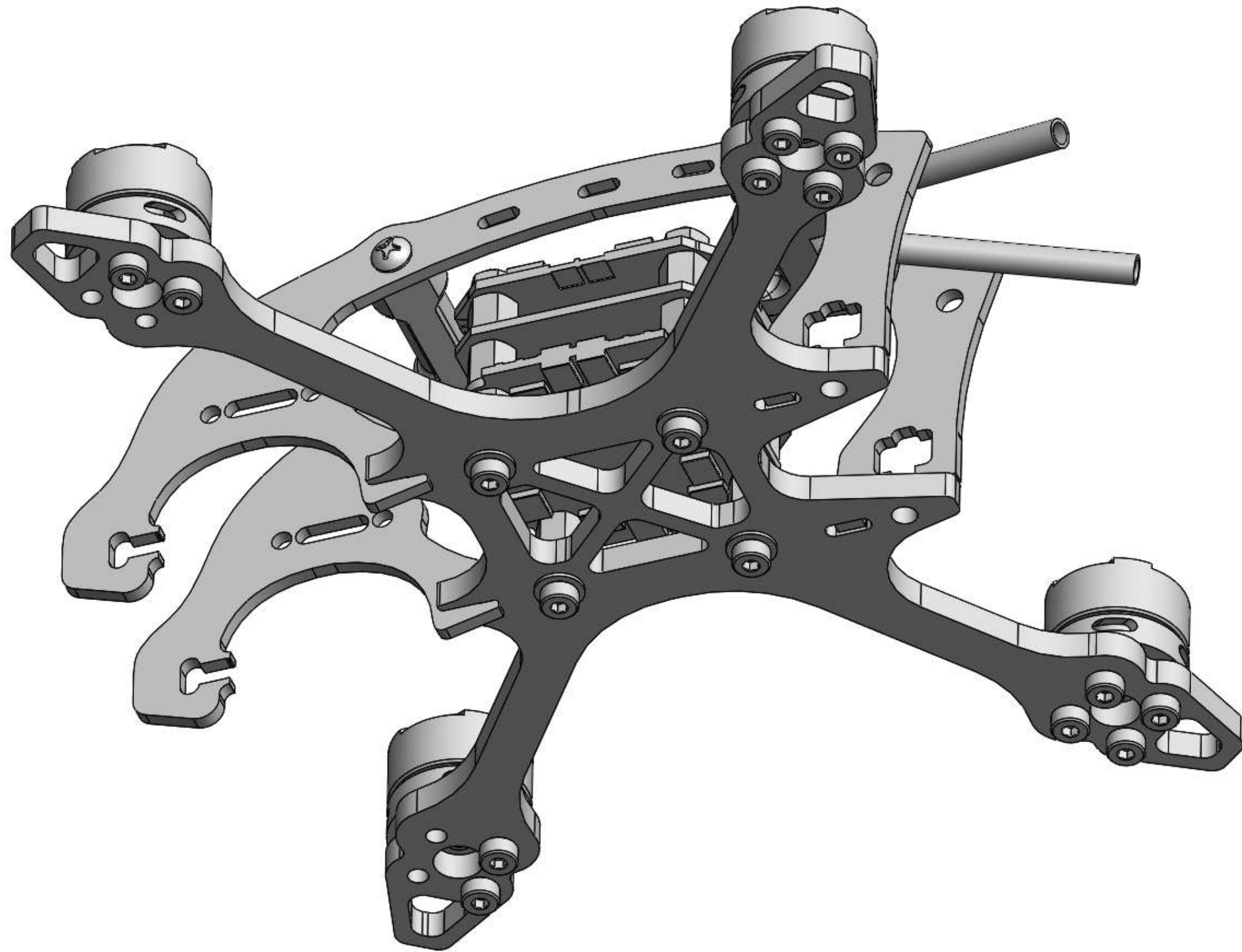
Quantity	Part Description
2	Washer (M2.5 Steel)
2	Nylock nut (M2.5 Steel)
2	Socket head screw (M2.5 Silver Aluminum)

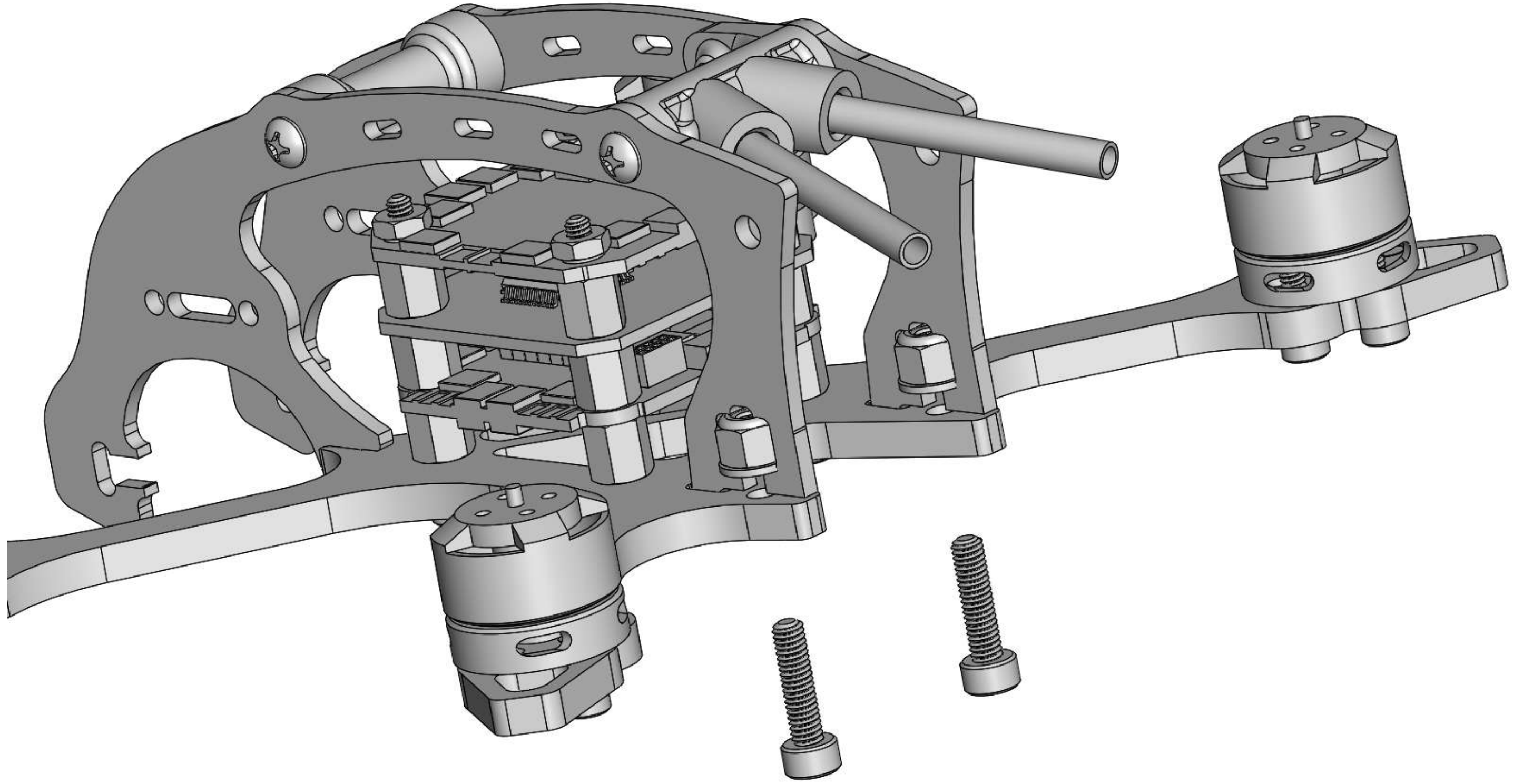
Assembly Process:

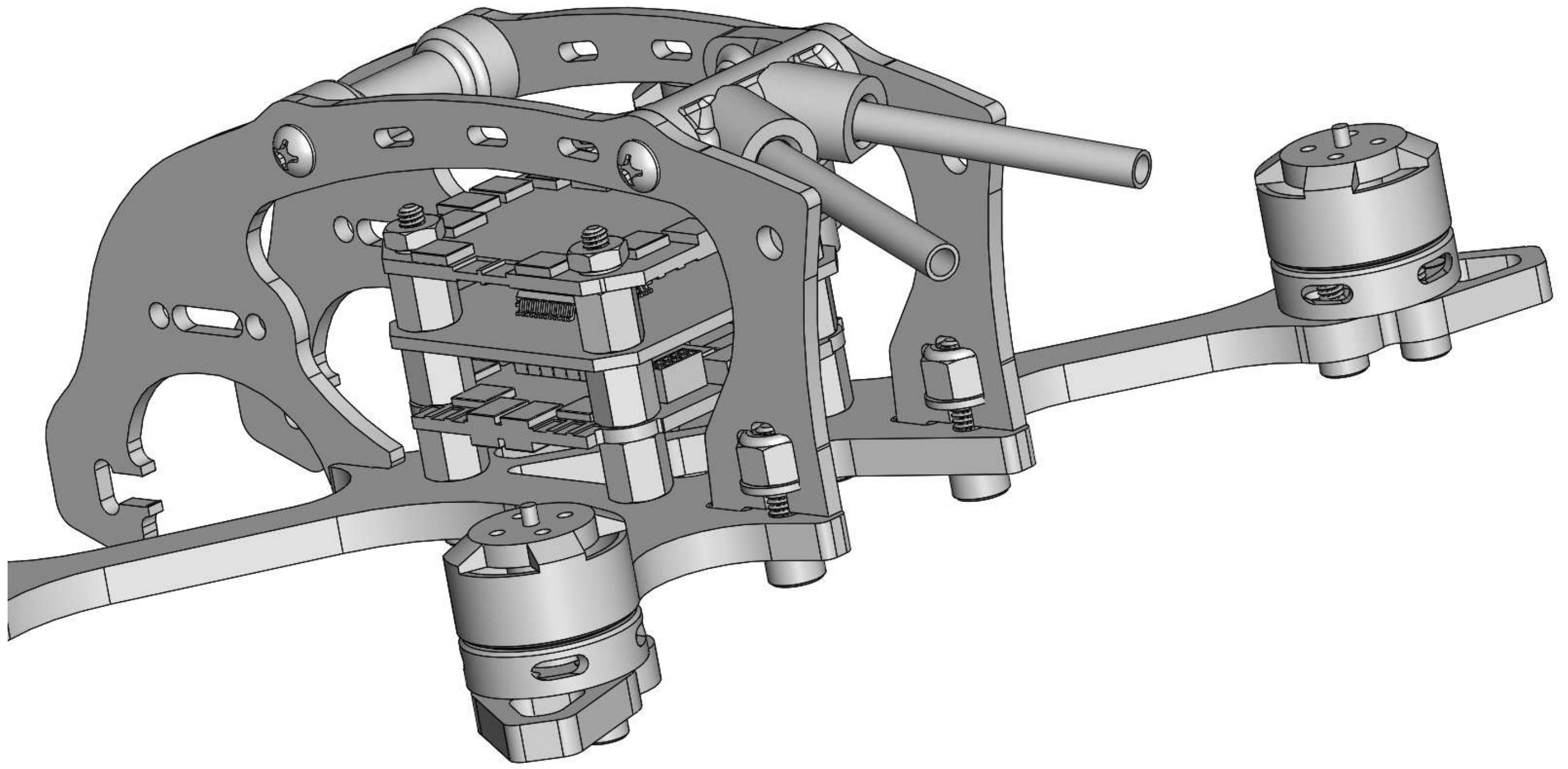
To install the fuselage onto the bottom plate position the front forks into the mating front slots at a slight angle. Then press the fuselage into place will positioning it's rear tabs into the rear slots of the bottom plate. Press the fuselage back until the holes in the bottom plate align with the captured nut cutout. To lock the fuselage in place each roll bar plate is held down with a screw, washer, and nut as show in the pics below. The process of feeding the screw through the bottom plate and installing the washer and nut can be a bit of a pain in the butt. It may take a few times to get it right. Don't give up and don't be a wuss. Don't whine and complain either. You have accomplished amazing things in your life. Don't let this tiny screw and nut beat you!











STEP 6

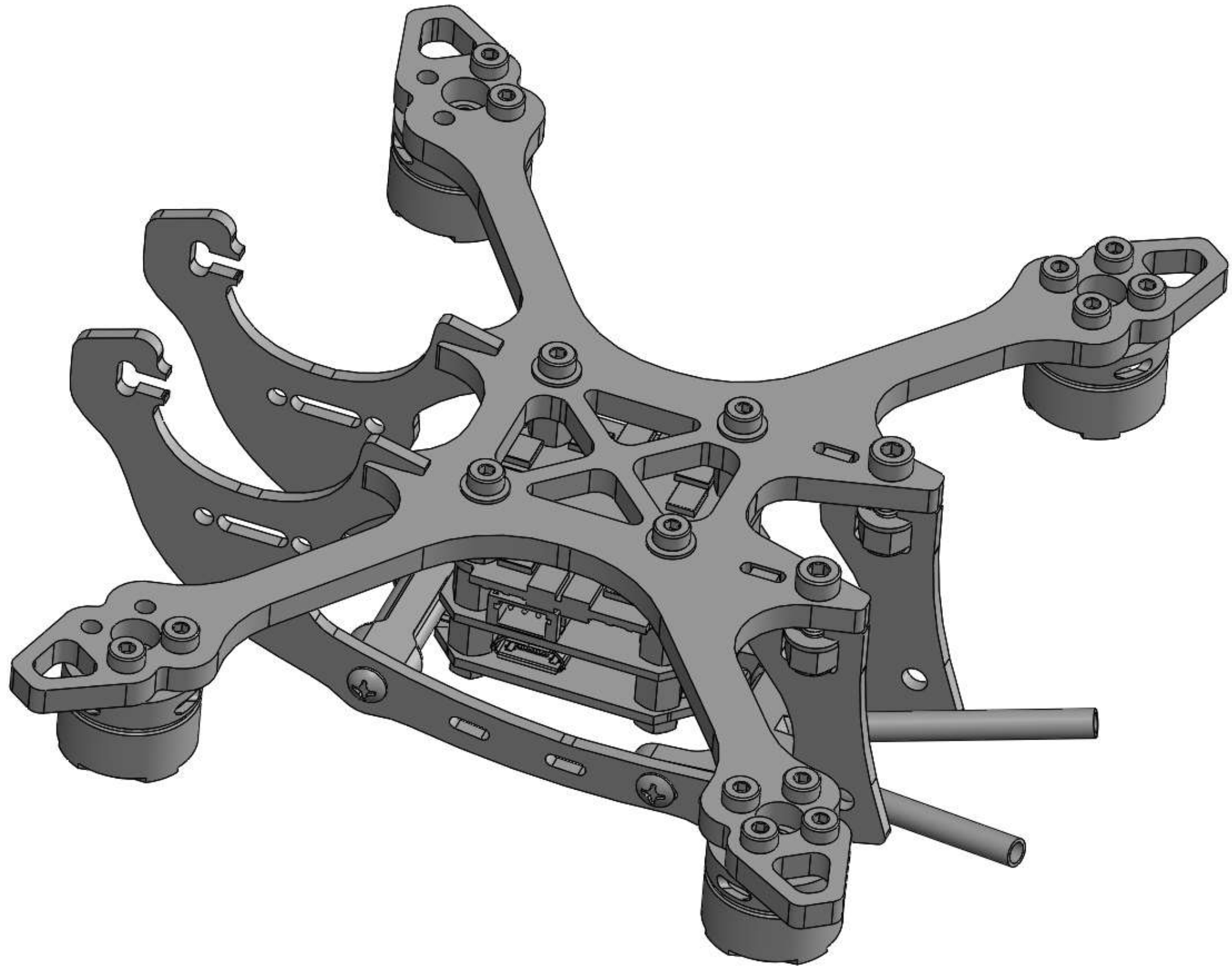
Parts Required:

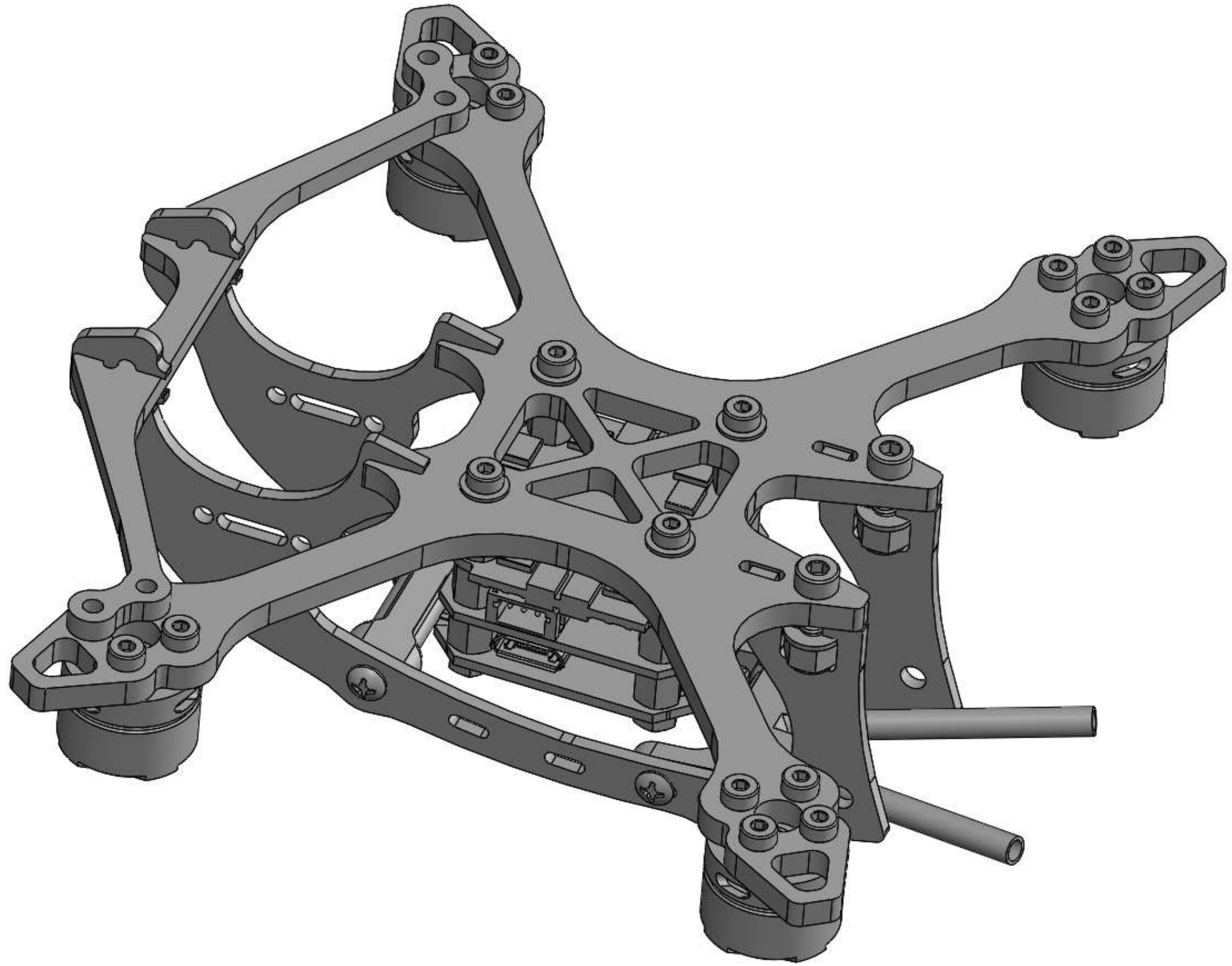
Quantity	Part Description
1	Front arm brace (2.5mm Matte CF)
4	Socket head screw (M2 X 8mm Steel)

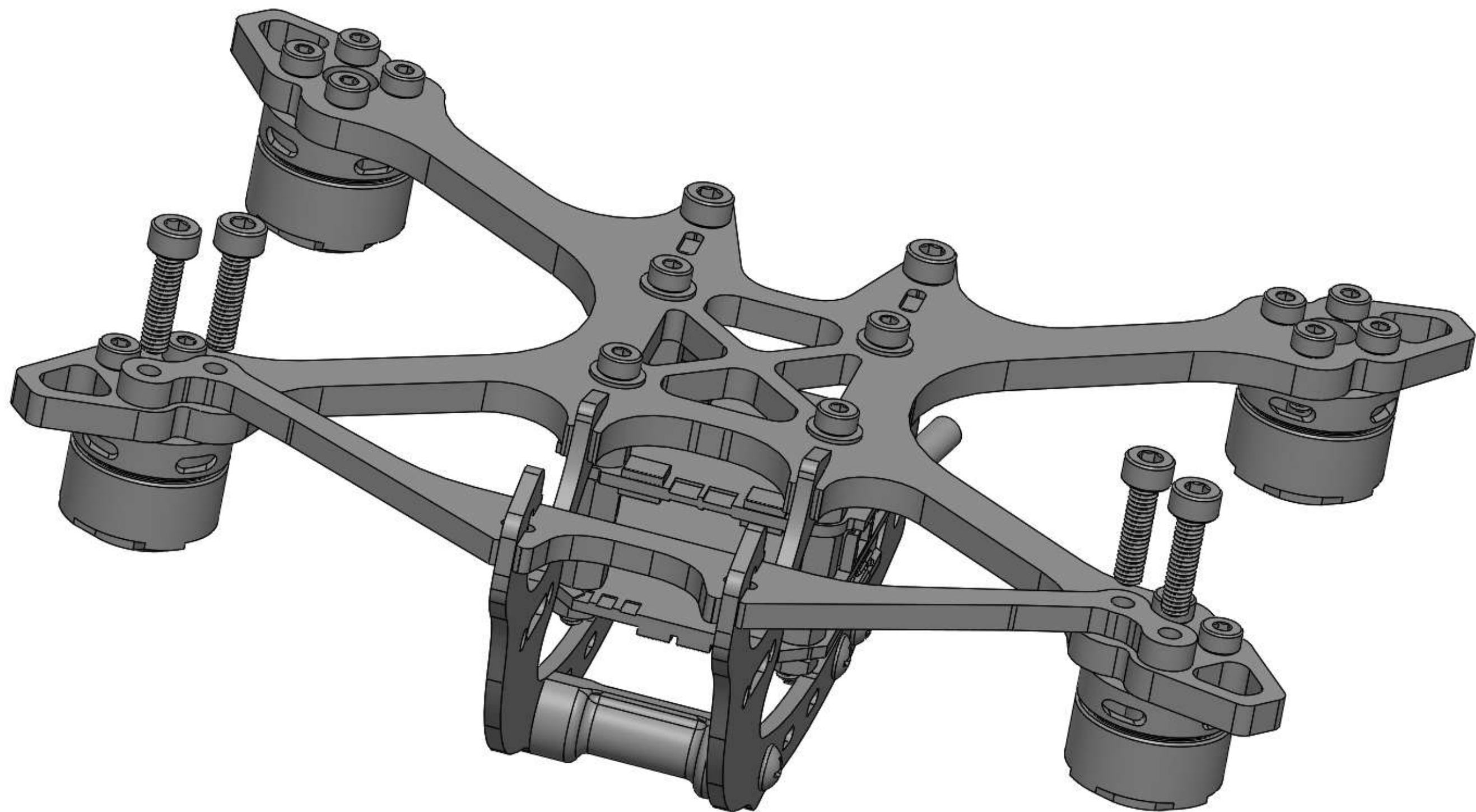
Assembly Process:

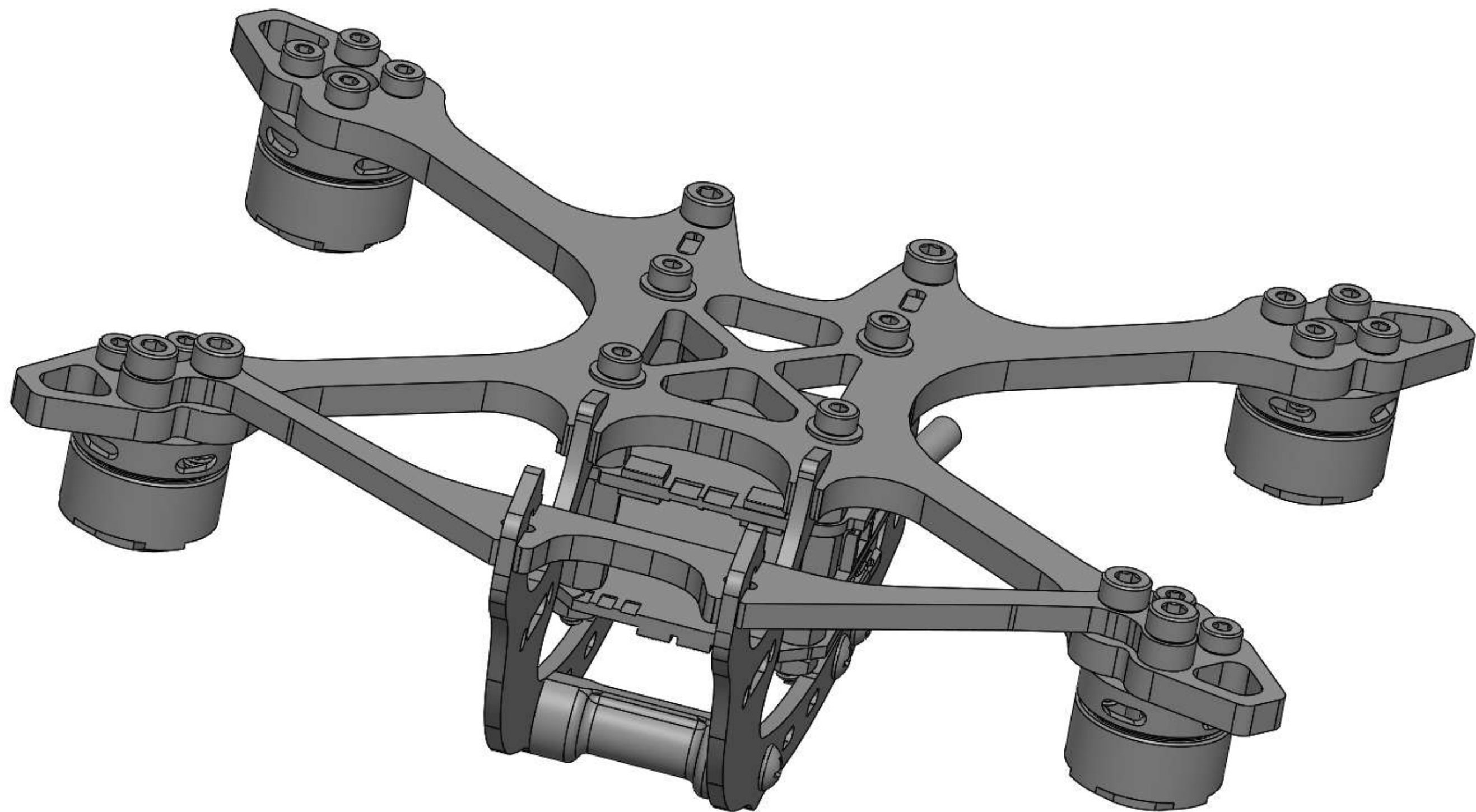
Our first batch of this frame includes a FREE rear brace in the kit. All subsequent production runs will NOT include this brace and it is available as an optional accessory. We do provide enough 8mm long screws in the kit to install both the rear and front brace. Installation of the rear brace is not covered in this manual but is an identical procedure as the front.

While the rear brace is optional the front brace is not. You must install the front brace. If we find out you are flying your Droner without a front brace there will be hell to pay. To install it position as shown below. Then thread the screws through the brace and into the motors.









STEP 7

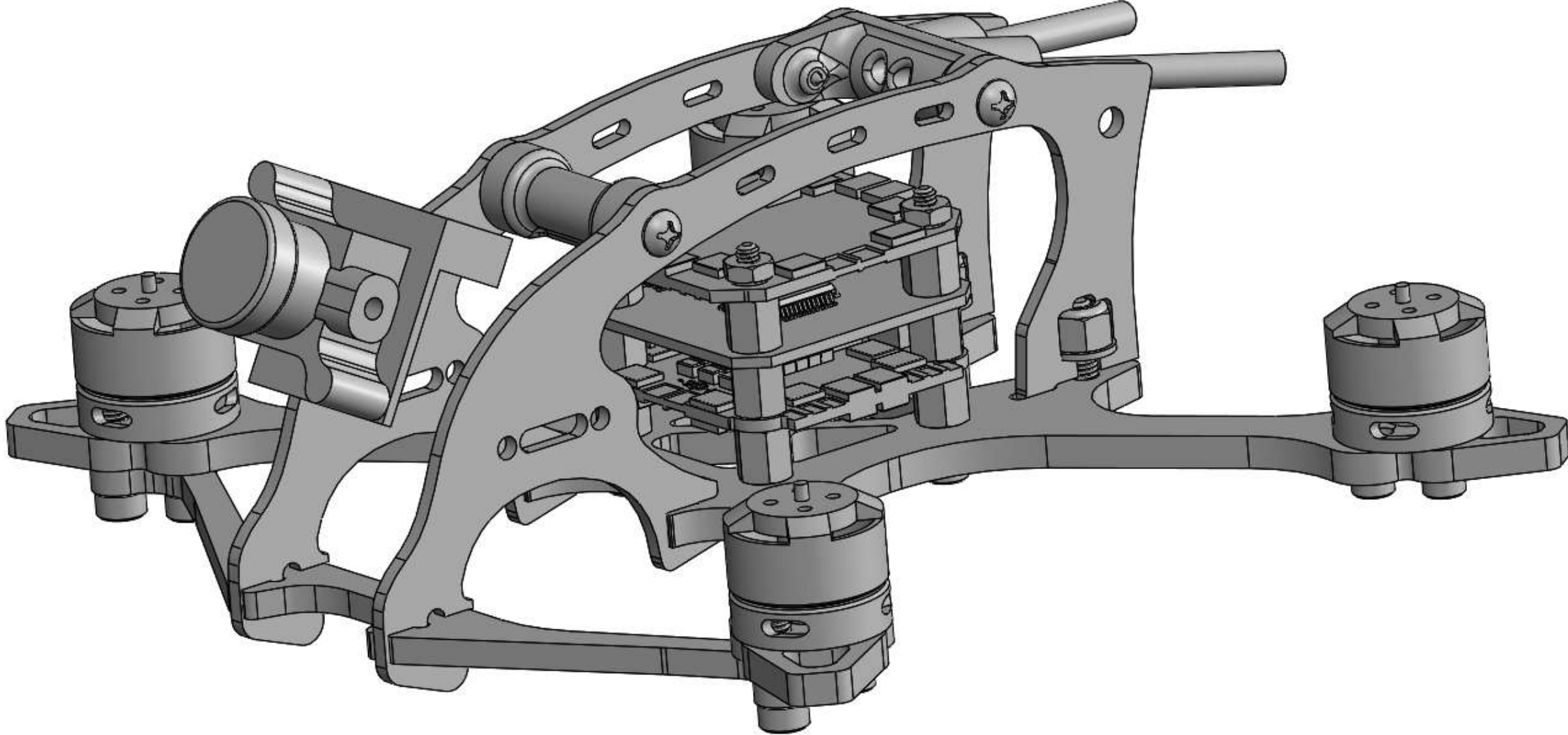
Parts Required:

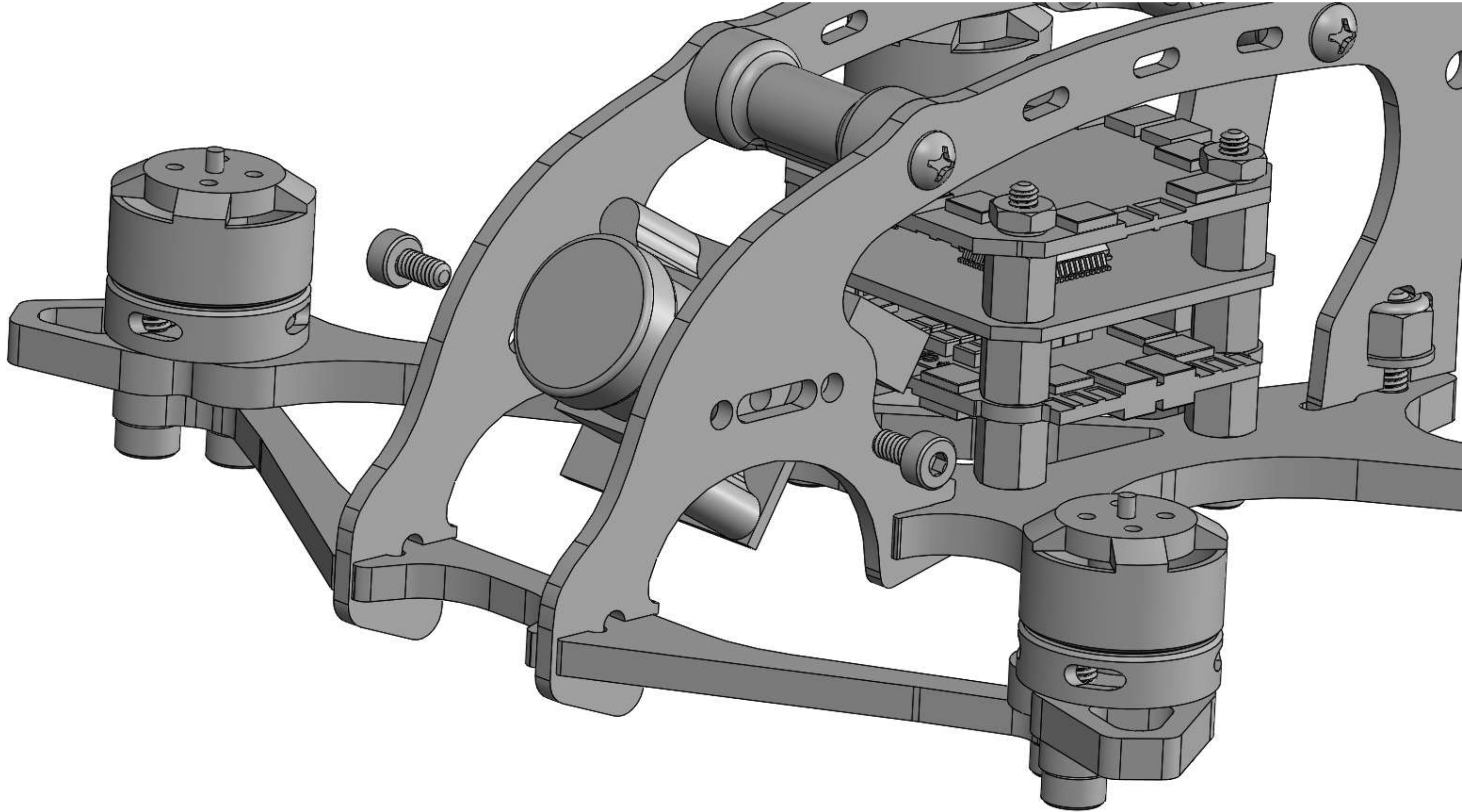
Quantity	Part Description
1	Micro FPV Cam (Sold Separately)
2	Socket head screw (M2 X 4mm Steel)

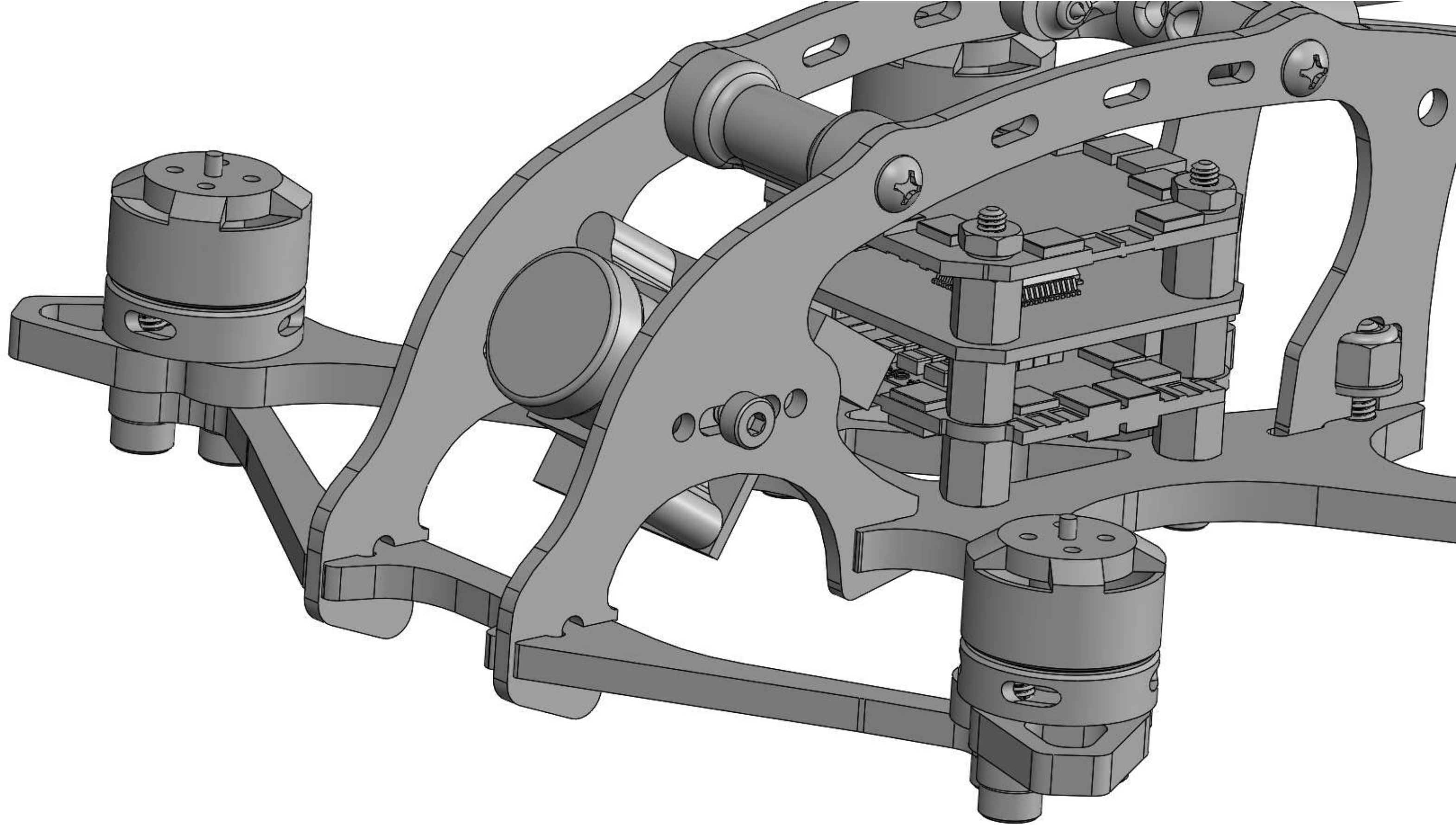
Assembly Process:

The Droner will allow for installation of any micro camera on the market to date. At the time when this manual was created this includes the following: Runcam Micro Eagle, Runcam Micro Swift, Foxeer Micro, Foxeer Predator Micro, Runcam Split Mini, and HGL-RC Elf micro.

Use the included screws to mount your camera of choice. Adjust the placement of the lens in reference to the forward edge of the roll bar plates by sliding it along the slots. Make sure to position the lens such that it sits just behind the plate so the camera is not damaged in a crash.







Final Steps:

Assembly of your Droner is nearly complete. To finish him off run zip ties through the slots in the top rails to securely attach things like the FPV antenna, or provide stress relief for the receiver antennas. Don't forget to run the receiver antennas through the antenna tubes in the rear of the craft. Below is a picture of one of our Droner builds for reference.

Congratulations on completing the most amazing micro FPV quad on planet earth! Feel free to hold your Massive Droner in your hand and show it to everyone you know. They will be happy to see it in person and proud of you for owning such a Massive Droner. There is no shame in your game.

