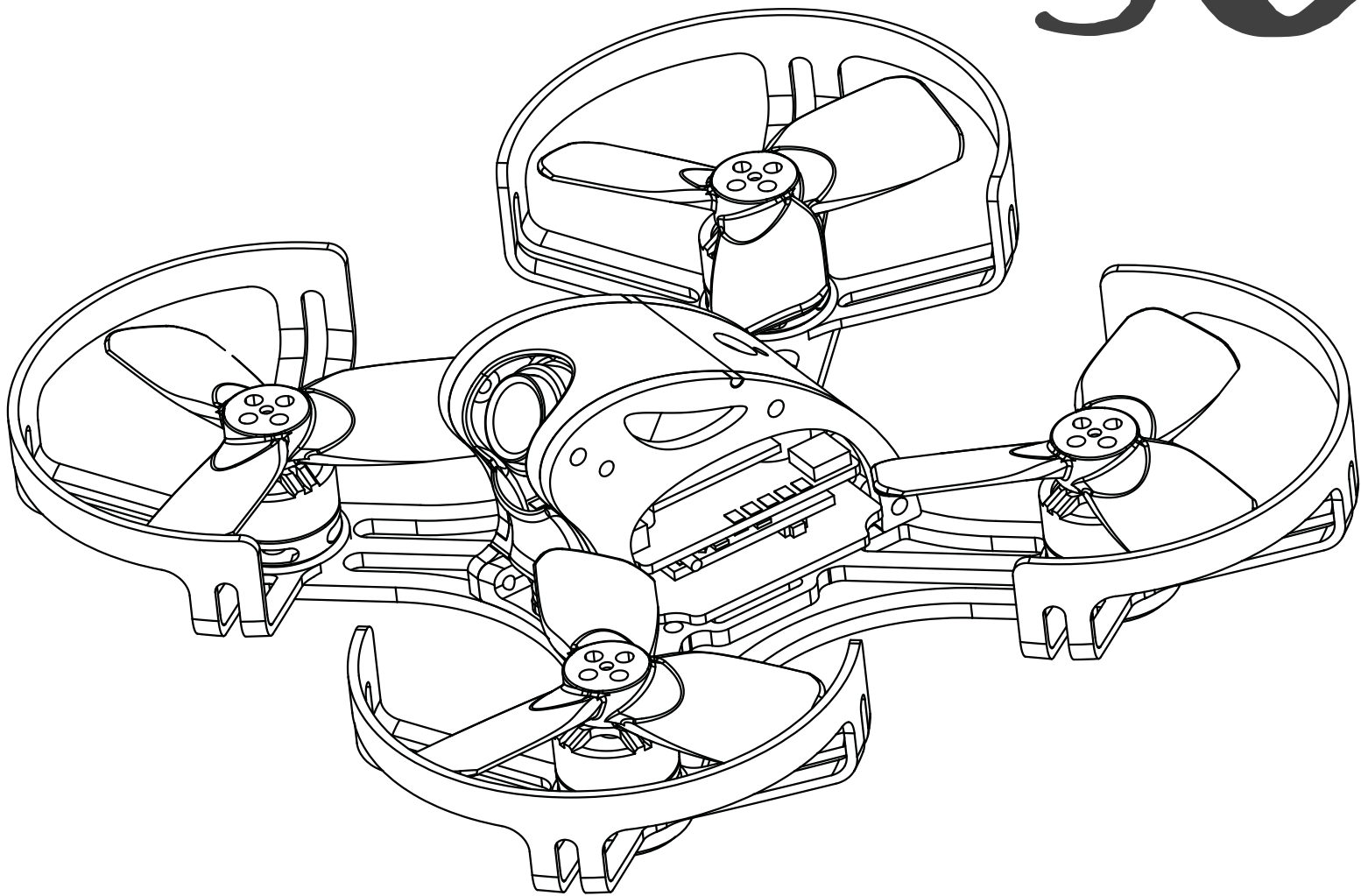


FALCON 90



Instruction Manual

Falcon CP90 Mini FPV Quadcopter

NOTICE: Consult local laws and ordinances before operating FPV (first person view) equipment. In some areas, FPV operation may be limited or prohibited. You are responsible for operating this product in a legal and responsible manner.

Age Recommendation: Not for children under 14 years. This is not a toy.

Specifications

Manufacturers	Gofly-RC
Product model	Falcon CP90
Wheelbase	95mm
Size	125mm*125mm*35mm
Weight	78g(without battery)
Motor	1104 7500KV brushless motor
ESC	4in1 BLheliS 20A(Include 5v BEC)
Power input	2s/3s lipo battery
Max Propeller Diameter	2inch(50.80mm)
Flight time	4-5minutes
Support Receiver	DSMX/DSM2/PPM/SBUS
Camera	700TVL HD CMOS 1/4 inch
Video transmitter	5.8g 25MW 48CH
Flight controller	OMINIBUS F3 flight controller
OSD	Betaflight OSD
LED navigation lights	Programmable RGB LED
Alarm Buzzer	75db

Package Content

CP95 Mini FPV Quadcopter	x1 set
Propeller	x2 pair
Motor protective cover	x4 pcs

Optional Equipment

Battery	2S <input type="checkbox"/> 3S <input type="checkbox"/>
Receiver	Frsky <input type="checkbox"/> DSMX <input checked="" type="checkbox"/> Flysky <input type="checkbox"/> Futaba <input type="checkbox"/>
RC Radio Transmitter	Frsky <input type="checkbox"/> DSMX <input type="checkbox"/> Flysky <input type="checkbox"/>
Micro USB Cable	<input type="checkbox"/>
FPV monitor or goggle	<input type="checkbox"/>
Charger	<input type="checkbox"/>

Flight Preparation

1>Downloader and install Betaflight software in your PC.

Go to Google Chrome web store and search the key word “Betaflight” to install the software in Chrome. This is the software to configure flight controller and your radio so that it can start and control the quad properly.

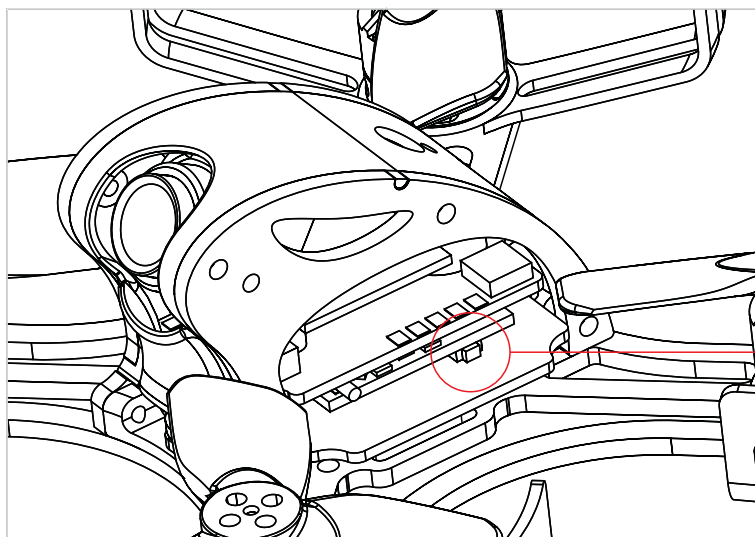
The quad itself has been programmed in the factory and is not necessary to make changes of the parameters for beginners.

2>Binding the quad receiver to a radio

Please set your radio to the airplane mode.

The quad comes with a DSM2/DSMX compatible satellite receiver. Please make sure your radio system is DSM2/DSMX compatible. Otherwise you may need to change the receiver of the quad, and follow the installation instructions of your radio system and OMNIBUS flight controller. The satellite has a binding button on the side.

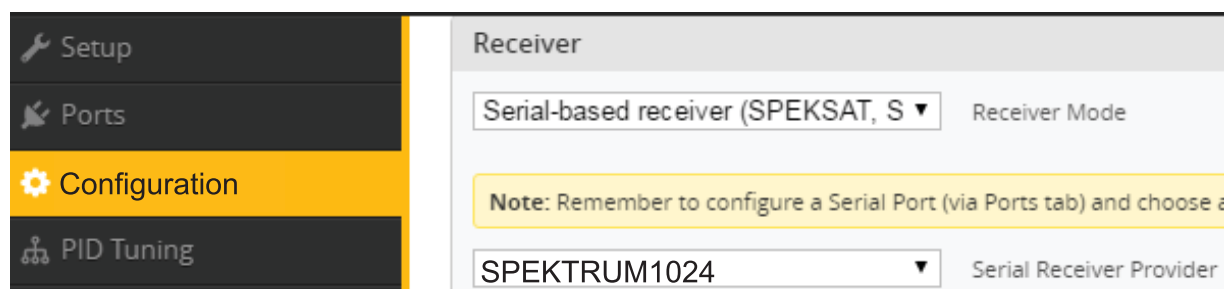
Follow the following steps to finish binding.



Binding button

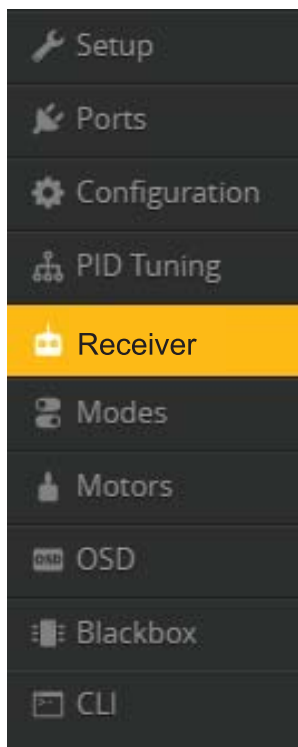
- Press and hold binding button
- Power up the quad until satellite flashes rapidly
- Release binding button.
- LED stays on in DSMX mode.
- LED flashes slowly in DSM2 mode.

If the radio only support dsm2, please select spektrum 1024 in the betaflight configuration and save.

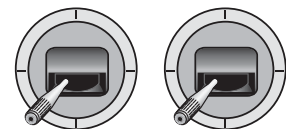
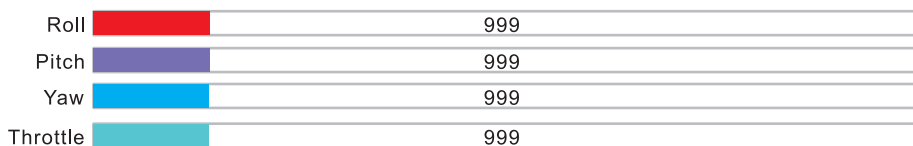


Flight Preparation

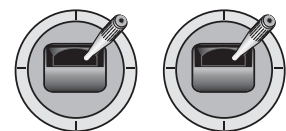
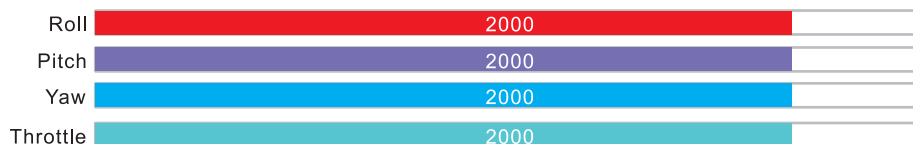
3> Betaflight and Radio settings



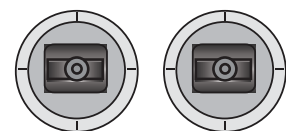
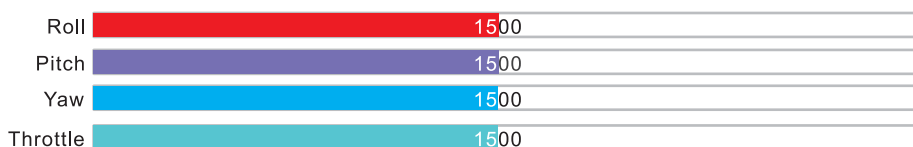
Set the minimum range smaller than 1100



Set the maximum range bigger than 1900

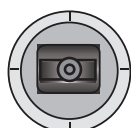


Set the middle point to 1500

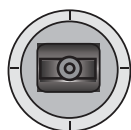


4>Lock and unlock throttle

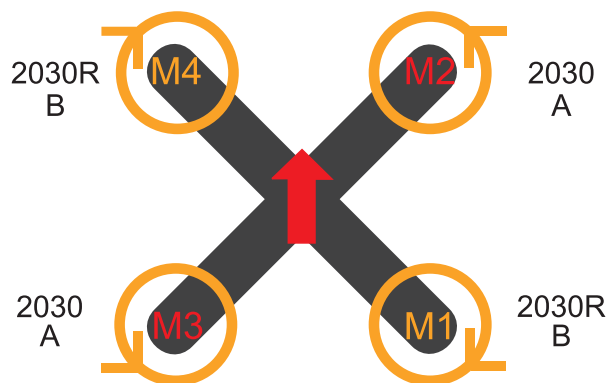
For safety the throttle is locked in factory settings. To unlock throttle and power on the quad move the throttle stick all the way to the right lower corner.



Unlock throttle
(Power on)



Lock throttle
(Power off)



5>Installing the Propellers

Refer to the illustration for the proper motor rotation and propeller location. The 3blade propellers have an “2030R” or “2030” marked on one blade. Match the propeller location to the illustration.

The 5blade propellers have an “A” or “B” marked on one blade. Match the propeller location to the illustration.

Secure the propellers using 2 socket head screws per propeller. Do not overtighten the screws as damage to the propellers or motors may result.

WARNING

DO NOT have propellers installed during setting procedures. Unexpected startup may cause serious damages or injury.

Video System Detail

Electrical Characteristics:

Frequency band:5362-5945 MHz

Channel customer:48

Modulation:FM

Channel SEL.:Touch Switch

Channel Indicate:CHI-CH8 Channel indication with 4 LEDS and A~B frequency group Indicate with 3LEDS

Transmit power:13 ±1dBm

Frequency control:PLL

All harmonic:Max-50dBm

Frequency Stability: ±100KHz(Typ.)

Frequency precision: ±200KHz(Typ.)

Channel Carrier error:1dB

Antenna Port:50Ω

Input format:NTSC/PAL

SENSOR:PAL:720X540/NTSC:640X480 1/4"

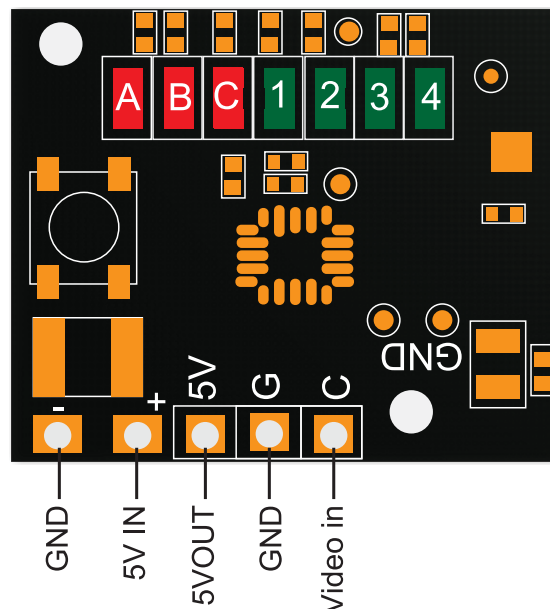
LENS ANGEL:H:120°/V:100°

Base -band interface:P1.27*2

Power consumption:200~215MA@5V DCIN

Supply Voltage:2.9-5.5v

Operating Temperature:-10 °C ~+60 °C



1234 \ ABC	1	2	3	4	5	6	7	8	
ABC	OXXX	XOXX	XXOX	XXXO	OOXX	XOOX	XXOO	O000	
FS/IRC	OXX	5740	5760	5780	5800	5820	5840	5860	5880
E	XOX	5705	5685	5665	5645	5885	5905	5925	5945
A	XXO	5865	5845	5825	5805	5785	5765	5745	5725
R1	OOX	5658	5695	5732	5769	5806	5843	5880	5917
R2	XOO	5362	5399	5436	5473	5510	5547	5584	5621
B	000	5733	5752	5771	5790	5809	5828	5847	5866

Notes:

1. ABC red color stand for frequency group. 1234 green color stand for frequency points.
2. O stand for turn on light, X stand for turn off light. Switch frequency points according to different O or X.

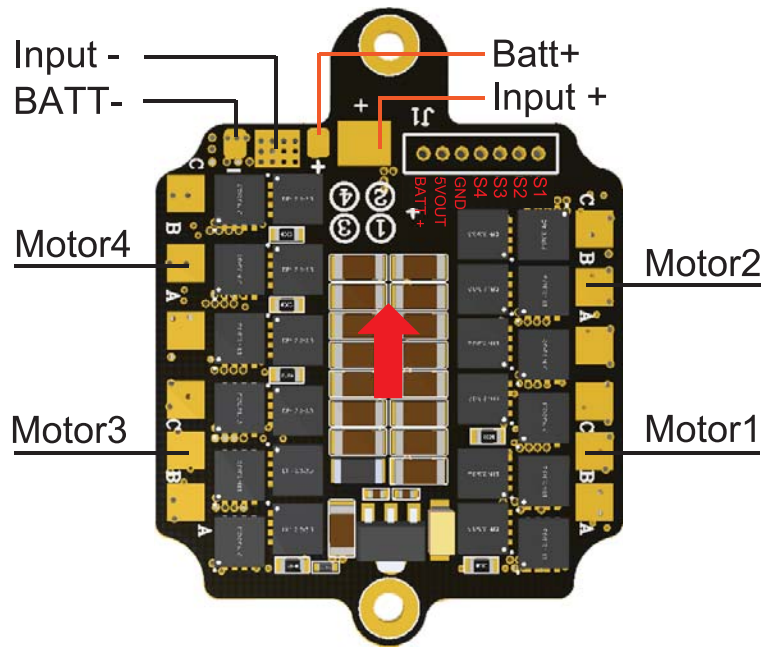
Operation Instructions:

- 1.LED ABC red color frequency group, LED 1234 green color frequency points;
2. O stand for turn on light, X stand for turn off light. Switch frequency points according to different O or X
- 3.Short press on button, switch channel from 1 to 8;
4. Long press for 2s to enter or quit the setting, enter frequency group setting press button to switch frequency group from A to F. press the button for 2s to quit setting.

ESC Detail

Specifications:

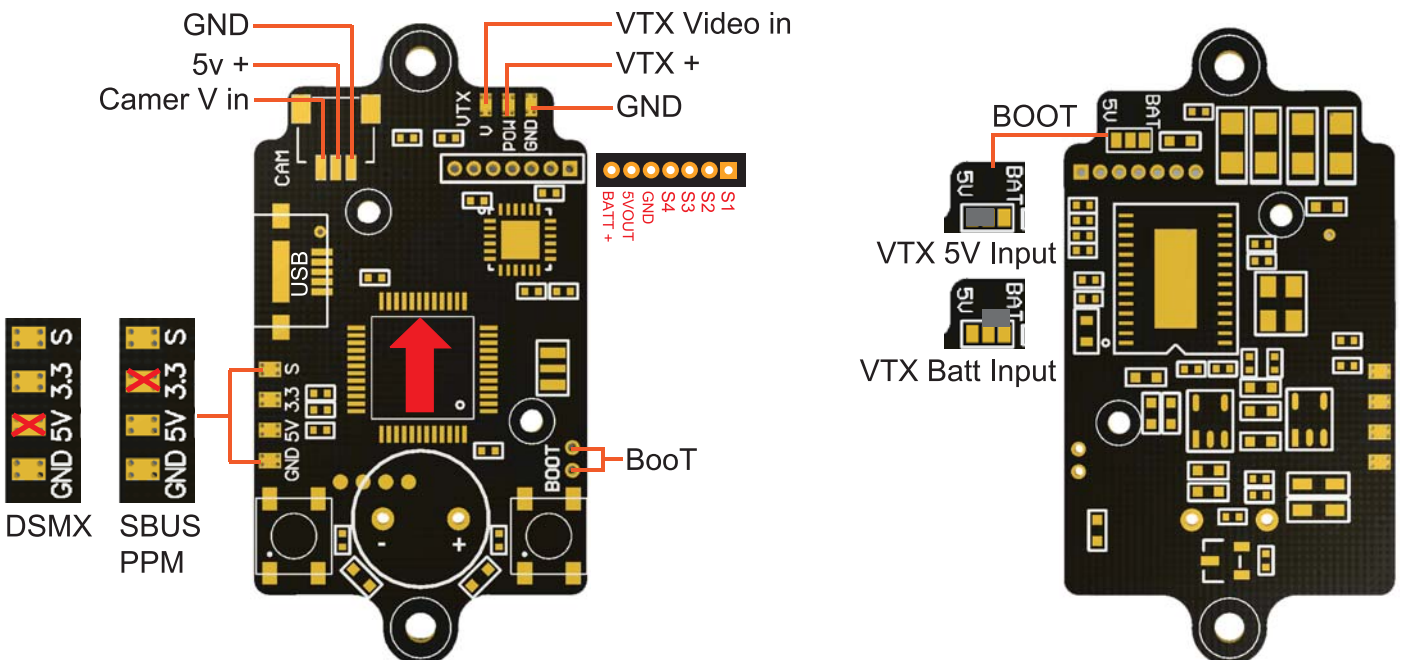
- Continuous Current: 20A
- Voltage Range: 2-4S LiPo
- BEC Output: 5v/1A
- Weight: 6.5g
- Dimensions: 31X31mm
- Firmware: BLHeLi_S Q-H
- Dshot Oneshot Multishot: Supported
- Processor:EFM8BB21



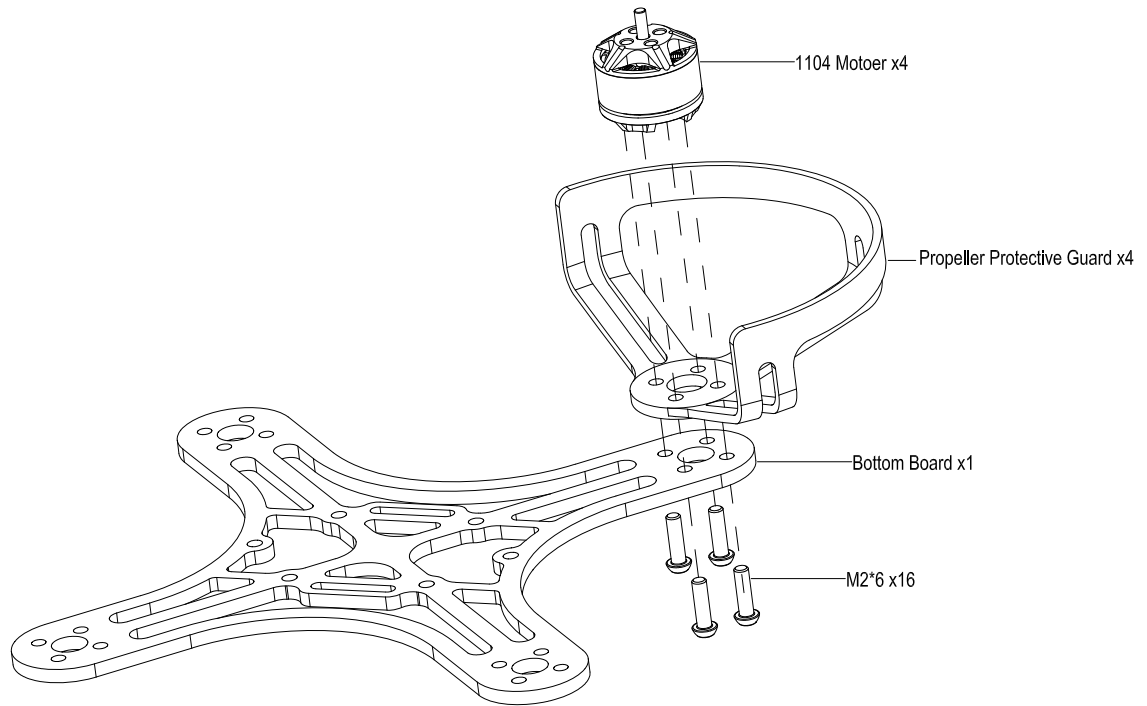
Flight controller Detail

Specifications:

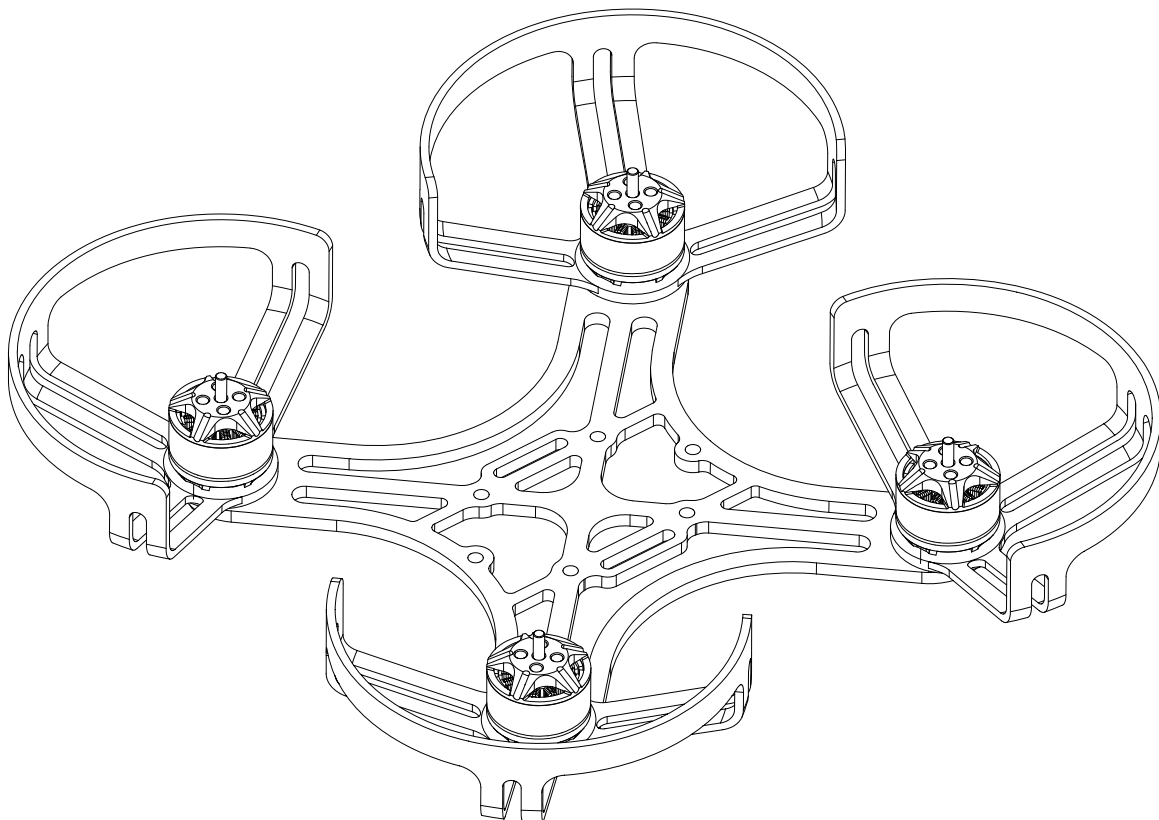
- Item name: F3 OMINBUS
- Firmware: Betaflight_3.1.6_OMNIBUS
- Ominibus F3 flight controller integrated with OSD module.
- Powered by MPU6000 sensor for quick response to acceleration, integrated OSD module (This is 6DOF version, no barometer and compass).
- Designed for quadcopter with LC filter. It supports CF and BF firmware (Omnibus F3) STM32F3CCT6 microprocessor, 256K memory, MPU6000 sensor, SPI port, faster processing speed.
- Power input :5V
- Supports popular receivers such as SBus, PPM, DSMX.
- SBUS or DSM receiver input, please configurate RX3 as input interface.
- DSM receiver powered from 3.3V
- SBUS and PPM from 5V
- Supports alarm Buzzer, programmable LED, voltage monitoring.



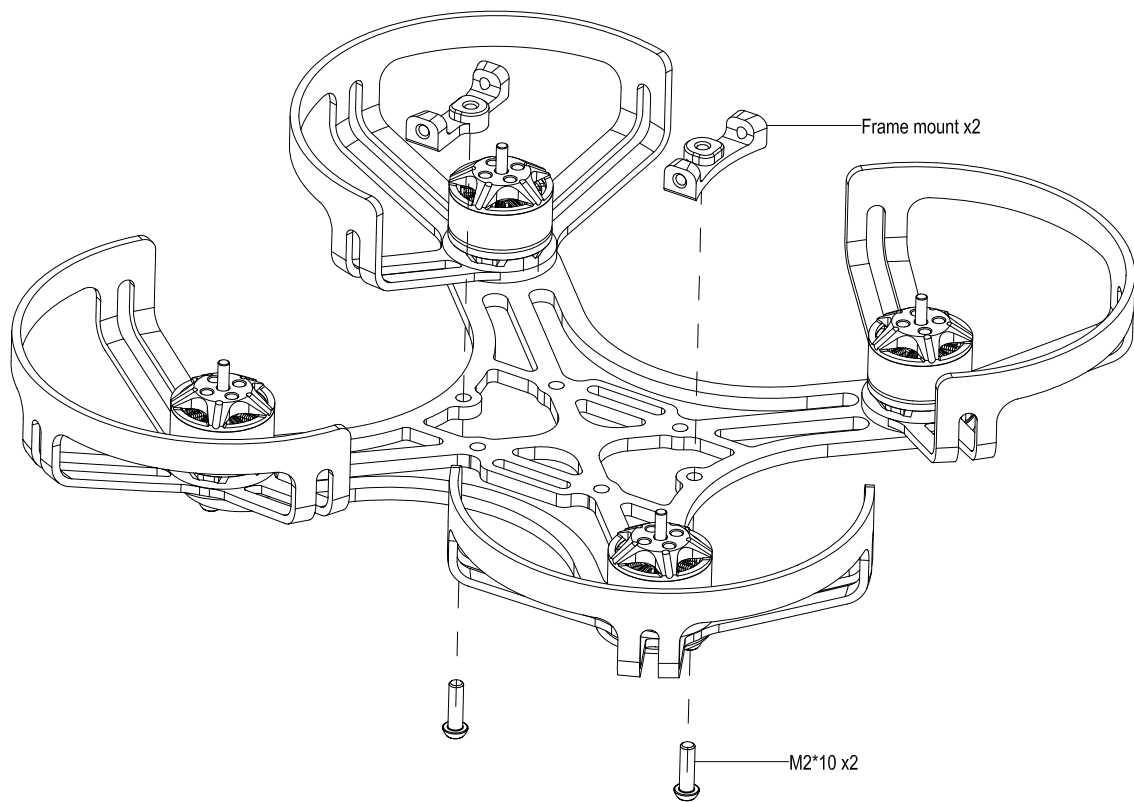
Motors Install



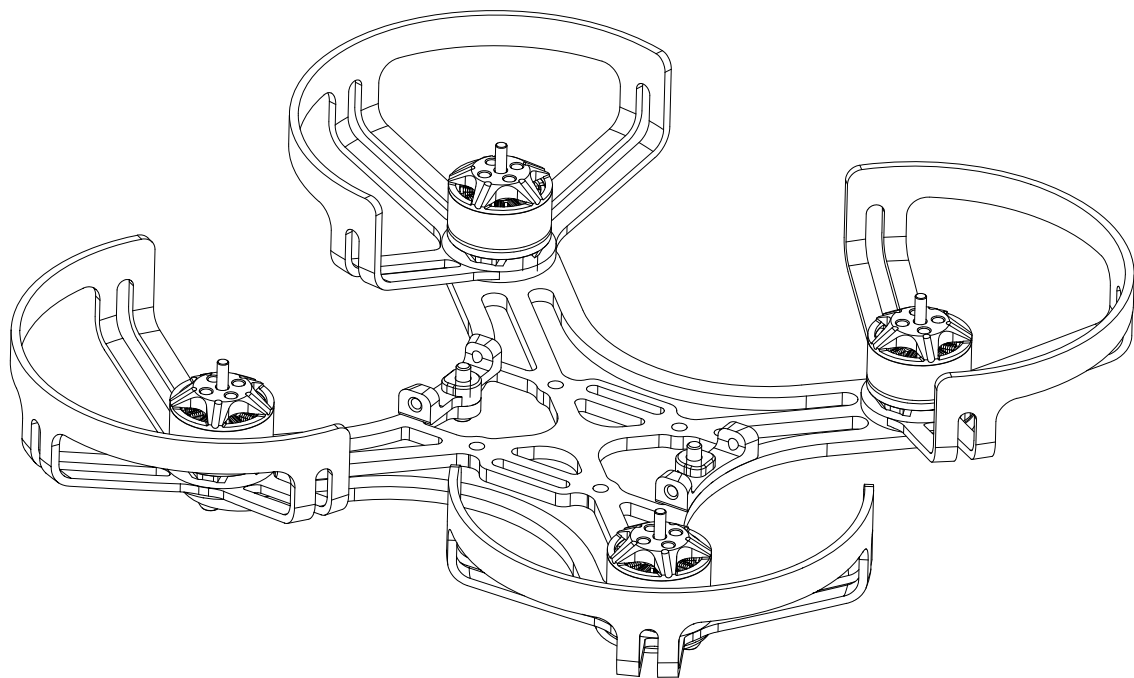
Complete



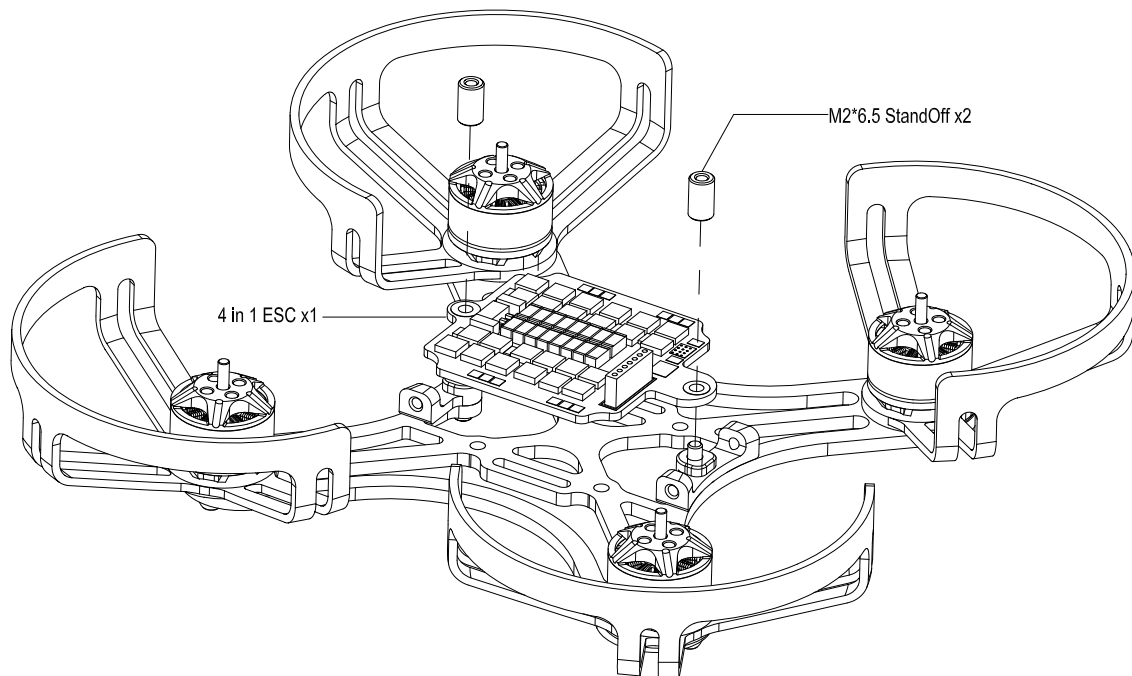
Frame Mount Install



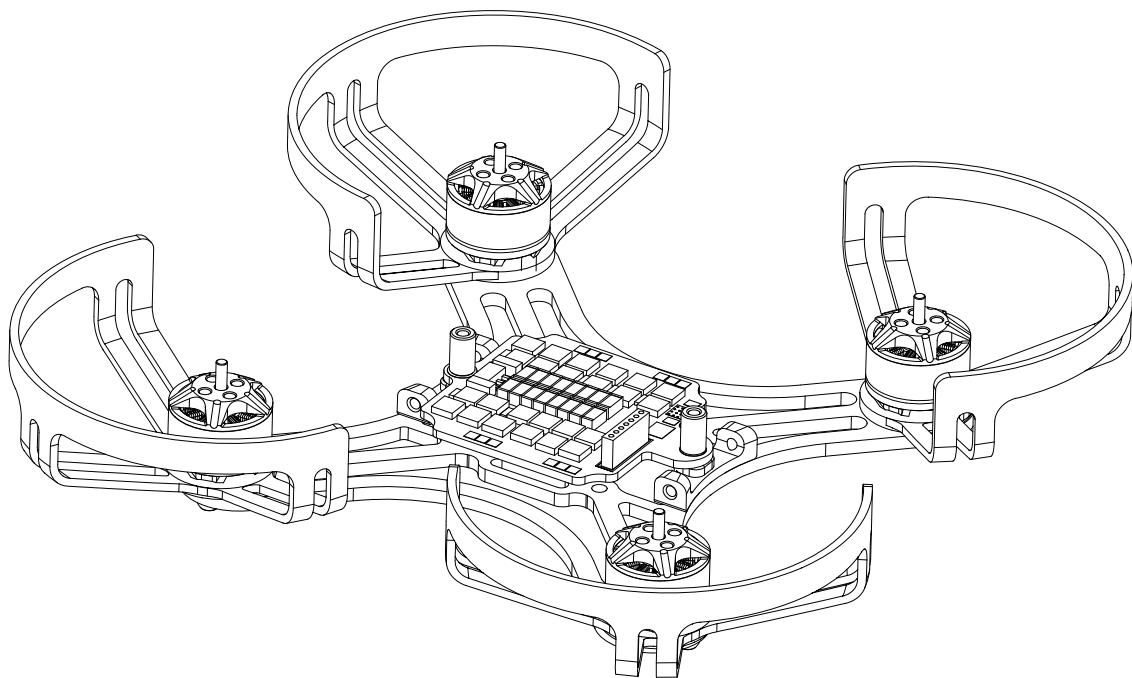
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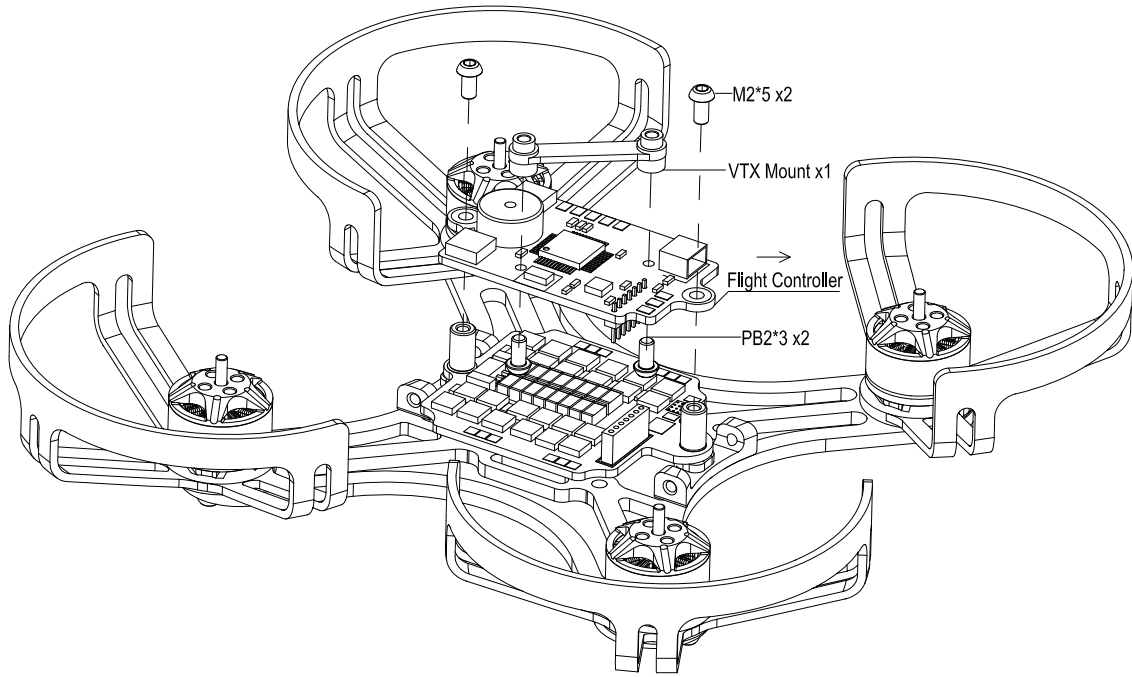
ESC Install



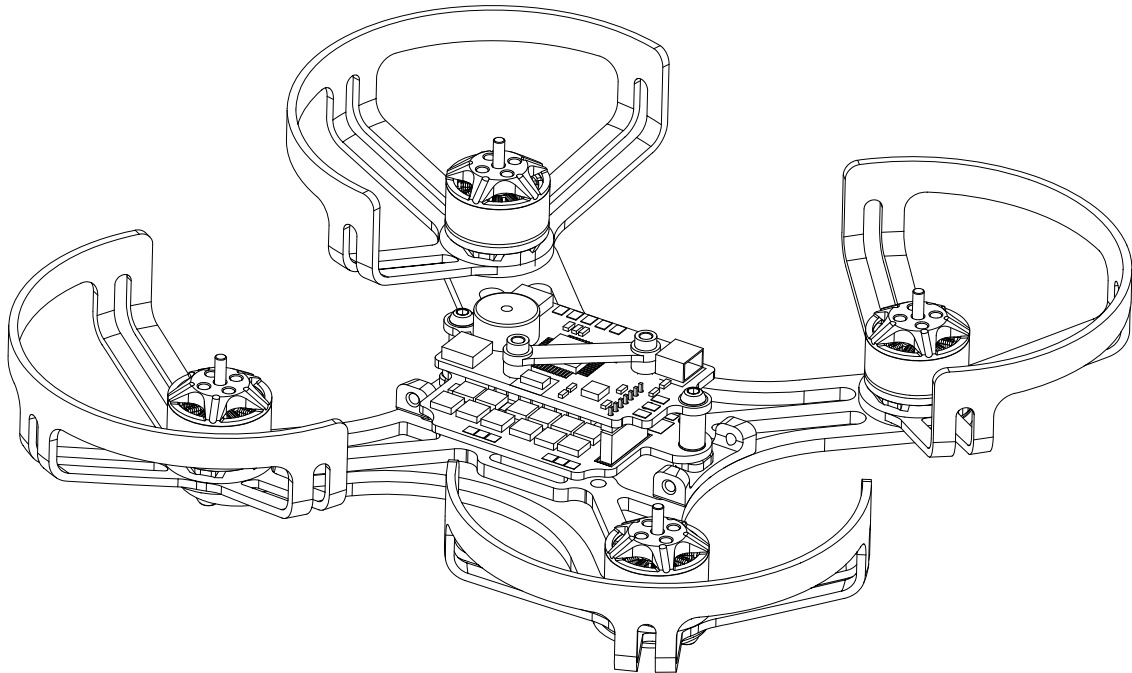
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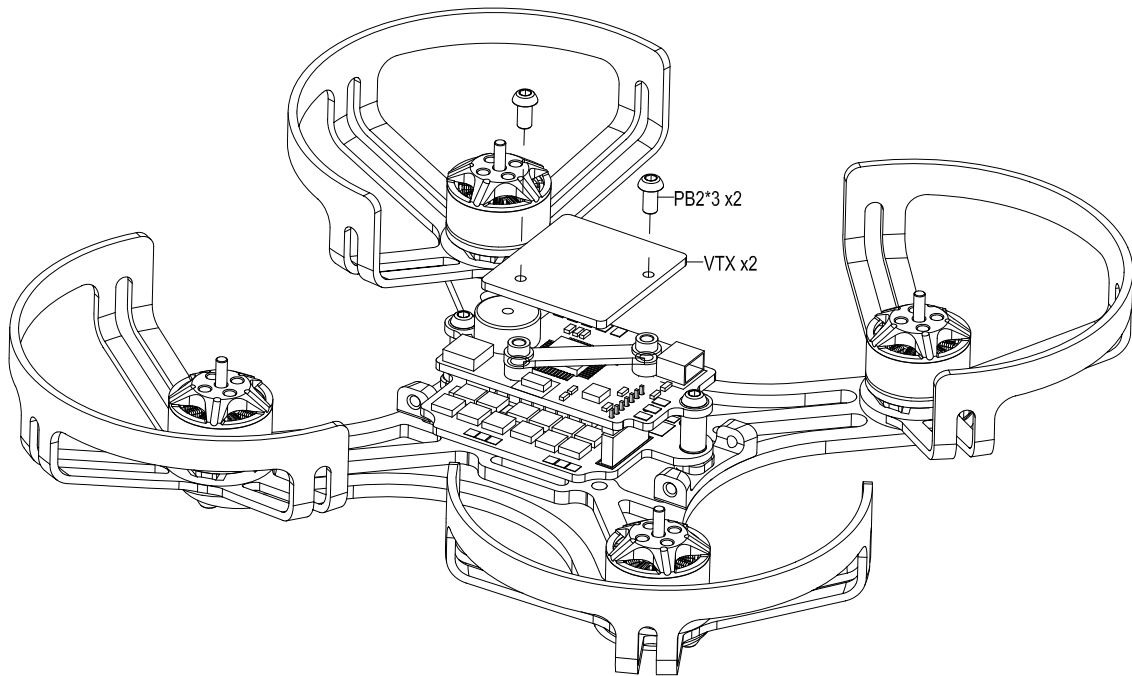
Flight Controller Install



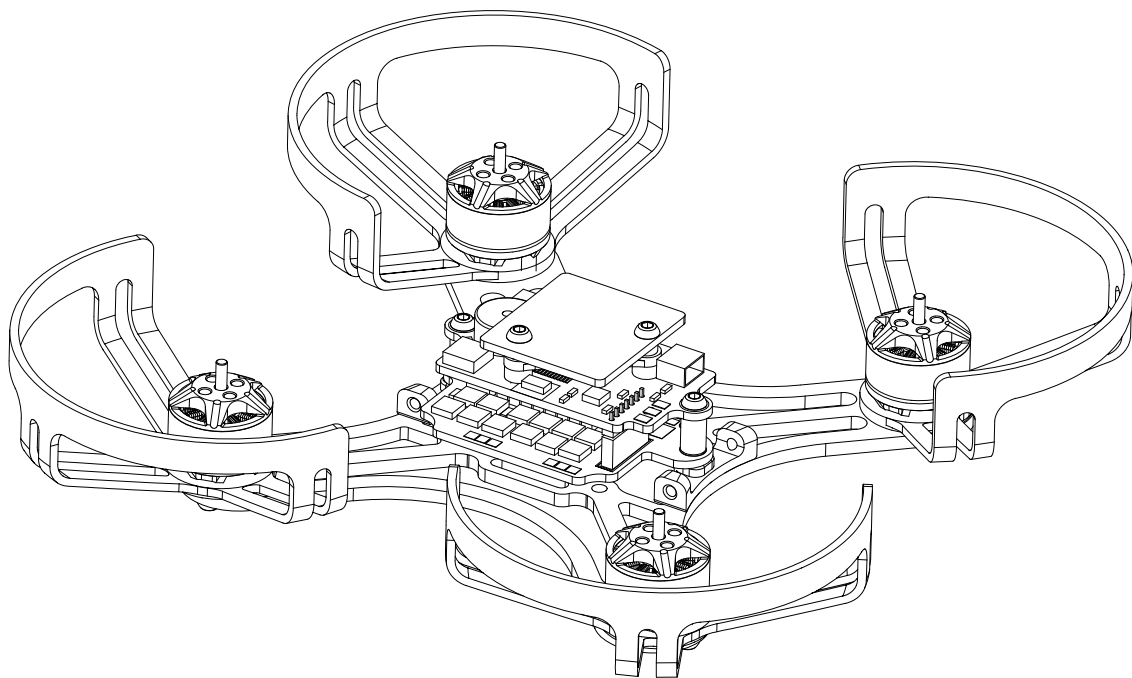
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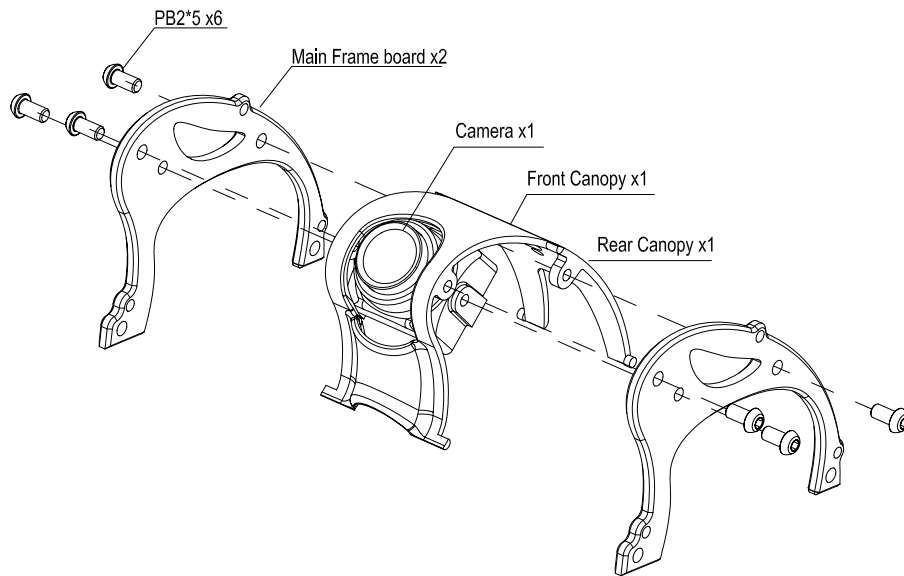
VTX Install



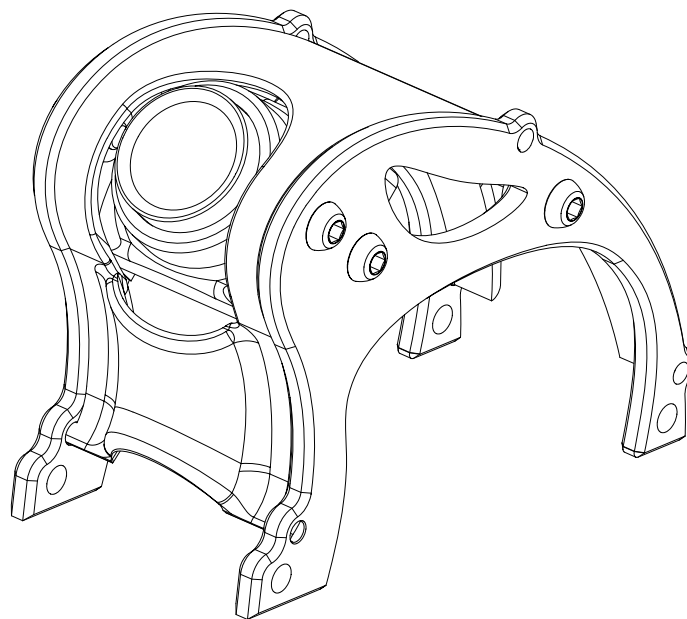
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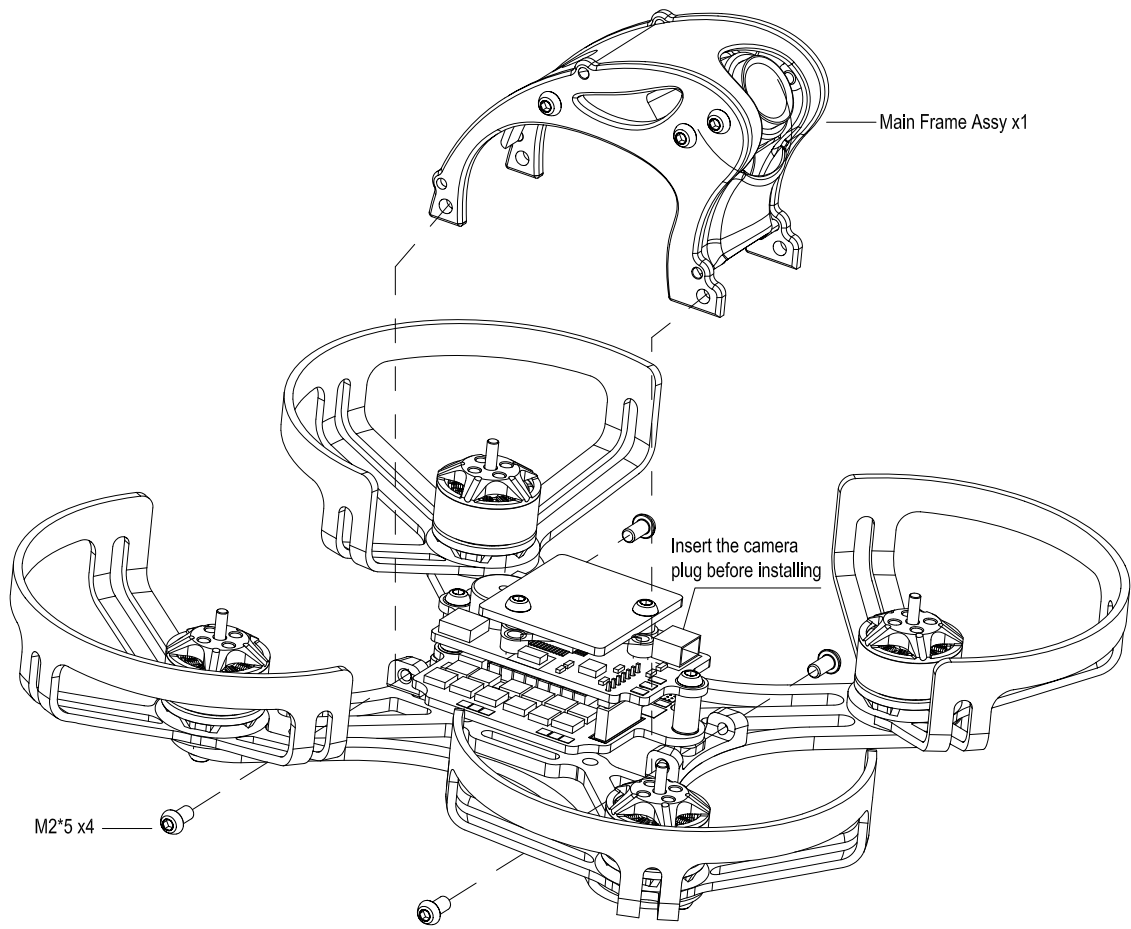
Camera Install



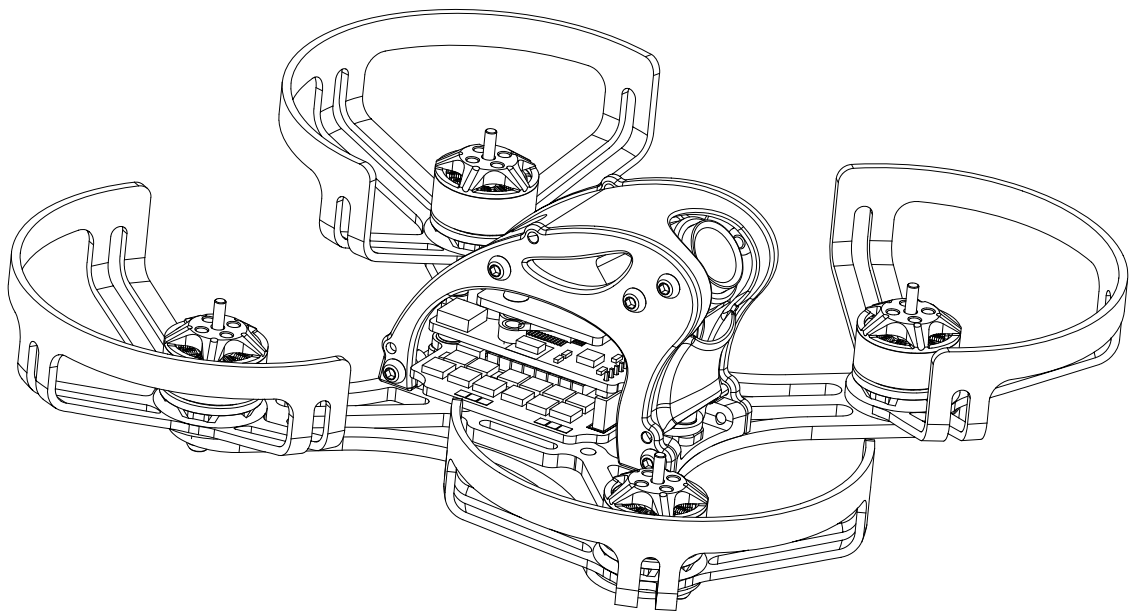
Complete



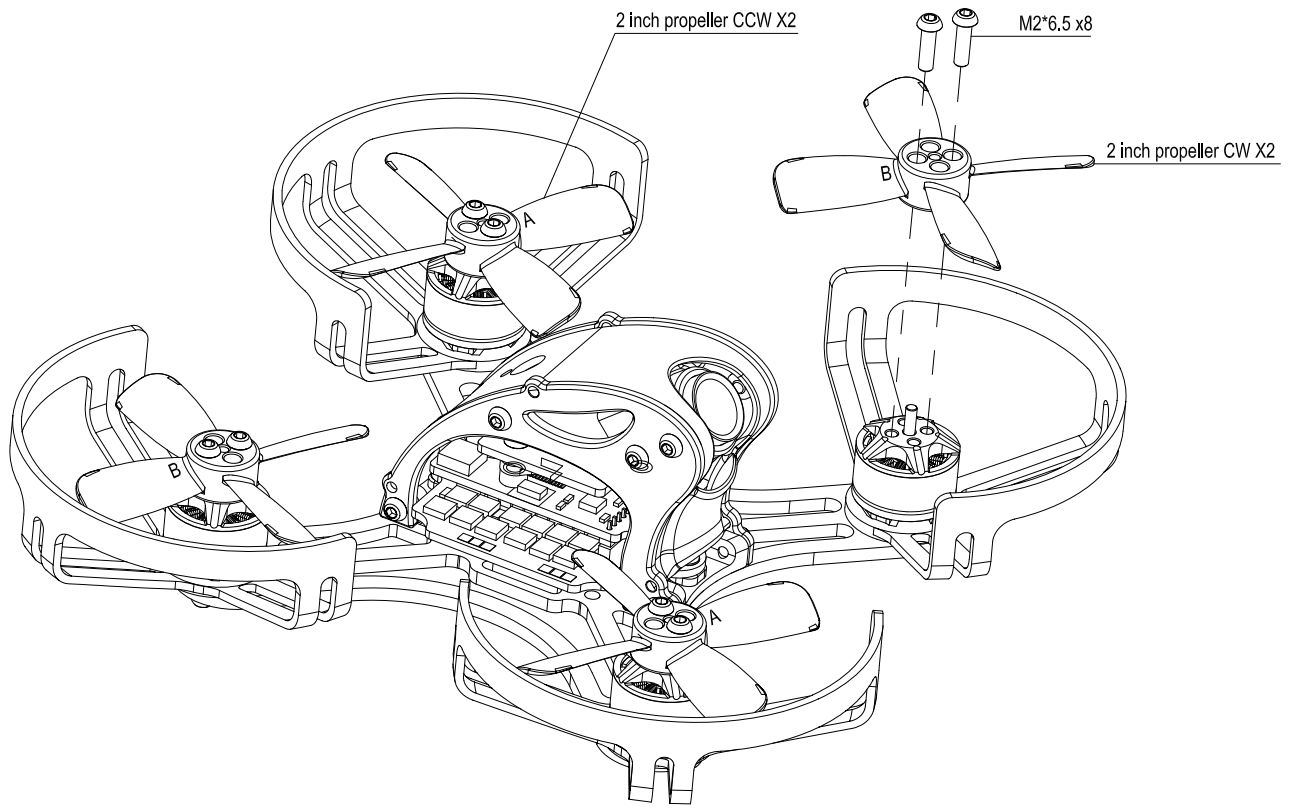
Main Frame Install



Complete



Propellers Install



Complete

