BOTLAB STORE

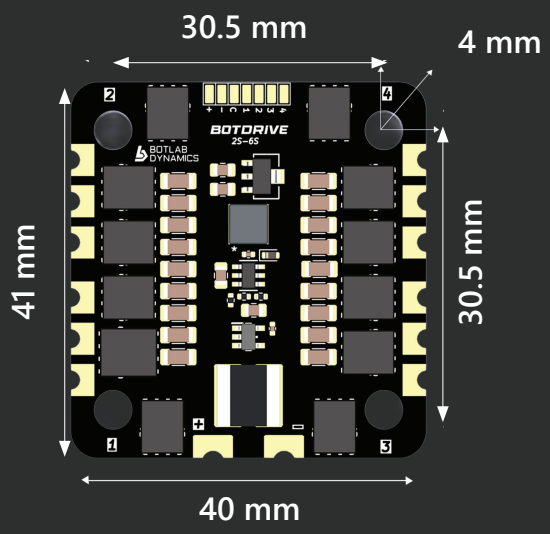
BOTDRIVE

50 Amps 8-bit 4-in-1 ESC

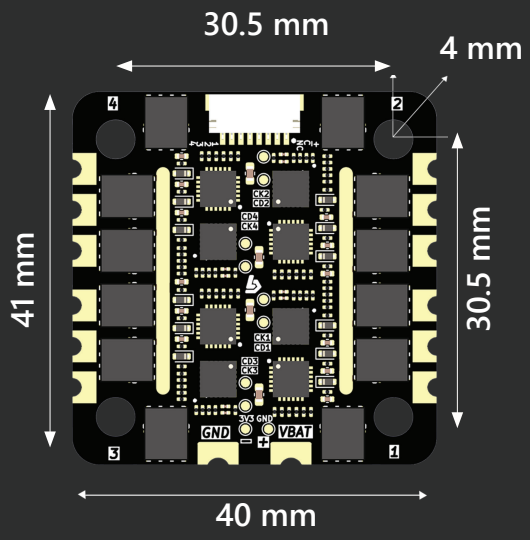


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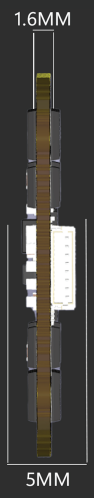
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FRONT



BACK



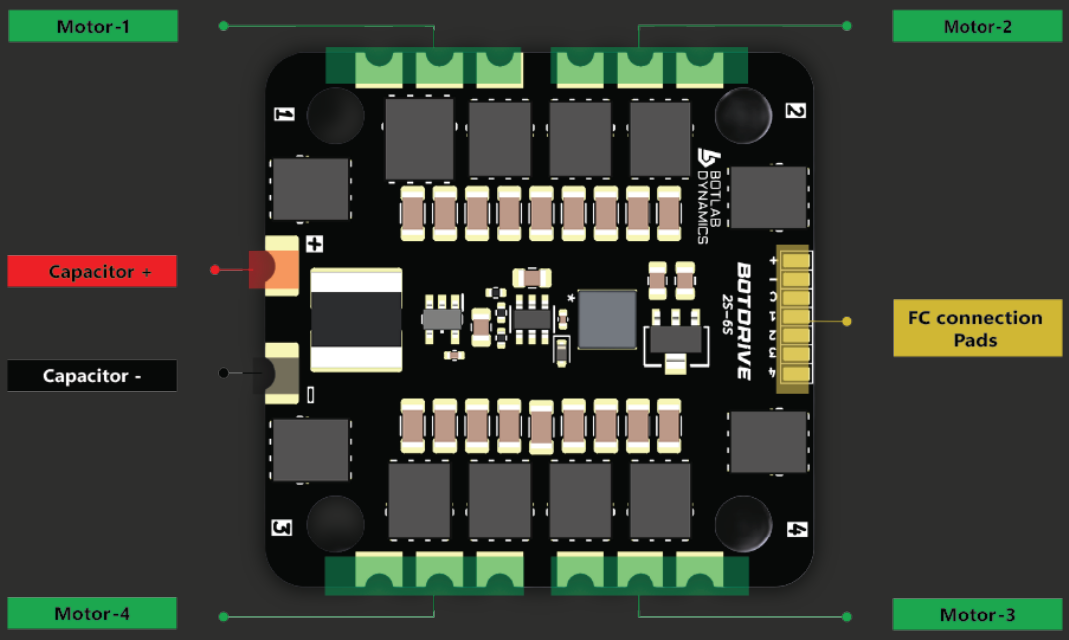
SIDE

BOTLAB STORE

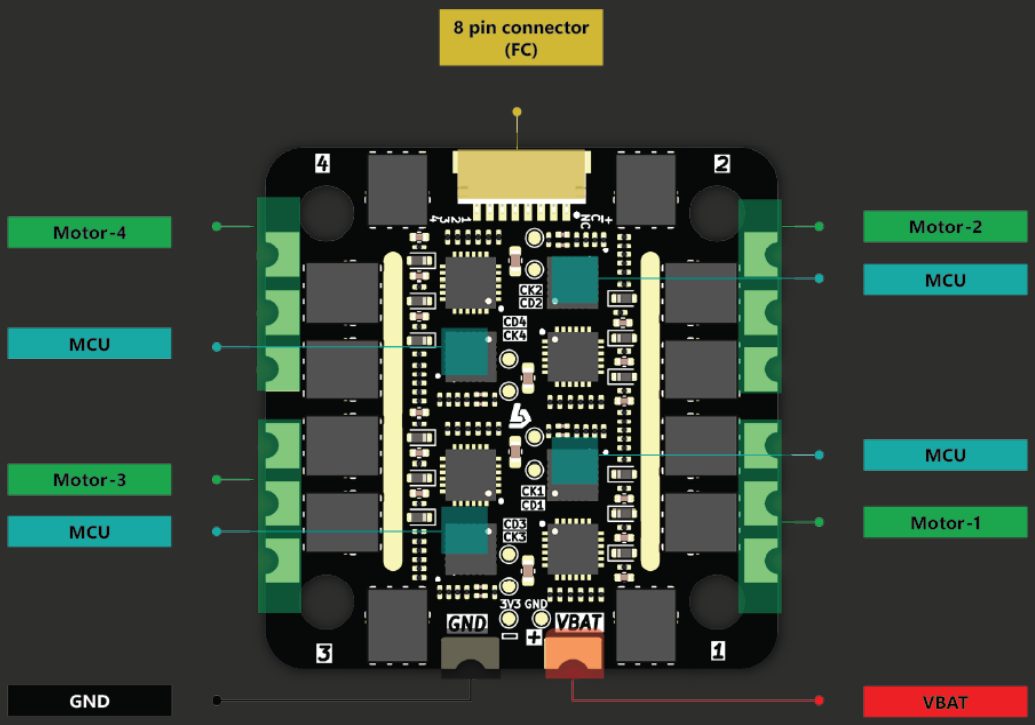
About ESC 8 bit

The Botdrive 8-bit 50A 30.5×3.5 4-in-1 ESC is a powerful, compact speed controller built for quadcopters, drones and other remote control vehicles. It combines four ESCs in one, keeping things lightweight and easy to install. This ESC can handle up to 50 amps, making it great for high-power setups. This ESC supports 2S-6S (8.4V - 25.2V) voltage range and is equipped with advanced motor controls to ensure smooth, precise throttle response.

LAYOUT



FRONT-I



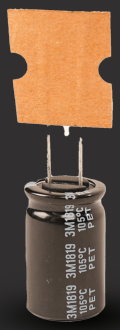
BACK

BOTLAB STORE

Specification

MCU	EFM8BB21F16G
Mosfet Driver	FD6288Q
Firmware	EFM8BB21F16G
BLHeli_Suite Configurator download link	https://github.com/bitdump/BLHeli
BLHeli Configurator download link	https://github.com/blheli-configurator/blheli-configurator/releases
Continuous Current	50A*4
Burst Current	60A*4
External Capacitor	47uF 35V Low ESR Capacitor
ESC Protocol	DSHOT 300/600,PWM
Power Input	2S-6S LiPo
Power Output	VBAT
Current Sensor	Supported
Mounting	30.5 x 30.5mm(Hole to Hole)
Dimension	40 x 41 mm(edge to edge)
Mounting hole	M4 (hole diameter - 4.2mm)

Package Include



1 x 35V 1000uF low ESR Capacitor



4 x M3 Anti-Vibration Silicone Grommet Insert



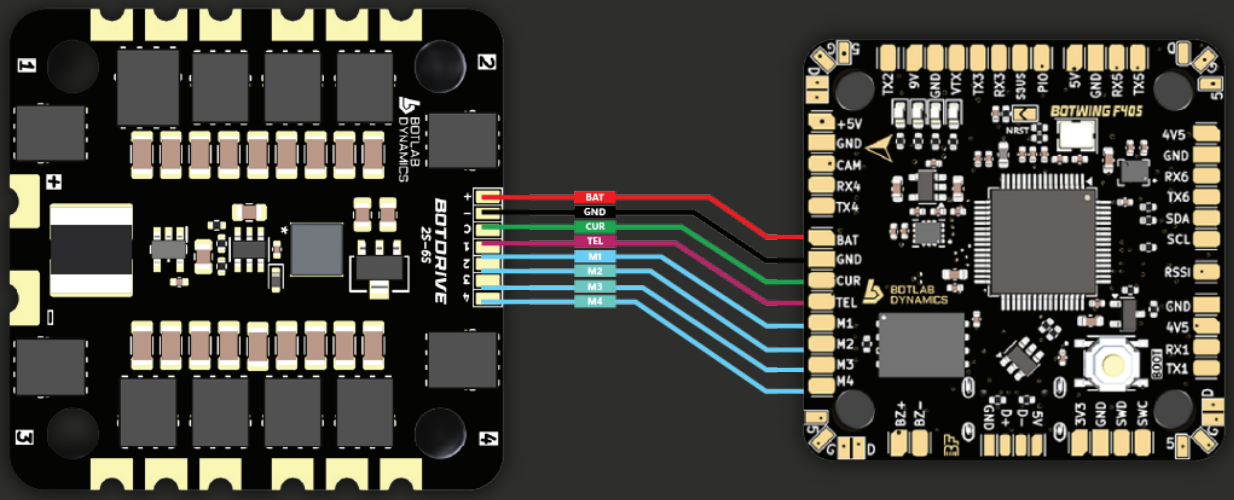
1 x XT60 Power cable(70mm)



1 x JST-SH 1.0mm 45mm length 8pin cable (for FC-ESC connection)

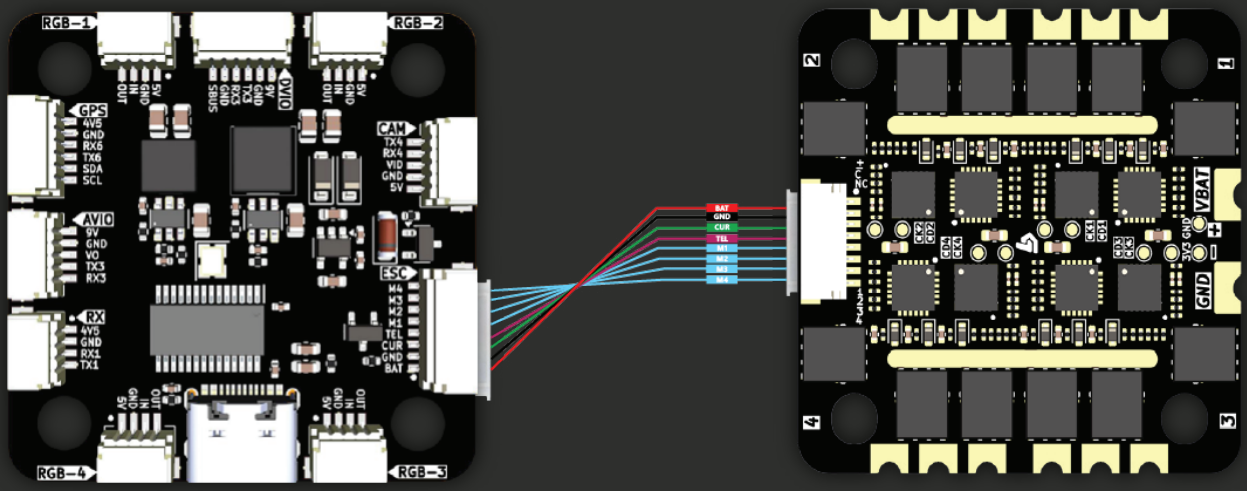
Connections

Method 1 - Soldering



ESC-FC

Method 2 - Connectors

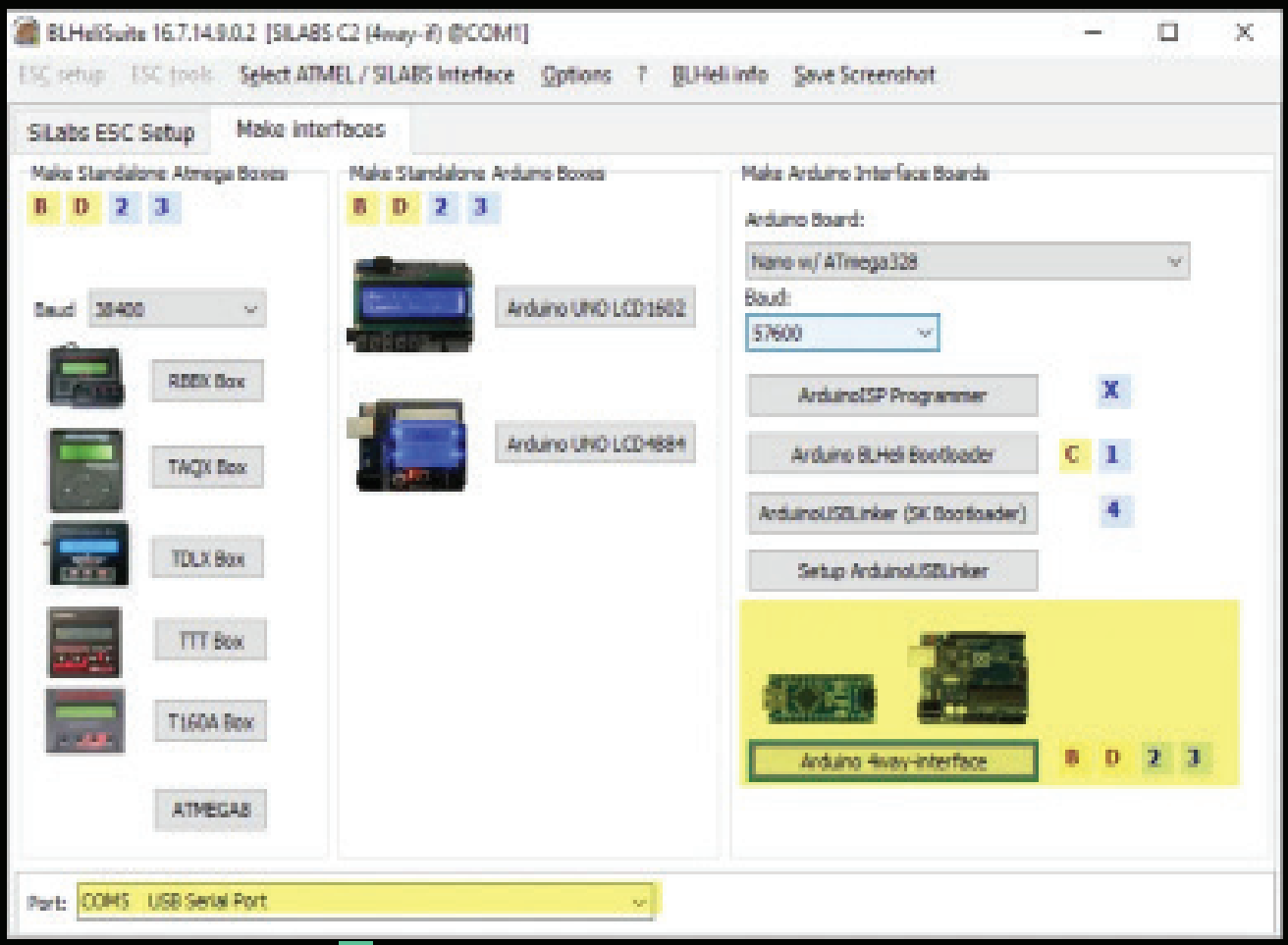


FC-ESC

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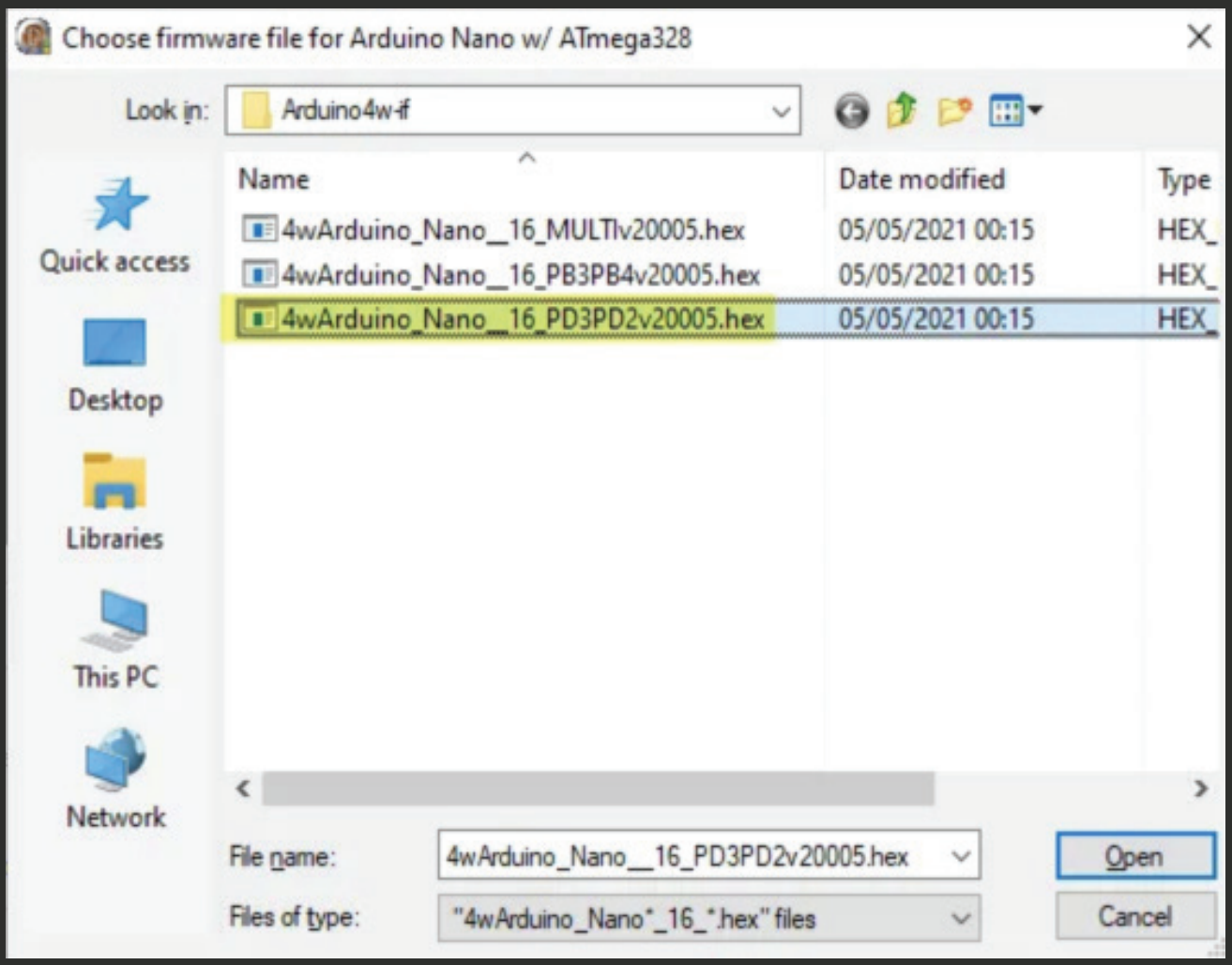
Firmware Flashing

You can flash both BLHeli_S and Blue Jay firmware in this ESC.



Step 1- Enable Arduino to flash ESC firmware-

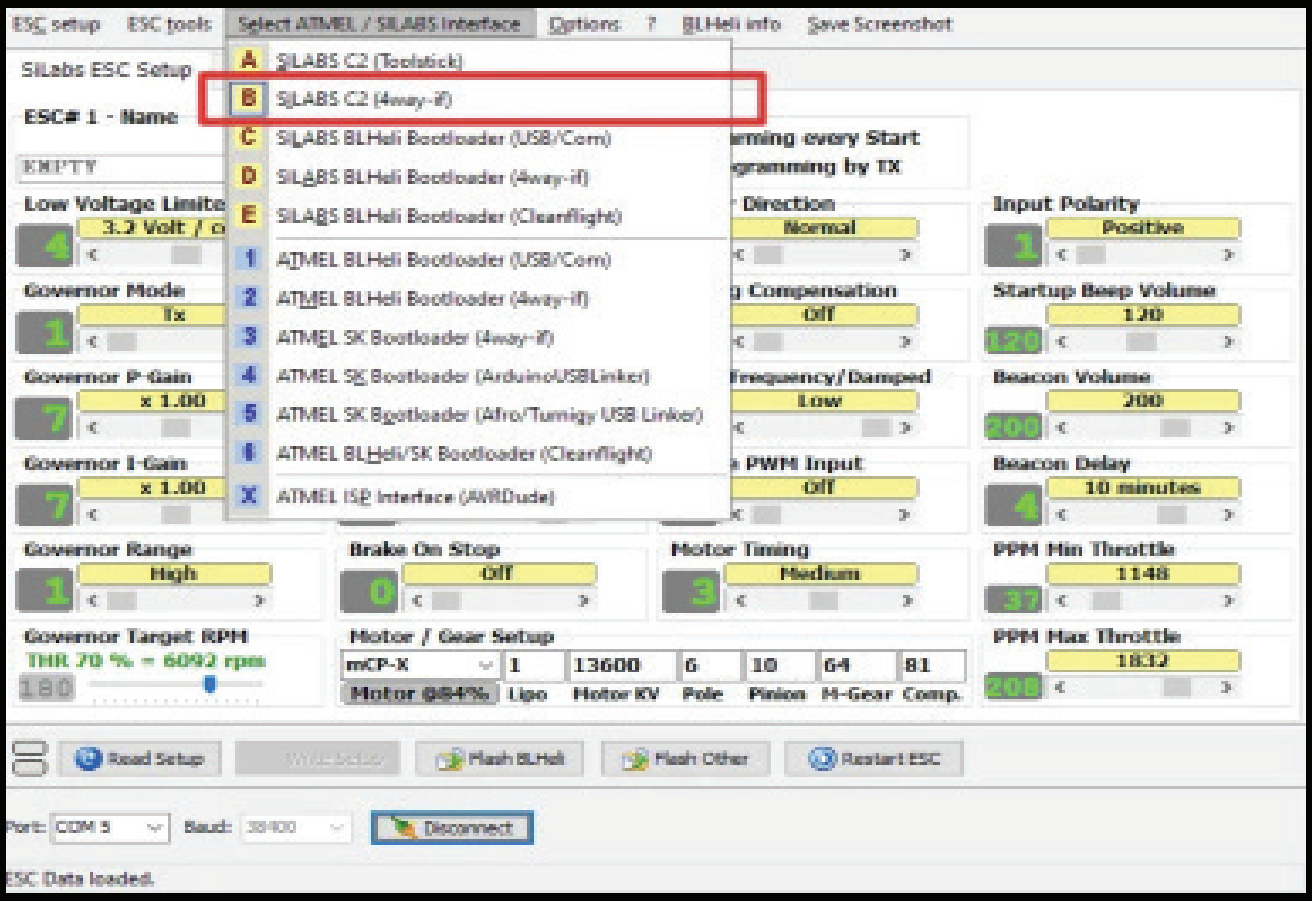
- Plug in your Arduino, a new COM port should appear
- Pick the Arduino COM port in BLHeliSuite.
- Go to Make Arduino Interface and select the “Arduino 4-way interface” option.
- Then select the firmware for Arduino. C2 interface is used to flash the firmware.



Step 2- Pin connection of Arduino Nano/Uno with ESC.

MCU	EFM8BB21F16G
Mosfet Driver	FD6288Q
Firmware	EFM8BB21F16G
BLHeli_Suite Configurator download link	https://github.com/bitdump/BLHeli
BLHeli Configurator download link	https://github.com/blheli-configurator/blheli-configurator/releases

Step 3- To flash firmware in ESC via C2 interface select “SILAB C2 (4 way-if)” under SILABS Interface in BLHeli Suite.



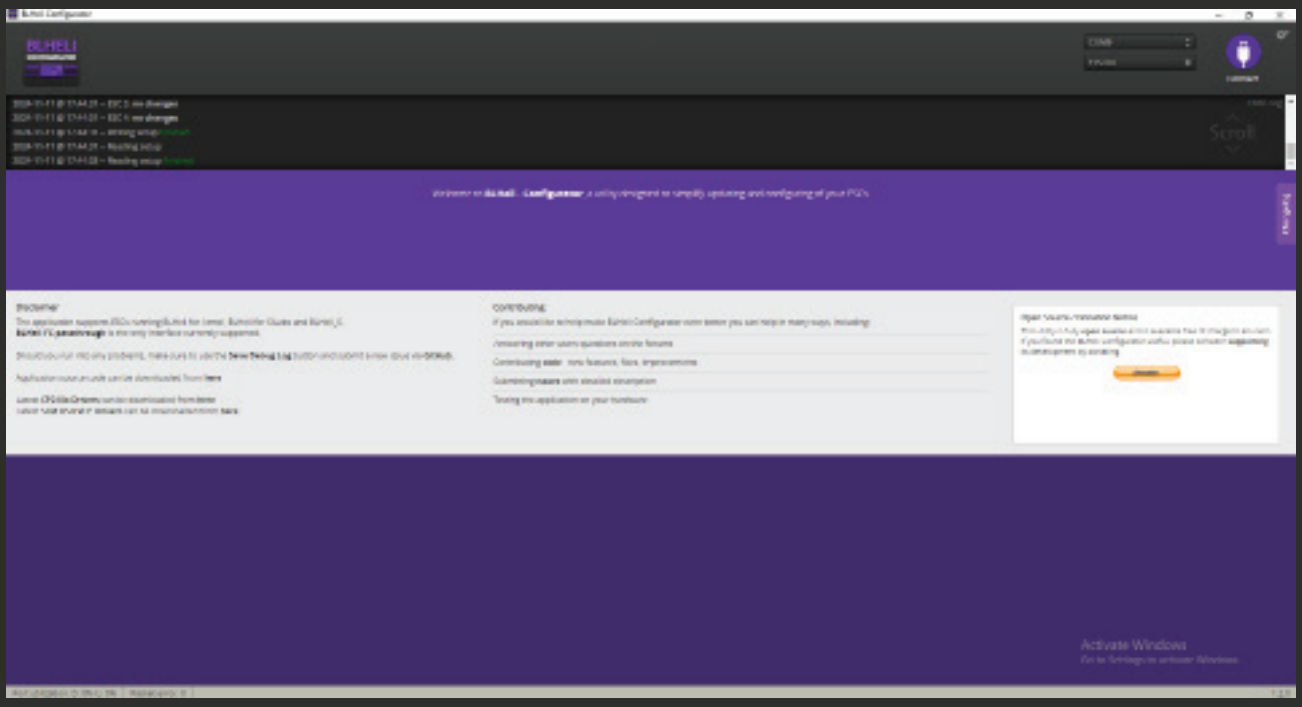
Step 4- Now connect and read setup if everything works properly then upload the firmware version JH50 in the board.

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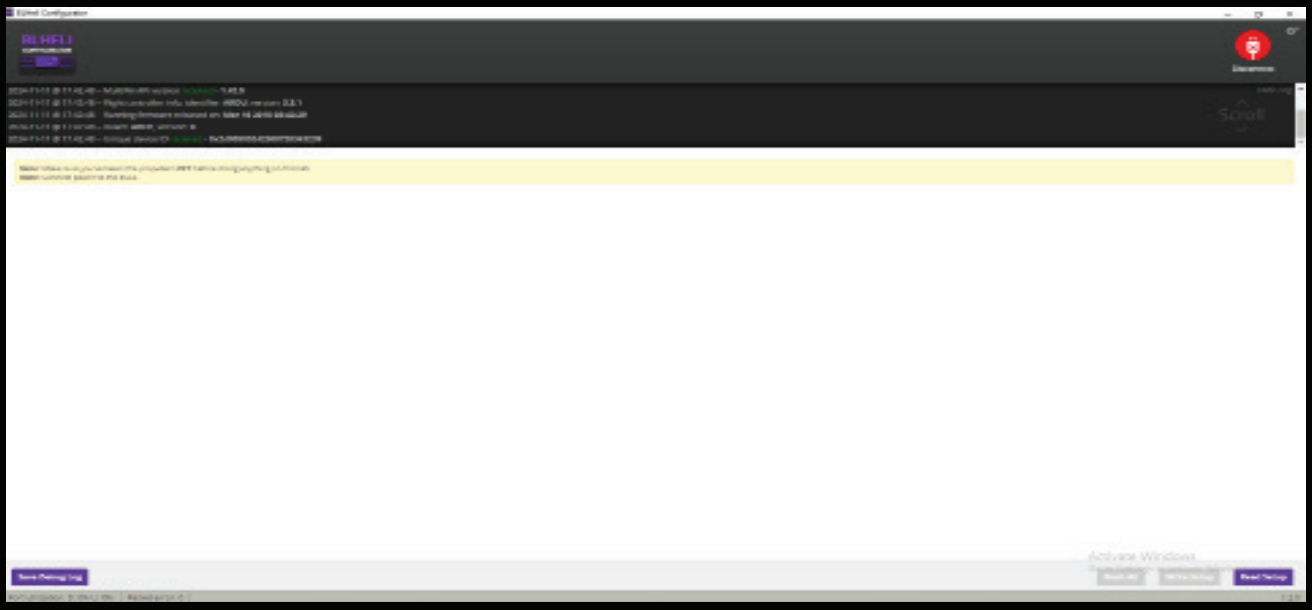
Firmware Update Using BLHeli Configurator

To update the ESC parameters or firmware, connect the battery to the ESC to power it, then link the ESC to the Flight Controller (FC). Next, connect the FC to your PC via USB. This setup enables the FC to act as an interface between the ESC and your PC, allowing configuration through the BLHeli Configurator, which supports the BLHeli FC passthrough interface. This approach provides seamless access to the ESC for parameter adjustments and firmware updates directly via the FC.

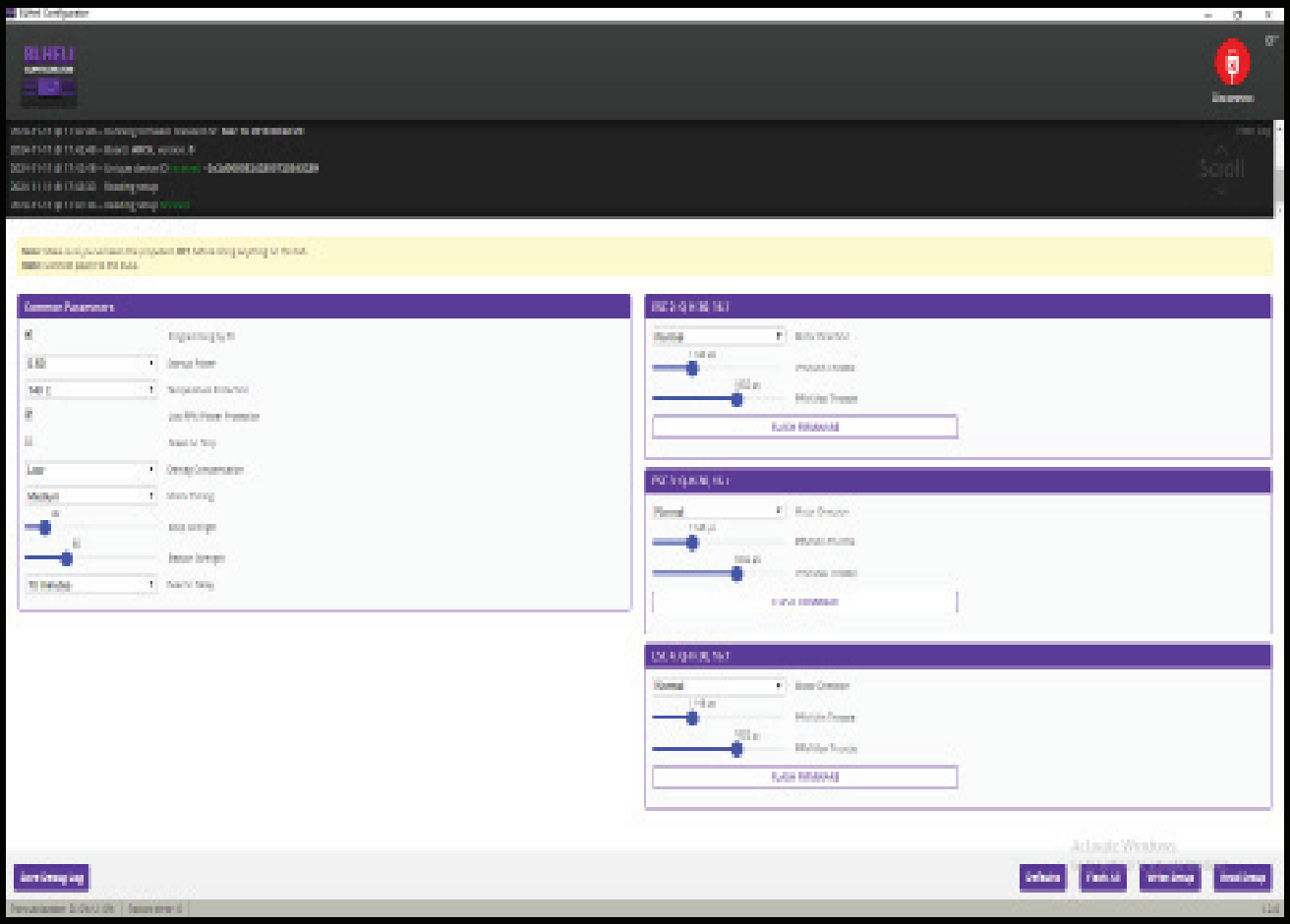
Step 1- Select your FC's COM port and click the Connect button.



Step 2- Once connected, you'll see a blank screen. Now, plug in the battery to power the ESC and click "Read Setup" (bottom right).

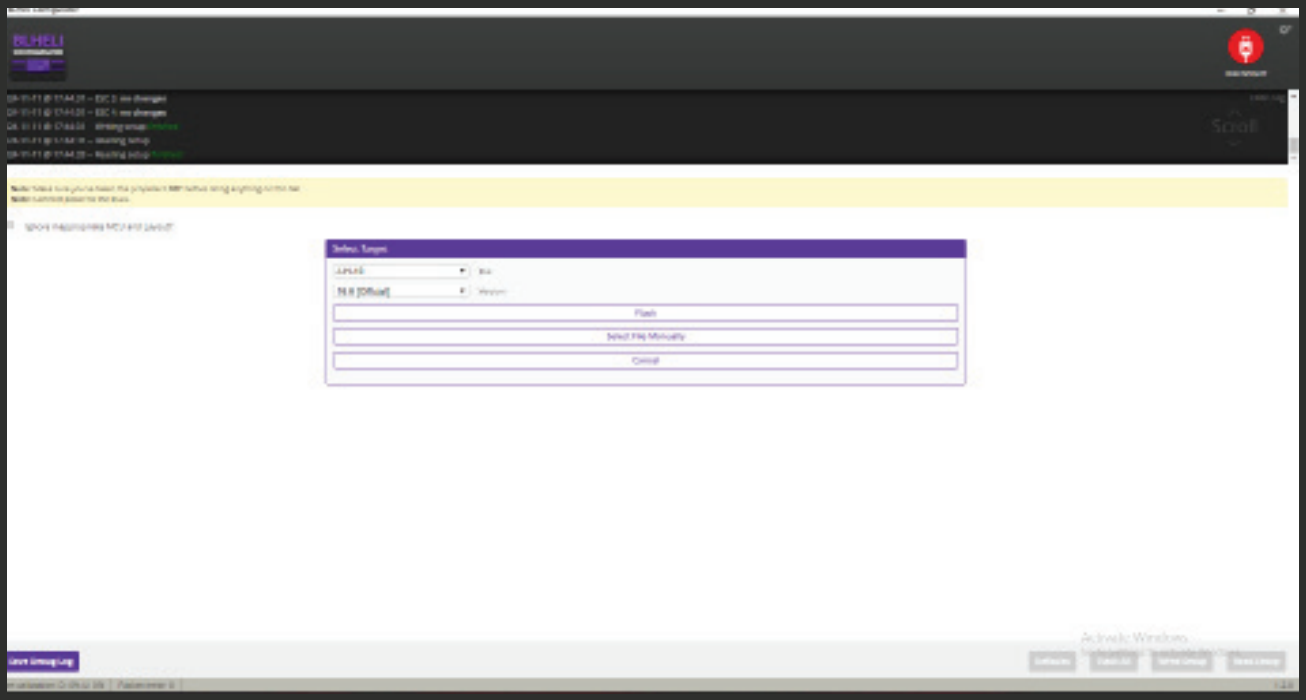


Step 3- You're now connected to the ESC and can configure its settings. Click "Write Setup" (bottom right) to save changes before disconnecting.



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Step 4- To update BLHeli firmware, click “Flash All” (bottom right). You’ll be prompted to choose a firmware version.



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Let's Connect

Please visit the botlabdynamics.store for manuals and support.