BEECORE FLYSKY F3_EVO_Brushed ACRO Flight Control Board quick user guide

This board is designed to work with Inductrix / BeeDuctrix / Tiny Whoop / Eachine E010, just replace the current board with our new BEECORE main board and experience the next level of flight control.

1. Specification:

STM32 F303 processor

Six-Axis: MPU6500
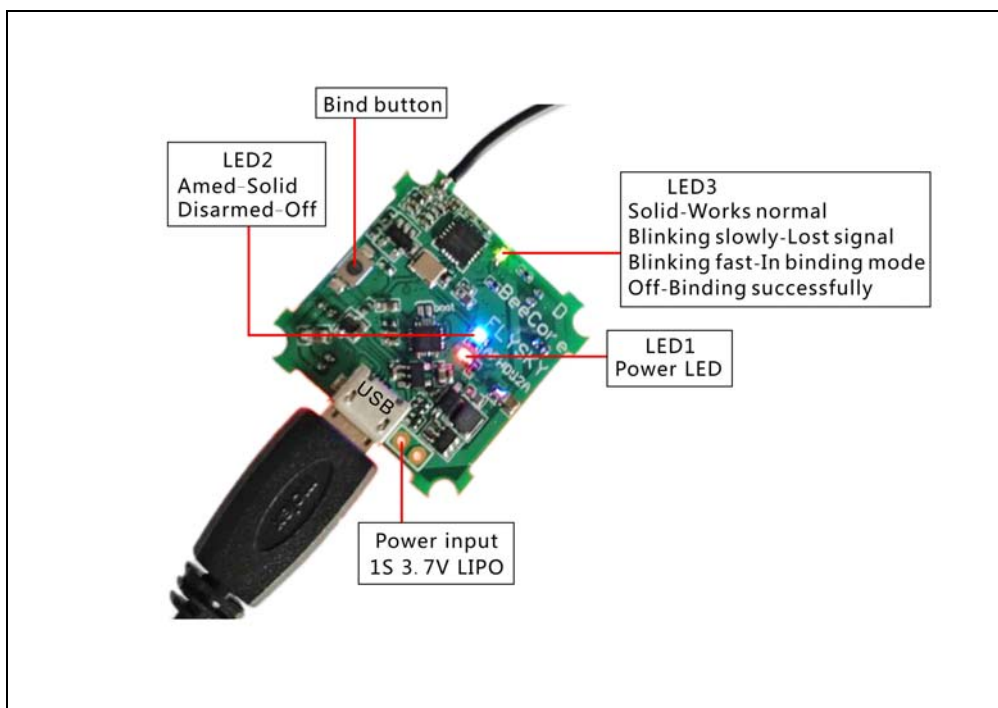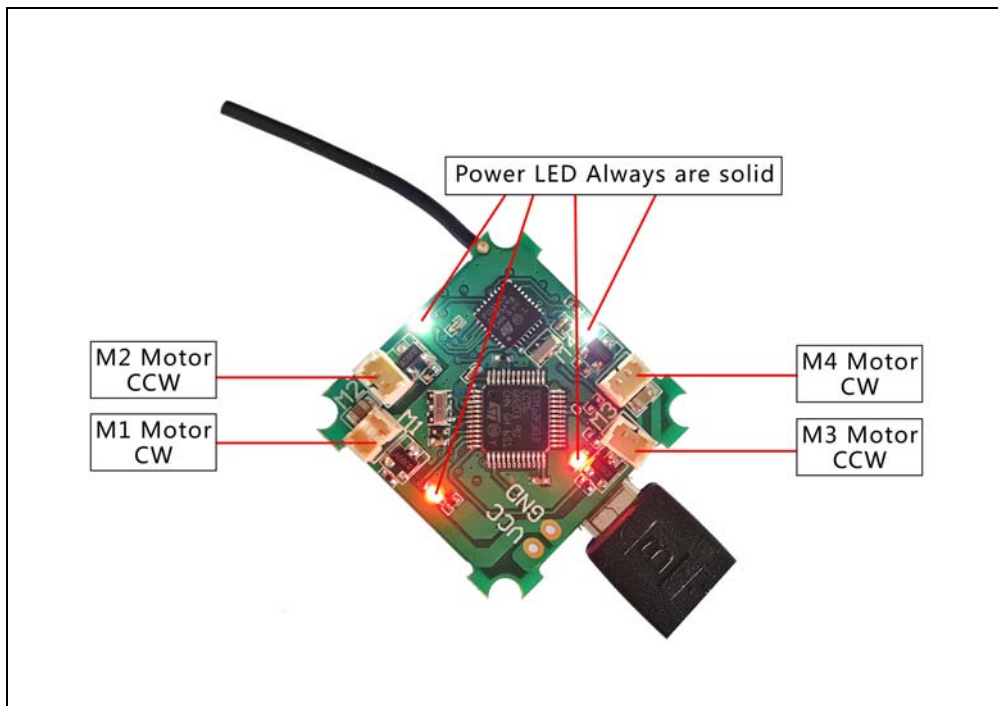
Size: 2mm x 26mm

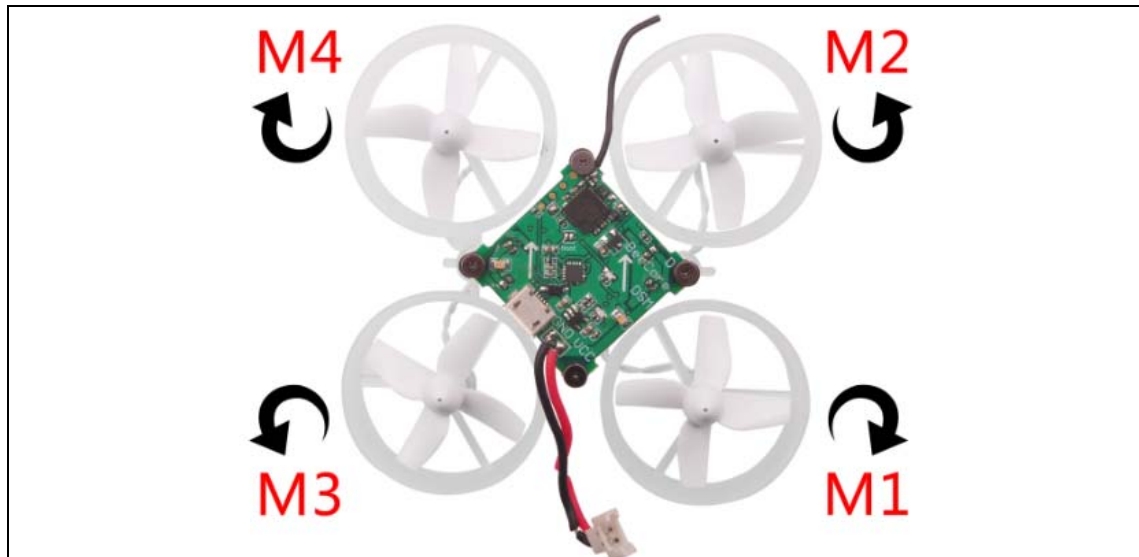Weight: 3 grams

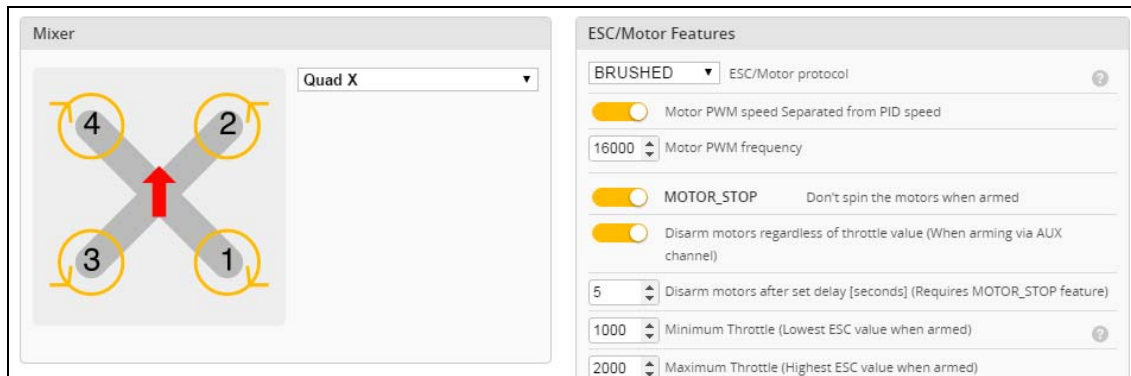Work voltage: 3.7v-5v / 1S Lipo battery input

Receiver: 6CH Flysky protocol PPM output AFHDS 2A Mode

Firmware Version: Betaflight 3.1.0

2. Connector and LED Definition:

3. Installation and Connection diagram：

Mixer

Quad X

4   2

3   1

ESC/Motor Features

BRUSHED ▼ ESC/Motor protocol

Motor PWM speed Separated from PID speed

16000 ⬍ Motor PWM frequency

MOTOR_STOP   Don't spin the motors when armed

Disarm motors regardless of throttle value (When arming via AUX channel)

5 ⬍ Disarm motors after set delay [seconds] (Requires MOTOR_STOP feature)

1000 ⬍ Minimum Throttle (Lowest ESC value when armed)

2000 ⬍ Maximum Throttle (Highest ESC value when armed)

M4   M2

M3   M1

⚠ Please pay attention to the motor sequence of original Inductrix main board , it's different from BEECORE, Install the motor according to the diagram above.

4. Cleanflight / Betaflight configuration：

All the configuration was set up before shipping, if you need to flash firmware and select Full chip erase, you should reconfigure for the BEECORE Flight controller board according to the bellowing diagram.
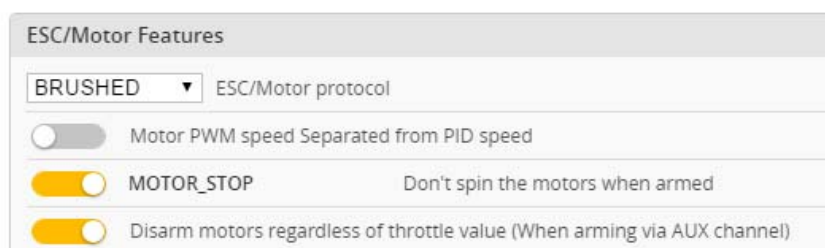
⚠ Please unplug the motor from the BEECORE when you need to flash firmware and "Full chip erase", otherwise it will can't connect to the Clenflight configurator.

Reconfigure steps:

1. Cleanflight: Go to the CLI tab, type "Set motor_pwm_rate=1000" ,then enter save


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Entering CLI Mode, type 'exit' to return, or 'help'

# set motor_pwm_rate=1000
motor_pwm_rate set to 1000
# save
```

Betaflight: Go to Configure Tab and set ESC/Motor protocol to BRUSHED

ESC/Motor Features

BRUSHED ▼ ESC/Motor protocol

Motor PWM speed Separated from PID speed

MOTOR_STOP   Don't spin the motors when armed

Disarm motors regardless of throttle value (When arming via AUX channel)

*This step is in order to avoid motor auto-spinning when connect the battery

2. Ports and receiver mode sets like the bellowing diagram: Set receiver mode to be RX_PPM in Cleanflight or Betaflight Configurator

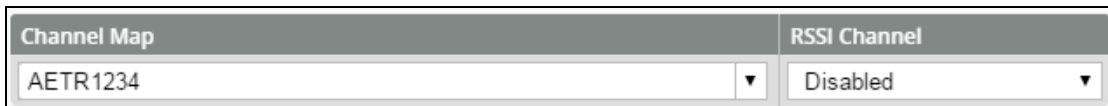Betaflight configuration:

Cleanflight configuration:

3. Binding Procedure:
   a) Connect the battery to the BEECORE while holding the Bind button ,the Green LED will getting to flashing fast, this indicates the receiver is in binding mode, then release the bind button.
   b) Enter to the RX setup and select AFHDS 2A Mode for your Flysky transmitter , and then turn on the transmitter while holding the bind button, the green LED on the Beecore will first turning off and then starting to blinking slowly, this indicates binding successfully. Re-power for the Beecore and turn on your transmitter, the Green LED getting to be solid ,this indicates the connection was

established between Beecore and your transmitter.

1.Select RX setup to AFHDS 2A mode

2.Turn on the transmitter while holding the bind button

4. The default receiver channel map is AETR1234, please ensure your transmitter is matched with it, otherwise it can't be armed.

Channel Map	RSSI Channel
AETR1234 ▼	Disabled ▼

5. The Default Arm/Disarm switch is AUX1(Channel 5),and you can also customize it with Cleanflight Configurator or Betaflight Configurator.
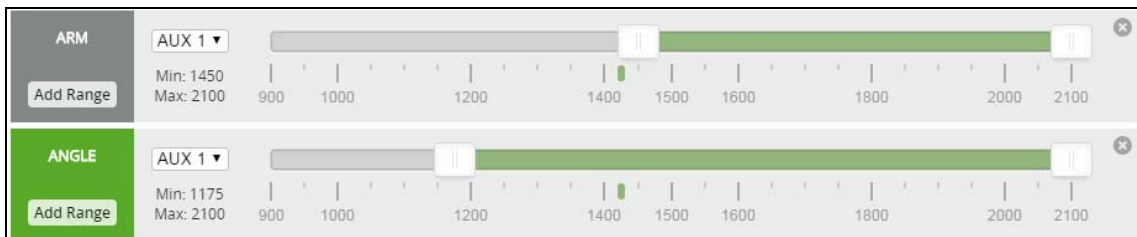
6. Turn on the transmitter and move to the AUX. Channels interface, Set "SWA" or "SWB" switch etc. for CH5 to ARM/DISARM the motor, Take FLYSKY I6 as an example.

7. Toggle the AUX1 Switch and the blue LED on the BEECORE will get be solid, this indicate the motor was armed. Be careful and enjoy your flight now!