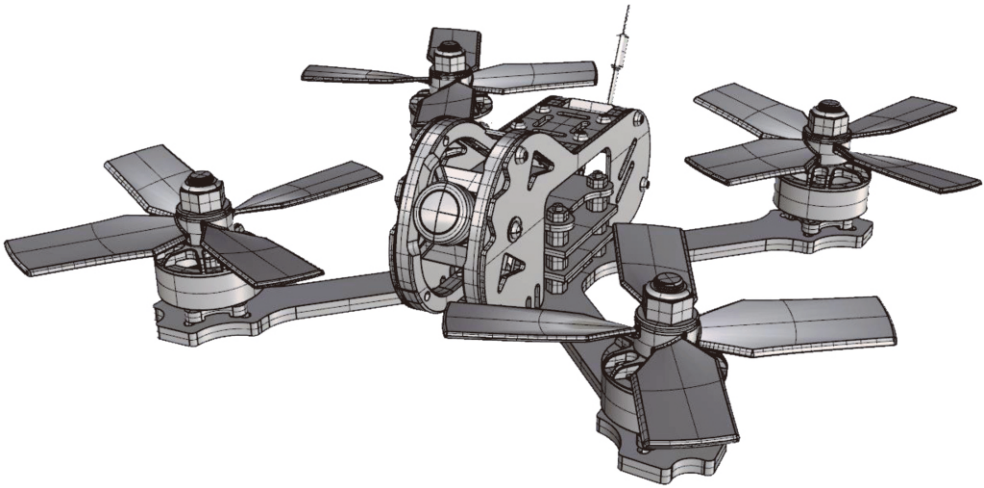
TYRO79

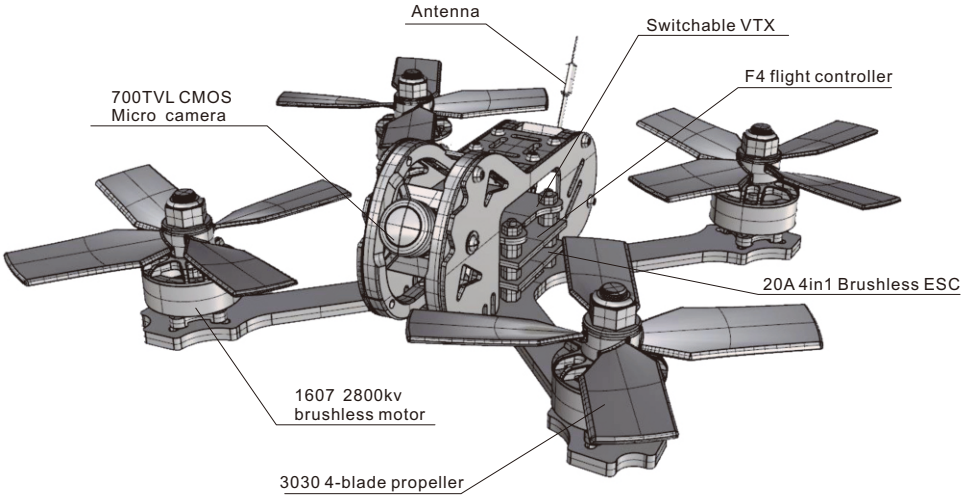
QUICK START GUIDE (DIY)



EACHINE

Package included:

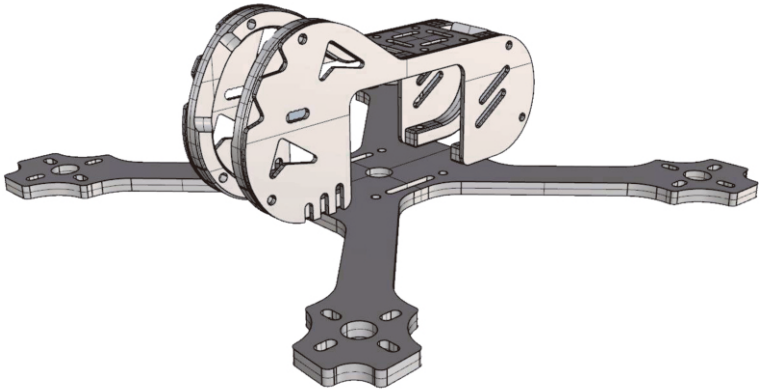
1 x 140mm racing frame kit
2 x 1607 2800KV brushless motor CW
2 x 1607 2800KV brushless motor CCW
1 x 4 IN 1 20A BLHeli_S ESC
1 x Customized F4 flight controller
1 x 700TVL CMOS camera
1 x 5.8G 40CH 0mw/25mw/200mw switchable VTX
2 x 3030 4-blade propeller CW
2 x 3030 4-blade propeller CCW



Contents

1.0 Frame kit

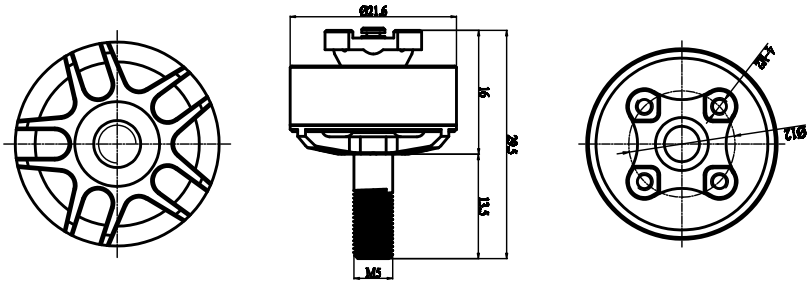
Wheel base: 140mm
Bottom plate thickness: 3mm
Side plate thickness: 1mm
Frame kit material: 3K carbon fiber & 6065 aluminium



2.0 Motor

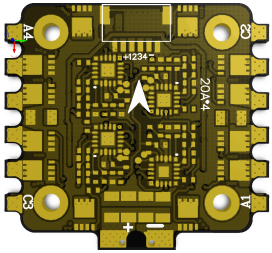
KV: 2800KV
Lipo cell: 2-4S
Weight: 17.8g (includes wires)
Output shaft length: 14mm
Maximum pull: signal 630g
(4S 3030 4-blade propeller)
Maximum power: 350W

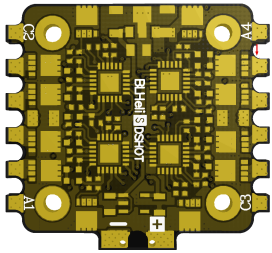
Configu-ration: 9N/12P
Mounting holes distance: 12*12mm
Mounting holes: φM2
Bearing: NSK
N52 Strong NdFeB Magnet
Recommend propeller: 3 inch



3.0 ESC

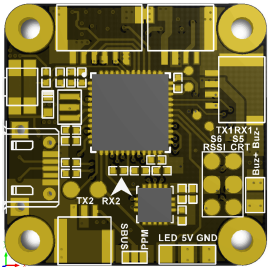
Continuous current: 20A
Peak current: 25A (10S)
BEC output: no
Input voltage: 2-4S
Main control chip: 48mhz EFM8BB2
Firmware upgrade: Supports Dshot600/BLHeli_S/Oneshot125
MOS: 3*3
MOS type: vs3610ae 30v64a

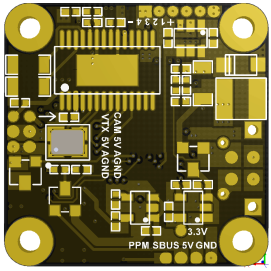




4.0 Flight controller

Main control chip: STM32F411
Sensor: ICM20602 6-axis
Integrated OSD
PPM/DSM/IBUS/UAR share: UART1-RX
Mounting holes distance: 20*20mm
Weight: 24g
PID circulation rate and refresh rate can up to 32kHz
Supports Betaflight/cleanflight/inav firmware





5.0 Switchable VTX

Supports TBS SmartAudio
Transmitting power: 0mW/25mW/100mW/200mW switchable
Channel: 40CH
Full video format: NTSC/PAL
Input voltage: 7V~24V
Power dissipation: +12V/600MW
Size: 25×20×6mm
Weight: ≤3.2g (except antenna)

There are two ways to control the frequency and power of the launches:

Enter the release: FEATURES->VTX SA can enter the following interface.

<1> uses remote control to visualize control, as shown in Figure 1.1

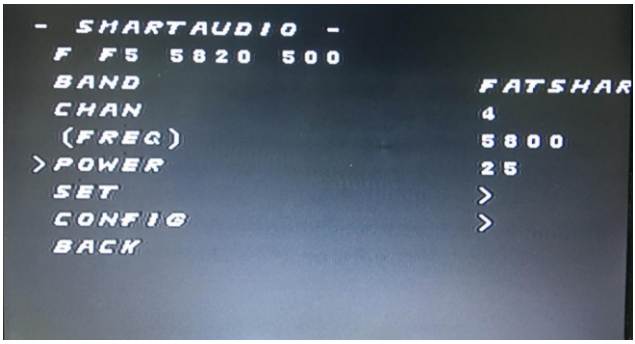


Figure 1.1

The second row is the status bar, respectively.
F:freestyle modeF5: is now in frequency band F, fifth frequency point.
5820: now has a frequency of 5820.
500: now has a transmit power of 500MW
Third lines
BAND: indicates frequency band, and BAND can be modified by remote control.A (BOSCAM A) B (BOSCAM B) E (BOSCAM E) F (FATSHARK) F (E)
Fourth lines
CHAN: represents frequency points, and the 1---8 can be modified by remote control.
Fifth lines
(FREQ): indicate the corresponding frequency now, changing with the band and Chan above.
Sixth lines
POWER: indicates the transmission power and can be adjusted.

5.0 Switchable VTX

Seventh lines
SET: Enter and select YES to confirm your BADN, CHAN, POWER settings and take effect immediately., as shown in Figure 1.2 below

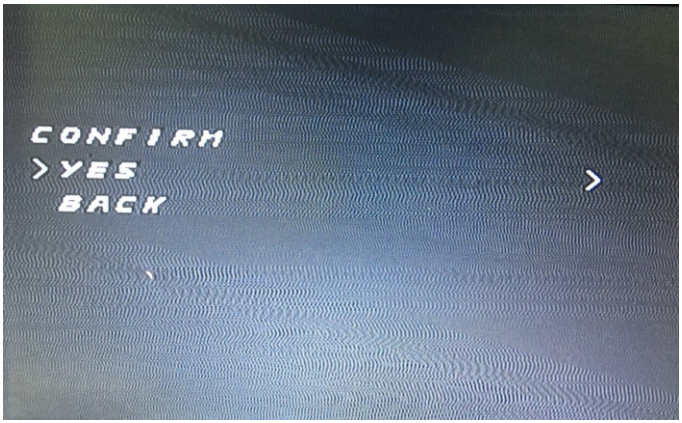


Figure 1.2

Eighth lines
The CONFIG: function is set in, as shown in Figure 1.3 below.

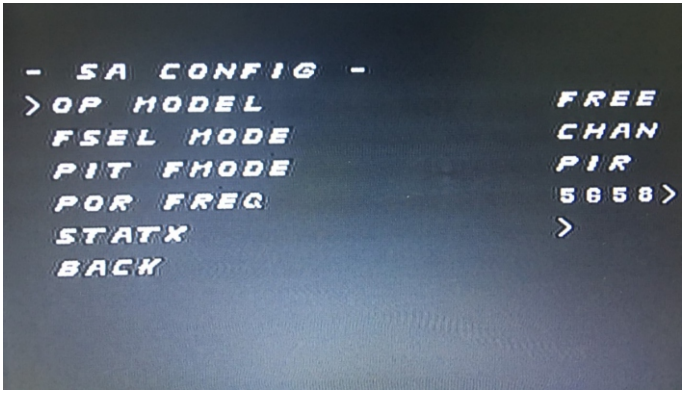


Figure 1.3

OP MODEL: mode adjustment, with free mode and race mode, needs reboot to take effect.
FSEL MODE: regulates frequency setting mode, CHAN and user, user mode is temporarily invalid.
PIT FMODE:PITMODE mode, with PIR and POR mode.

5.0 Switchable VTX

In the POR mode, POR FREQ: can enter into any frequency between 5300-5900, as shown in Figure 1.4.

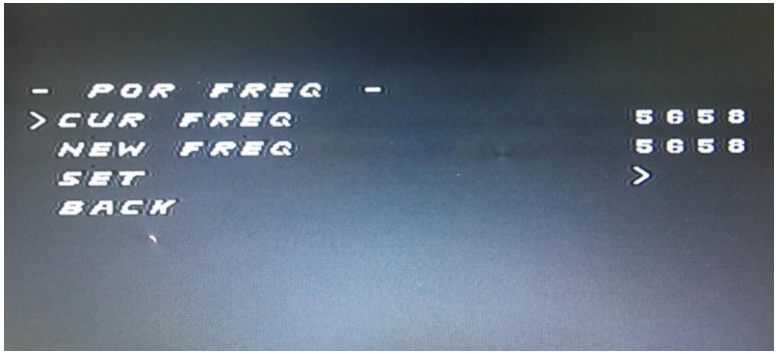


Figure 1.4

STATX: status information

<2>XMM-VTX is operated by a button with three LED lights (red light CH1-8; blue light BAND1-5; green light power 1-3 <25-100-200 mW>)and TBS Smart Audio remote control operation. Keyboard operation: Long press 3S (three LED indicators are all on) to open and enter CH switching operation, and the red light will flash, flashing once represents the currentCH1 (2-8 times for CH2-CH8 respectively). At this time, a short press of the key CH plus 1 will flash the corresponding number of times. CH1-8 cycle. Press the button 3S (three LED lights are all on) to open and enter the BANDswitching operation, and the blue light will flash. The flash once represents the current BAND1 (2-5 times for BAND2-BAND5 respectively). At this time, press the button BAND plus 1, and the blue light will flash correspondingly. BAND1-5 cycle. Press the button 3S (three LED lights are all on) again to open the power switching operation, and the green light will flash, one time represents the current power of the first grade (2-3 times for the green light flashing respectively), at this time, press the button power to add one gear, and the green light will flash the corresponding number of times. Power stall 1-3 cycle. Press the button 3S again (3 LED lights are all bright) to release the above settings again. Note that the previous settings will not be saved if the power is off before saving. For example, if CH is only set, it is also necessary to press 3S three times longer to save the settings.Long press button 8S (green light) quit PIT mode.

5.0 Switchable VTX

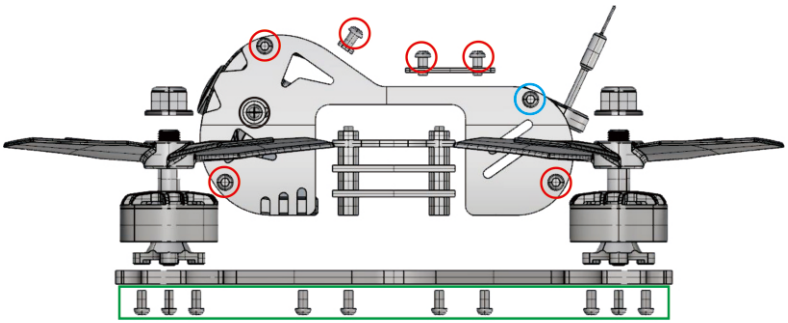
Band	CH1	CH2	CH3	CH4	CH5	CH6	CH7	CH8
Band-A	5865	5845	5825	5805	5785	5765	5745	5725
Band-b	5733	5752	5771	5790	5809	5828	5847	5866
Band-E	5705	5685	5665	5665	5885	5905	5905	5905
Band-F	5740	5760	5780	5800	5820	5840	5860	5880
Band-r	5658	5695	5732	5769	5806	5843	5880	5917

Note: In the remote control, the power of 25 corresponds to the actual 25 mW, 200 corresponds to the actual 100 mW, and 500/800 corresponds to the actual 200 mW.

6.0 Camera

Case size: 19mm*19mm
Weight: 9.5g
Total pixels: PAL: 1020H×596V (0.61MP);
NTSC: 1020H×508V (0.52MP)
Effective pixels: PAL: 976H×582V (0.57MP);
NTSC: 976H×494V (0.48MP)
Signal system: PAL/NTSC switchable
Resolution ratio(horizontal center): 700TVL
Video output: 1.0Vp-p/75Ω
Automatic gain control: 0.25/0.50/0.75/1.00, up to 55dB
White balance: off
Exposure mode: electron exposure
Electronic shutter: 1/50(1/60) - 1/100000 S
Gamma correction: 0.45/1.0
Synchronization method: inter-sync
Camera lens: standard 2.1mm
Lens operating voltage: DC 5-12V
Working current: 70mA (low power consumption)
Working temperature: -20℃~-60℃
Humidity: 0%~98%

7.0 Screws



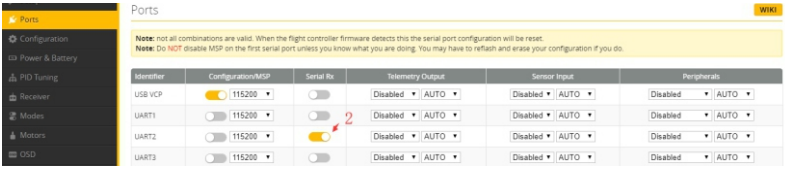
12* M2*5 2* M2*8

2* M2*4 24* M2*6

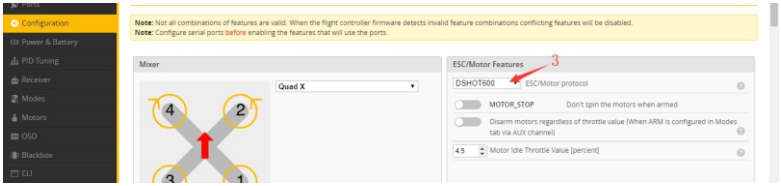
8.0 Adjusting parameter

1.Click connect connection

2: Click the RX interface under UART2 under the ports option, as shown in the figure.

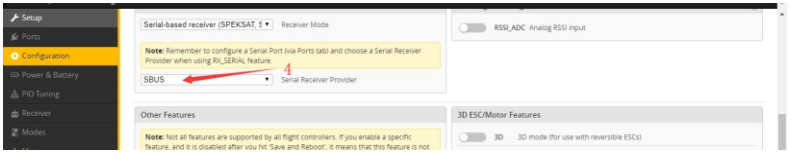


3: Click CONFIGURATIN to change to dshot600.



8.0 Adjusting parameter

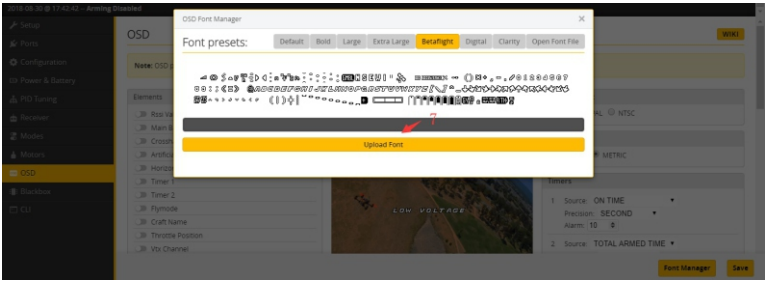
4: Click CONFIGURATIN; change to SBUs



5: Click modes, add arm and angle, drag the slider between 1300 and 1700, and set arm to AUX1 and angle to aux2

6: Push the slider to test the positive and negative rotation of the motor, such as error,

7: Click font manager, select betaflight, click upload font

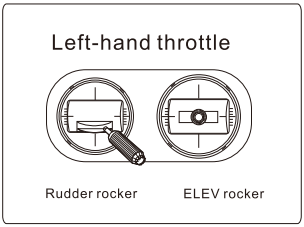


8: Click setup, calibrate accelerometer

9.0 Motor Unlock/lock

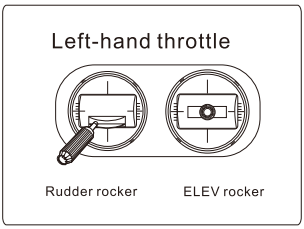
Motor Unlock

Put the throttle rocker at the lowest point, move the rudder rocker to the right and keep it for more than 2 seconds. The blue state indicator is always on, that is unlock the motor.

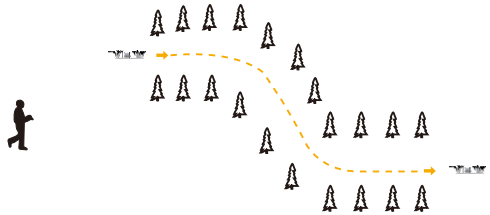


Motor lock

Put the throttle rocker at the lowest point, move the rudder rocker to the leftmost side, and the red state indicator is always turned on to lock the motor. At this time, pushing the throttle rocker motor upward will not rotate.



10.0 Traversing flight



1).Flying is more suitable for experienced pilots.
2).During the flight, please keep the flight within the video receiving range (the actual range depends on the flight environment and weather conditions).
3).During flight, please avoid crowd, animals and High voltage wires and other obstacles