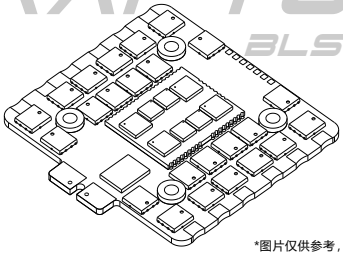
FLYCOLOR®

多旋翼飞行器 无刷电子调速器说明书

猛禽BLS-05 4合1 ESC

RAPTOR BLS-05



*图片仅供参考，产品以实物为准

感谢您使用本产品！本产品功率强大，错误的使用可能导致人身伤害和设备损坏，强烈建议您在使用设备前仔细阅读本说明书并保存，严格遵守规定的操作程序。我们不承担因使用本产品或擅自对产品进行改造所引起的任何责任，包括但不限于对附带损失或间接损失的赔偿责任。我们有权在不经通知的情况下变更产品的设计、外观、性能及使用要求。

01 产品特点

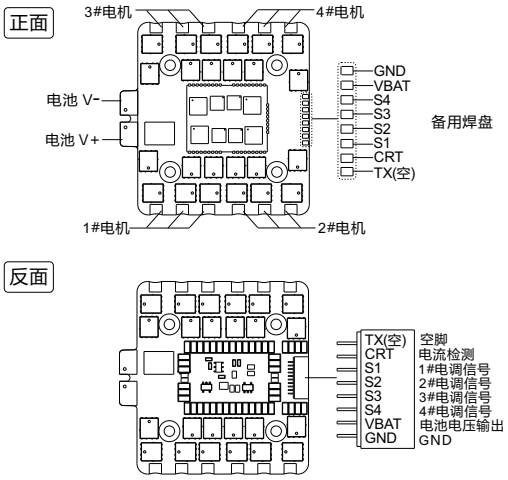
- 猛禽BLS-05 四合一电调采用EFM8BB51 MCU，8位C8051核心，工作频率50MHz；
- 支持固件1：Bluejay，B-X-30（使用Bluejay configurator 调参）；
  支持固件2：BLHeli-S，B-X-30（使用BLHeliSuite调参）；
  以具体型号为准；
- 可根据需求选择最高工作电压6S或8S；
- 功率部分和控制部分为独立的PCB，降低线路干扰；
- 简化且实用的四合一电调，超高的性价比；
- 完美兼容Flycolor F4 / F7 /H7 等一系列飞控；只需使用极短信号线连接飞控，安装更快；
- 专用三合一驱动IC，启动更加舒畅。电调支持最高50万转速；
- 电调使用的固件，专为多旋翼提升优越的性能，硬件产生的电机PWM可提升油门响应和降低噪音；
- 内置电流计、Vbat电池电压输出；
- 硅胶减震柱能有效减少震动的影响，提高飞行稳定性；
- Bluejay 固件支持Dshot300和Dshot600；
- BLHeli-S支持上电自动检测油门信号，支持普通油门模式1-2ms的脉宽输入，支持 oneshot125,oneshot42和 multishot信号；支持所有Dshot数字信号；
- Damped light再生制动，使得效率更高，油门从大到小变化时电机减速响应更加迅速，稳定性和灵活性显著加强（BLHeli-S固件时）；
- 支持更大功率负载，适合竞速级多旋翼的暴力飞行。

02 规格参数

●型号:	Raptor BLS-05 4in1	
●持续电流:	80A～100A（以具体型号为准）	
●BEC:	No	
●锂电池节数:	3-6S	3-8S
●重量:	23g	
●尺寸(供参考):	54x55x5.8mm	
●安装孔:	30.5x30.5mm,M3	
●调参软件:	Bluejay configurator 或 BLHeliSuite	
●电调固件:	B-X-30	
●典型应用:	9"~15"多旋翼	

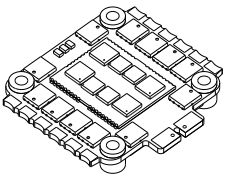
如需查看或更改可编程选项及参数值，请使用Bluejay 或 BLHeliSuite 调参软件。

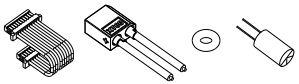
03 端口示意图



04 零件清单

- 猛禽BLS-05 4in1 1x
- 硅胶减震柱 4x
- O型橡胶圈 5x
- 电源线 1x
- 电调/飞控连接线 1x
- 电解电容 1x





*图片仅供参考，产品以实物为准

- 请使用随产品附带的配件进行安装，请保持产品器件底部与机架之间有足够的安全距离，避免短路造成产品损坏；
- 为加强更好滤波效果，请将配件包中的电解电容，焊接在正负极两端。**如果安装空间允许，可选配额外的电容安装板，更多信息可联系销售。**
- 请使用随产品附带的电调/飞控连接线对接，如有更改，连接前务必确认您的连接线线序正确，避免造成产品损坏。

05 注意事项

- 每次上电会自动检测输入的油门信号,然后执行相应的油门模式；
- 首次使用无刷电调或更换遥控设备后需要进行油门行程校准；
  Dshot 模式时，将不再需要校准油门；
- 请勿刷写除其它固件,以免损坏电调；
- VBAT 为电池电压，如果连接至其它设备，务必确认工作电压是否匹配;
- CRT.(Current)为电流检测口，可连接至飞控对应电流检测口;
- 无论任何时候都要注意极性，供电之前一定要反复检查;
- 在插拔或者做任何连接时，请关闭电源;
- 请不要超出ESC工作电流、电压范围使用；
- 所有焊接要求良好的焊接技术，任何时候都需要避免因焊接而造成元件或线材之间短路；
- 可以做一些减震措施尽量避免震动;
- 请确保所有电线和连接部件绝缘良好，避免短路造成产品损坏；
- 请避免在潮湿、高温等恶劣环境下使用产品，避免造成产品损坏；
- 如需更多信息，请联系售后或者技术支持。

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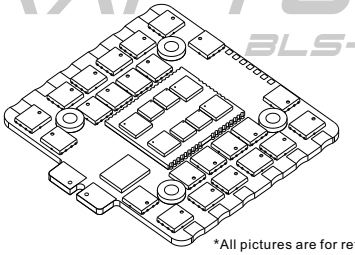
User Manual
Multi-Rotor Brushless ESC

Raptor BLS-05 4in1 ESC



*All pictures are for reference only

ATTENTION

Thank you for using our product. Any Improper operation may cause personal injury damage to the product and related equipments. This high power system for RC model can be dangerous ,we strongly recommend reading the user manual carefully and completely. We will not assume any responsibility for any losses caused by unauthorized modifications to our product. We have the right to change the design, appearance, performance and usage requirements of the product without notice.

01 Main features

- Raptor BLS-05 4in1 ESCs use EFM8BB51F16G MCU, pipelined 8-bit C8051 core with 50 MHz maximum operating frequency.
- Supports firmware 1: Bluejay, B-X-30 (Using Bluejay configurator). Supports firmware 2: BLHeli-S,B-X-30 (Using BLHeliSuite). Subject to specific model.
- It can be selected according to the requirement, with a maximum 6S or 8S.
- The power section and the control section are separate PCBs to reduce circuit interference.
- Simplified and practical 4 in 1 ESC, ultra high cost-effectiveness.
- Perfectly compatible with a range of flight controllers such as Flycolor F4/F7/H7. Simply connect the flight controller with a very short wire for faster installation.
- Dedicated 3in1 drivers, makes the start more smooth. ESC maximum speed is limited to 500k eRPM.
- Firmware is designed for superior performance in multirotors, and uses hardware generated motor pwm for smooth throttle response and silent operation.
- Built in current meter and Vbat battery voltage output.
- Silicon spacer for supporting could reduce the effect of vibration, makes the flight more stable.
- Bluejay firmware supports Dshot300 & Dshot600.
- BLHeli-S code supports regular 1-2ms pulse width input, as well as Oneshot125 , Oneshot42 and Multishot , supports all Dshot .
- Damped light does regenerative braking, causing very fast motor retardation, and inherently also does active freewheeling (BLHeli-S firmware).
- Supports higher power load, more suitable for violent flight of racing drone.

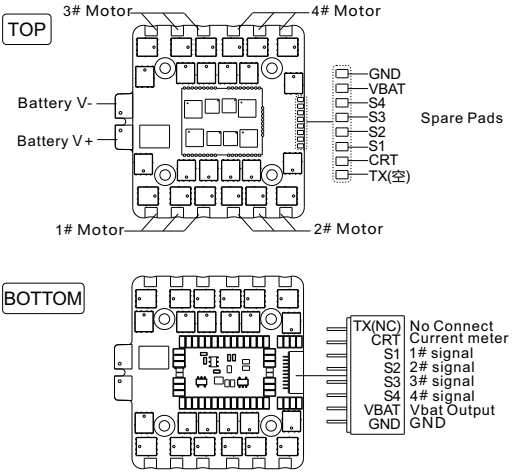
02 Specification

●Model:	Raptor BLS-05 4in1	
●Con. Current:	80A～100A (Subject to specific model)	
●BEC:	No	
●LiPo cells:	3-6S	3-8S
●Weight:	23g	
●Size:	54x55x5.8mm	
●Mounting:	30.5x30.5mm,M3	
●Configurator:	Bluejay configurator or BLHeliSuite	
●Firmware :	B-X-30	
●Application:	9"~15" multi-rotors	

ATTENTION

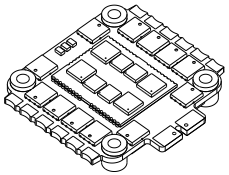
To view or change programmable items and parameter values, Please use BLHeliSuite or Bluejay configurator.

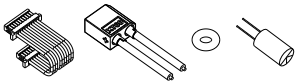
03 Connect diagram



04 Part list

● Raptor BLS-05 4in1	1x
● Silicone vibration absorber	4x
● O-Ring	5x
● Power cable	1x
● FC/ESC connecting wire	1x
● Low ESR capacitor	1x





ATTENTION

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●Please use the parts supplied with the product for installation. Please ensure enough safety space between the ESC& Drone frames, as short circuit will damage the product.

●To enhance better filtering effect , please solder included capacitor to the positive and negative terminals on the ESC. **If the installation space permits, an additional capacitor mounting board can be optionally installed, please contact our sales for more information.**

●Please use the wire supplied with the product for connecting. confirm the pinout and sequences between flight controller and ESC before applying power. Modify as necessary.

05 Attention

- ESC will automatically detect the input throttle signals every time as soon as it powered on, and then execute the corresponding signal-receiving mode.
- User need to calibrate the throttle range when starting to use a new ESC or another transmitter. When the input signal is Dshot, throttle calibration is disabled.
- Please don't flash any other firmware to avoid product damage..
- VBAT is battery output, make sure your device operating voltage is matched if you want to use VBAT.
- CRT.(Current)port can be connect to the port on F.C for current meter.
- Observe polarity at all times. Double check before applying power.
- Power off before unplugging ,plugging in or making any connections.
- Please do not exceed the current & voltage range.
- All welding requires good welding technology, short circuit between the element or the wire should be avoided at any time.
- Do everything you can to prevent vibrations.
- Please ensure that all wires and connecting parts are well insulated to avoid product damage due to short circuit.
- Never use this product in harsh environments such as humidity, high temperature, and so on to avoid product damage.
- Please contact sales or technical support for more information.