

NEXUS

The Nexus Flybarless (FBL) control unit has been designed from the ground up based on the Rotorflight 2.0 reference design. All aspects of the Nexus have been planned and tested for optimum performance and compatibility, ensuring the best out-of-the-box Rotorflight experience on the market today.

With its advanced STM32F722 MCU and the TDK ICM-42688-P 6-axis MEMS motion tracking device, which combines a 3-axis gyroscope and a 3-axis accelerometer, the Nexus flight controller ensures precision control and flight. A large 128Mb of onboard flash memory ensures you can log all your flights for fine-tuning and adjustment.

Our Plug'n'Play solder-free RP3-H ExpressLRS receivers feature a locking connector system to ensure a stable connection between the control unit and receiver. DSM and S.BUS ports are also available for use with your selected receiver type. The Nexus also features multi-function ports for future expansion.

The Nexus features a CNC machined aluminum case as standard, which looks great, protects the control unit, and dissipates heat for the F722 processor.

After more than 12 months of R&D, the Nexus has been tested, tuned, and tested again by not only the developers at Rotorflight but also a team of experienced helicopter pilots who took part in our beta testing program. We would like to thank the Rotorflight team and the Beta testing team for making the Nexus possible!

Nexus 直升机陀螺仪，基于 Rotorflight 2.0 技术，历经全面测试与优化，实现了性能与兼容性的最优化。搭载高性能 STM32F722 MCU 和 ICM-42688-P 6 轴 MEMS 运动传感器，集成 3 轴陀螺仪和 3 轴加速度计，确保精准控制与飞行。内置充足大容量的 128Mb 闪存，能够记录所有飞行数据，便于用户进行微调和调节。

即插即拔免焊接RP3-H ExpressLRS 接收机，采用锁定系统，确保陀螺仪与接收机之间的稳定连接。DSM 和 Sbus 端口，适用于多种类型接收机，可自行搭配使用。除此以外，Nexus还具有多功能UART 端口，可用于连接各种高性能外设。

Nexus 陀螺仪兼具实用与美观，采用 CNC 铝合金外壳，不仅外观精美大方、保护主板，还保障了F722 处理器的高效散热。

历时一年多的研发时长，Nexus直升机陀螺仪在Rotorflight 开发团队和我们的专业、经验丰富的直升机飞行员的反复测试和优化调整下，现已准备好发布。让我们由衷地感谢 Rotorflight 团队和Beta 测试团队，是他们让Nexus陀螺仪得以问世。

NEXUS Specification	NEXUS技术参数	INCLUDES
<ul style="list-style-type: none"> • Item: Nexus Heli Flight Controller • Firmware: Rotorflight 2.0 • MCU: STM32F722RET6 • GYRO (IMU): ICM-42688-P • FLASH MEMORY (BLACK BOX, IC): 128Mb (W25N01GVZEIG) • BAROMETRER: SPL06-001 • UART: 6 - DSM[UART1], S.BUS[UART2], A-CRSF[UART4], PORT-B[UART6], PORT-C[UART3] • SERVO: 4 - S1, S2, S3, TAIL • RPM SENSOR: 1 - FROM ESC FREQUENCY SENSOR • SBUS: 1 • RECEIVER SUPPORT: CRSF, ELRS, GHOST, S.BUS, SUMD, IBUS, XBUS, EXBUS, PPM, MSP, DSM2, DSMX • VOLTAGE SUPPLY (DC): 5 - 12.6V • A-B-C SERIAL PORT POWER OUTPUT: 5V - 2.0A • DSM SERIAL PORT POWER OUTPUT: 3.3V - 0.5A • Telemetry: S.BUSH, HoTT, S.Port, MSP, EDGEEXT, ELRS • ESC: PWM, Oneshot, Multishot, Dshot • Support Tail ESC: 760us/1520us Servo • Support Tail motor: Yes • DIMENSIONS: 41.3 X 25.4 X 13.1mm • WEIGHT: 16.8g 	<ul style="list-style-type: none"> • 产品：Nexus 直升机陀螺仪 • 固件：Rotorflight 2.0 • MCU：STM32F722RET6 • 陀螺仪（IMU）：ICM-42688-P • 闪存（黑匣子，IC）：128Mb (W25N01GVZEIG) • 气压计：SP06-001 • UART 接口：6 - DSM[1], S.BUS[UART2], A-CRSF[UART4], PORT-B[UART6], PORT-C[UART3] • 舵机：4 - S1, S2, S3, 尾部 • RPM 传感器：1 - 来自 ESC 频率传感器 • SBUS：1 • 支持接收机：CRSF, ELRS, GHOST, S.BUS, SUMD, IBUS, XBUS, PPM, MSP, DSM2, DSMX • 电压 (DC)：5 - 12.6V • A-B-C 串口电源输出：5V - 2.0A • DSM 串口电源输出：3.3V - 0.5A • 遥测：S.BUSH, HoTT, S.Port, MSP, EDGEEXT, ELRS • ESC 电调：PWM, Oneshot, Multishot, Dshot • 支持尾舵机：760us/1520us 舵机 • 支持尾电机驱动：是 • 尺寸：41.3 X 25.4 X 13.1mm • 重量：16.8g 	<ul style="list-style-type: none"> • Nexus Heli Flight Controller *1 • JST-GH 4 Wire pigtail cables *3 • JST-GH to Servo Plug *1 (dupont 3 pin connector) • USB-C extender *1 • Type C extension cable *1 • 3M double-sided mounting tape *3 • Heat shrink tubing *2

