

GOOSKY

S2 Ultra

快速使用指南

GOO-SKY.COM

GOOSKY

S2 Ultra

Quick Start Guide

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免责声明

- 本产品并非玩具,不适合未满 14 岁的人士使用。
请勿让儿童接触 S2 Ultra,在有儿童出现的场景操作时请务必特别小心注意。
- 本产品是一款竞技直升机,在电源正常工作及各部件未损坏的情况下将提供轻松自如的飞行体验。
- 请务必在使用产品之前仔细阅读本文档和产品说明书、遥控器说明书,了解您的合法权益、责任和安全说明;否则,可能带来财产损失、安全事故和人身安全隐患。一旦使用本产品,即视为您已理解、认可和接受本文档全部条款和内容。使用者承诺对自己的行为及因此而产生的所有后果负责。
- GOOSKY 不承担因用户未按本指引、产品说明书、遥控器说明书使用产品引发的一切损失。
- 在遵从法律法规的情况下,GOOSKY 享有对本文档的最终解释权。

Disclaimer statement

- This product is not a toy and is not intended for use by persons under the age of 14. Do not let children touch the S2 Ultra, and be very careful when operating in a scene where children are present.
- This product is a competitive helicopter, which will provide a relaxed and comfortable flying experience when the power supply is working properly and the components are not damaged.
- Please be sure to read this document, product manual, and transmitter manual carefully before using the product to understand your legal rights, responsibilities and safety instructions. Otherwise, it may cause property damage, safety accidents and personal safety hazards. Once you use this product, you are deemed to have understood, recognized and accepted all the terms and content of this document. The user undertakes to be responsible for his own actions and all consequences arising therefrom.
- GOOSKY shall not be liable for all losses caused by the user's failure to use the product in accordance with this guideline, product manual, and remote control manual.
- In compliance with laws and regulations, GOOSKY has the final right to interpret this document.

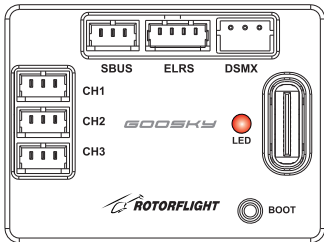
注意事项

- S2 Ultra 特技直升机具有一定的危险性,操作前一定要详细阅读使用指南或说明书,确保使用安全,以免误伤自己或者他人。
- 请在空旷的室外环境飞行,并远离人群。
- 请远离高压架或者高压线等设备,避免电磁干扰。
- 飞行前注意检查遥控器和飞机电池电量,确保设备有电。
- 使用前一定要将电池充满电,然后再飞行。

Precautions

- S2 Ultra aerobatic helicopter has certain dangers. Before operation, be sure to read the guide or instruction to ensure the safety of use, so as not to accidentally injure yourself or others.
- Please fly in an open outdoor environment and away from crowds.
- Please keep away from high-tension towers or high-voltage cables to avoid electromagnetic interference.
- Before flying, check the amount of the power of the remote control and the helicopter to ensure that the equipment is powered.
- Be sure to fully charge the battery before using it, then flying.

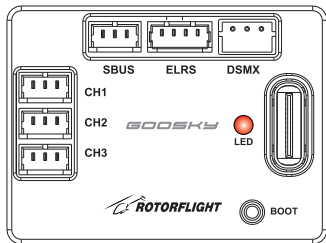
飞控灯语介绍



飞控 LED 指示灯灯语介绍

允许解锁	红灯常亮	
禁止解锁	红灯慢闪	
已解锁	红灯熄灭	
解锁失败	红灯快闪	

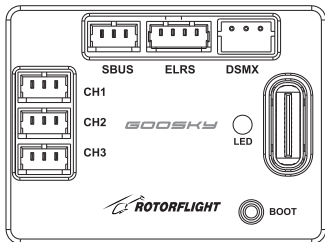
Flight Controller LED Status Indicators



LED Status Descriptions:

System is ready to arm	Solid red	
Arming not permitted	Slow flashing red	
System is armed	Rapid blinking red	
Arming attempt failed	Fast flashing red	

飞控介绍



硬核配置：STM32F405 主控 + ICM42688P 六轴传感器，128MB 黑匣子(支持 60+ 飞行数据记录)

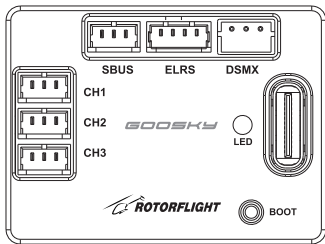
精准控制：专为 Rotorflight 2.2 优化,实现毫秒级响应与超稳姿态

全协议兼容：DSMX/SBUS/ELRS 接收机即插即飞,免焊接配置

工业级防护：CNC 铝合金外壳,高温不降频,抗冲击设计。

极小尺寸：24×33mm, 重量仅 11g

Flight Controller Overview



Hardware Configuration:

Equipped with STM32F405 main processor + ICM42688P 6-axis IMU sensor, and 128MB Blackbox memory (supports 60+ flight data logs)

Precision Control:

Optimized specifically for Rotorflight 2.2 to achieve ultra-responsive control and exceptional stability

Fully Compatible Protocols:

Plug-and-play support for DSMX / SBUS / ELRS receivers — no soldering required

Industrial-Grade Protection:

CNC aluminum alloy casing with high anti-interference performance and impact-resistant design

Ultra-compact size: 24 × 33mm, weight: only 11g

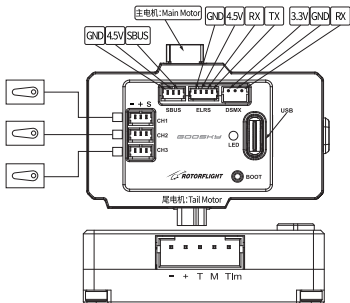
参数表

固件	Rotorflight
主控芯片 (MCU)	STM32F405RGT6
陀螺仪 / 惯性单元 (IMU)	ICM42688P
舵机接口 (共 3 路)	CH1, CH2, CH3
遥测支持	S.BUS, S.Port, MSP, EDGETX, ELRS
电调协议 (ESC)	支持 PWM, Oneshot, Multishot, Dshot300 (不建议使用Dshot600)
尾舵电机/尾电机切换	支持
UART 接口 (共 3 个)	ELRS / DSMX (UART 1)
	ESC 回传 (UART 5)
	SBUS (UART 2)
接收机协议	支持 CRSF、ELRS、S.BUS、FUBS、 MSP、DSMX
电调输入供电电压	5-16v (注意不要超过舵机使用电压)

Specifications

Firmware	Rotorflight
Main Controller (MCU)	STM32F405RGT6
Gyroscope / IMU	ICM42688P
Servo Ports (3 total)	CH1, CH2, CH3
Receiver Protocols Supported	S.BUS, S.Port, MSP, EDGETX, ELRS
ESC Protocols	Supports PWM, Oneshot, Multishot, DShot300 (DSHOT600 not recommended)
Tail Motor / Tail ESC Switching	Supported
UART Ports (3 total)	ELRS/ DSMX (UART 1)
	ESC Telemetry (UART 5)
	SBUS (UART 2)
Supported Receiver Protocols	CRSF, ELRS, S.BUS, FUBS, MSP, DSMX
ESC Input Voltage	5-16v (Do not exceed ESC-rated input voltage)

飞控接口定义



CH1-CH2-CH3: 舵机接口

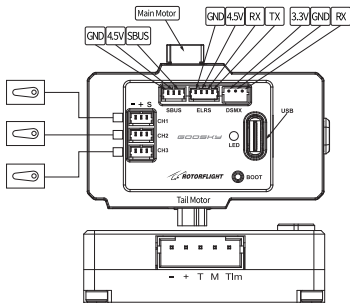
SBUS: JST 1.25mm 3PIN

ELRS: JST 1.25mm 4PIN, 注意接收机 TX 与飞控 RX 连接, 接收机 RX 与飞控 TX 连接

DSMX: HX 1.5mm 3PIN

BOOT 按键: 用于飞控固件升级, 按住 BOOT 键, 再给飞控上电, 可进入 DFU (固件烧录模式)

Flight Controller Port Definitions



CH1-CH2-CH3: Servo interface

SBUS: JST 1.25mm 3PIN

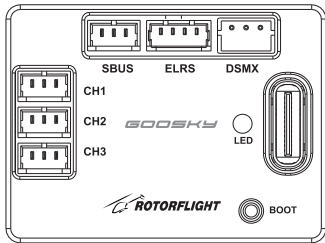
ELRS: JST 1.25mm 4PIN,

Note : Connect receiver TX to FC RX, and receiver RX to FC TX

DSMX: HX 1.5mm 3PIN

BOOT Button: Used for firmware updates. Press and hold the BOOT button, then power on the flight controller to enter DFU (Device Firmware Upgrade) mode.

接收机对应串口

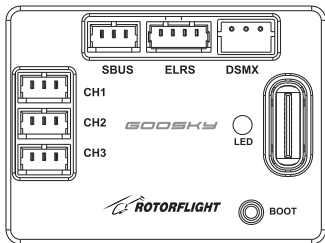


接收机类型	对应串口
ELRS	UART1
DSMX	UART1
SBUS	UART2

接收机的设置:

<https://www.rotorflight.org/docs/configurator/tabs/receiver>

Receiver to Serial Port Mapping



Receiver Type	Serial Port
ELRS	UART1
DSMX	UART1
SBUS	UART2

Receiver Settings:

<https://www.rotorflight.org/docs/configurator/tabs/receiver>

摇控器设置

注意：为了安全，建议拆掉直升机主桨、尾桨

1、开源遥控拨杆开关设置指南(TX16S 为例)

A、新建模型

B、进入混控设置

添加如拨杆功能，分别用于飞控锁、油门锁定、转速设定

通道编号	控制功能	输入源
CH1	副翼	Ail(默认)
CH2	升降舵	Ele(默认)
CH3	总距	Thr(默认)
CH4	方向舵	Rud(默认)
CH5	飞控锁定	SA
CH6	油门	Thr
CH7	转速选择	SE
CH8	姿态模式	SB

2、进入特殊功能设置

Trigger	功能	CH	数值	启用	效果
SF ↑	锁定通道值	6	100	启用	油门开启
SF ↓	锁定通道值	6	-100	启用	油门关闭

Transmitter Setup

Warning: For safety, it is recommended to remove the helicopter main blades and tail blades during setup.

1. Power on the transmitter and enter the switch setup menu (Using TX16S as an example)

A. Create a new model

B. Enter the mixer setup

Add the following channels and assign functions accordingly (used for flight control, throttle hold, RPM selection, etc.):

Channel	Control Function	Input Source
CH1	Aileron	Ail (default)
CH2	Elevator	Ele (default)
CH3	Collective (Throttle)	Thr (default)
CH4	Rudder	Rud (default)
CH5	Flight Mode Switch	SA
CH6	Throttle Output	Thr
CH7	RPM Selection	SE
CH8	Pose Mode	SB

2. Enter the Special Functions setup

Trigger	Function	CH	Value	Enable	Effect
SF ↑	Override Value	6	100	Enabled	Throttle ON
SF ↓	Override Value	6	-100	Enabled	Throttle OFF

摇控器设置

3、检查混控设置

进入通道查看页面,对照如下表格进行

通道编号	控制功能	PWM 值	输出最大值效果
CH1	副翼	988us/1500us/2012us	向右横滚
CH2	升降舵	988us/1500us/2012us	向前俯冲
CH3	总距	988us/1500us/2012us	总距向上
CH4	方向舵	988us/1500us/2012us	顺时针偏航
CH5	飞控锁定	988us-1500us 锁定	解锁
		1500us-2012us 解锁	
CH6	油门锁定	988us-1500us 0	100%
		1500us-2012us 100%	
CH7	转速选择	988us 转速 1	转速 3
		1500us 转速 2	
		2012us 转速 3	
CH8	姿态模式	988us-1500us 手动	姿态模式 打开
		1500us-2012us 姿态	

注意解锁步骤如下：

- 1,先解锁第五通道设定的 SA 飞控锁
- 2,再打开遥控器的第六通道 SF 油门锁

Transmitter Setup

3. Check Mixer Settings

Enter the channel view page and configure according to the table below:

Channel	Control Function	PWM Value	Output maximum effect
CH1	Aileron	988us/1500us/2012us	Roll Right
CH2	Elevator	988us/1500us/2012us	Pitch Forward
CH3	Collective (Throttle)	988us/1500us/2012us	Collective Up
CH4	Rudder	988us/1500us/2012us	Yaw Clockwise
CH5	Flight Controller Lock	988us-1500us (Disarm)	Arm
		1500us-2012us (Arm)	
CH6	Throttle Hold	988us-1500us (0)	100%
		1500us-2012us (100%)	
CH7	RPM Selection	988us (RPM 1)	RPM 3
		1500us (RPM 2)	
		2012us (RPM 3)	
CH8	Pose Mode	988us-500us (Manual)	Pose Mode ON
		1500us-2012us (Pose)	

Notes on Arming and Disarming:

- 1, First, disarm the helicopter by toggling the SA switch on channel 5
- 2, Then enable throttle hold by toggling the SF switch on channel 6

调参下载

登录 **www.GOO-SKY.com**. 进行下载

注意：官网中软件为稳定版本,如需获得软件的最新版本
可登录此网址：<https://github.com/rotorflight/rotorflight-configurator/releases/>



GOOSKY

Configurator Download

Visit: www.GOO-SKY.com to download the software.

Note: The version provided on the official website is a stable release. To access the latest versions, please visit:
<https://github.com/rotorflight/rotorflight-configurator/releases/>



GOOSKY



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