HGLRC M100-5883 GPS

说明书

M100-5883 GPS
使用指南

产品参数

接收机类型：	■GPS/QZSS L1C/A■SBAS EGNOS、GAGAN、MSAS和WAAS
	■GLONASS L1OF ■BDS B1I ■Galileo E1B/C
灵敏度：跟踪和导航-166dBm， 重新获取-160dBm， 冷启动-148dBm	
第一次Fix[1]的时间：冷启动29s， 热启动1s	
水平位置accuracy[2]：.02 m CEP	
时间脉冲信号的精度：RMS 30ns， 99% 60ns	
速度精度[3]：0 m/s.05	
操作限制：相互作用≤ 4 g，海拔80000 m，速度500 m/s	
时间脉冲信号的频率：1Hz	
波特率：9,600 -- 460800 bps（默认为115200 bps）	
最大导航更新速率：10Hz（默认为10 Hz，可配置）	

*默认的GPS+伽利略+QZSS+SBAS，BDS和荣耀不同时被支持

1. 所有卫星都在≥-130dBm
2 . CEP 50%，24小时静态，≥-130dBm，> 6SVs
3. 50%，30 m/s，动态运行
4. 假设机载< 4g平台

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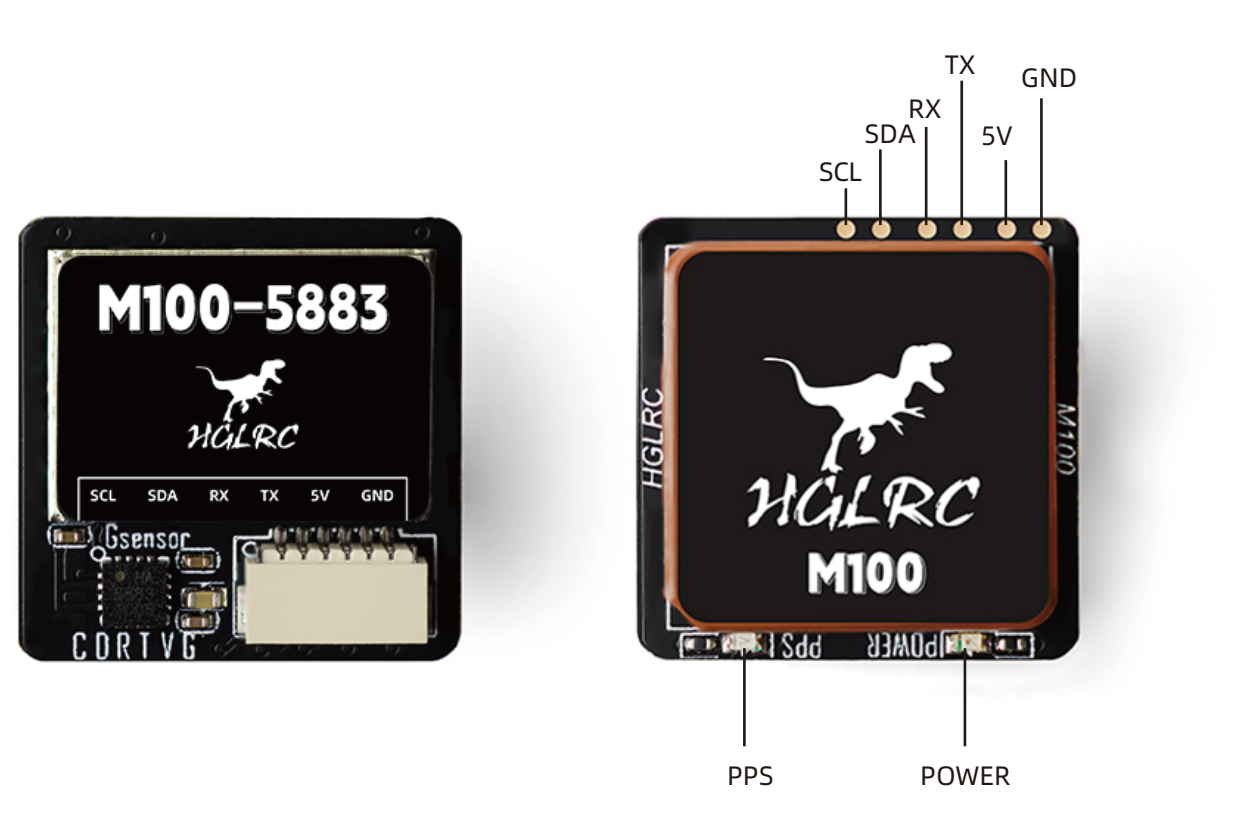
接口定义



指示灯	PPS(蓝灯)	POWER(红灯)
正常启动	常亮	常亮
达到定位精度	闪烁	常亮

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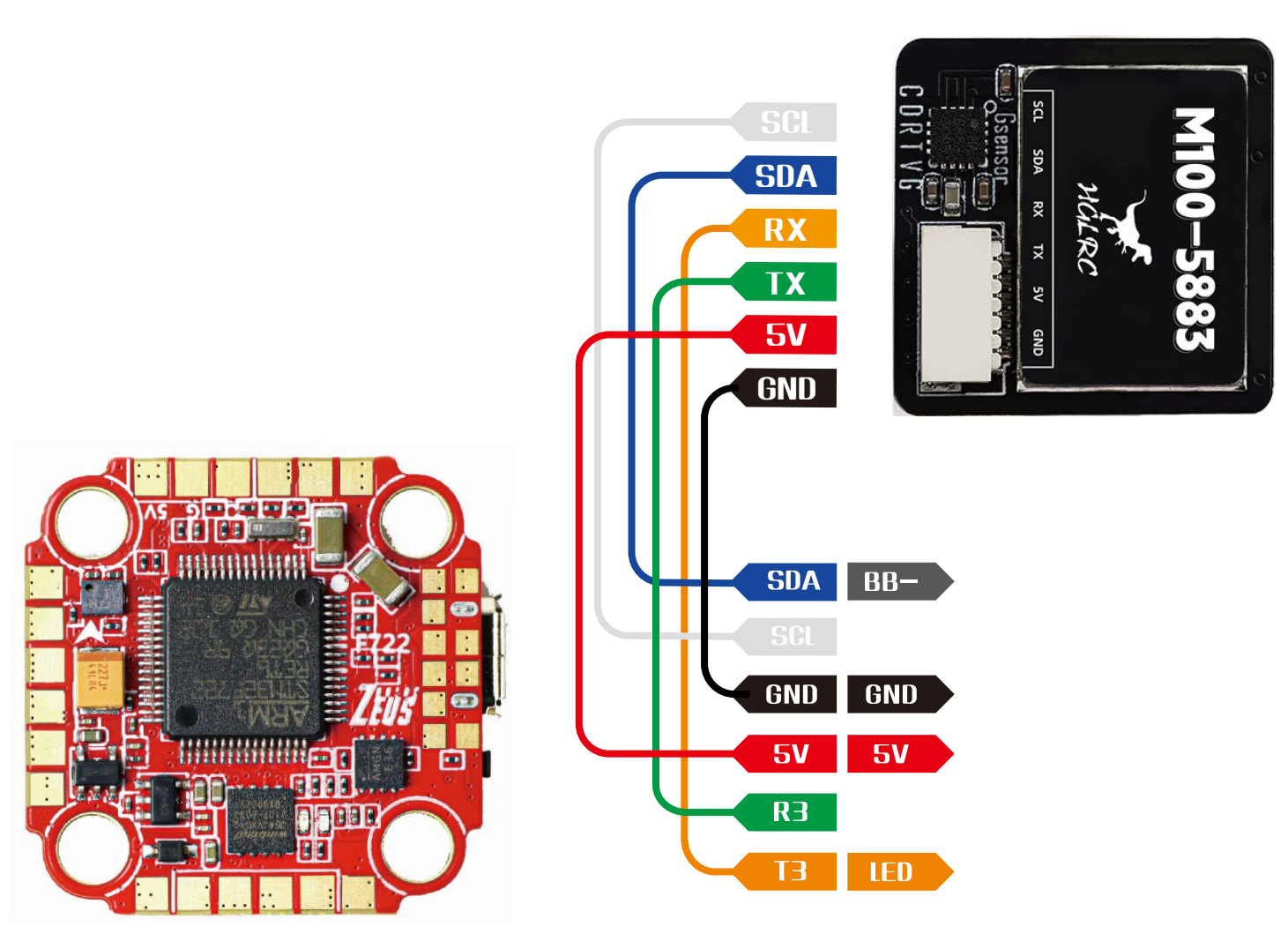
接线图



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按照接线图把GPS连接到飞控任意端口，以UART3示范
(注：一定要接空余的串口或GPS专用串口)

Betaflight设置

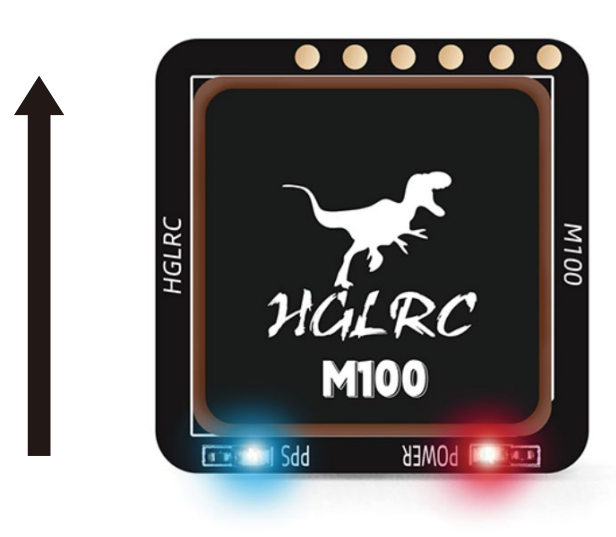
打开Betaflight的端口页面，设置传感器输入类型为GPS，波特率115200

找到UART3，在传感器输入打开GPS并选择波特率115200

开启GPS，启用UBLOX协议

给飞行器通电，GPS正常工作时指示灯亮起，Betaflight顶端的GPS标识亮起

罗盘方向



INAV设置

打开INAV的配置页面，设置传感器输入类型为GPS，波特率115200

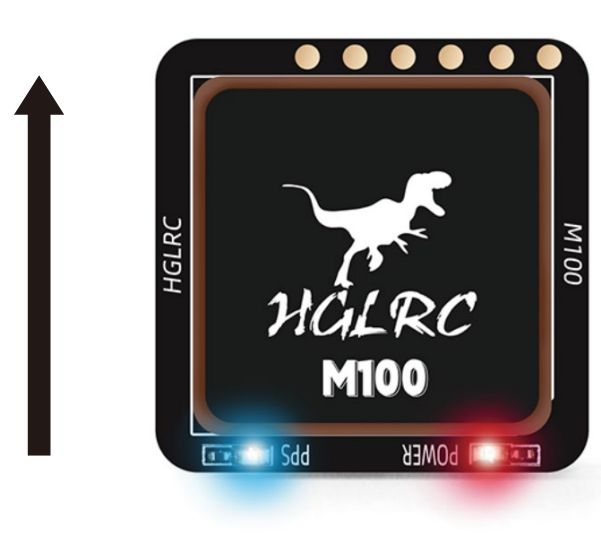
找到UART3，在传感器输入打开GPS并选择波特率115200

开启 gps 启用 ublox协议

罗盘选择 QMC 5883

给飞行器通电，GPS正常工作时指示灯亮起，inav顶端的GPS与罗盘灯亮起

罗盘方向



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注意事项

1.在开启罗盘后，请先校准后再使用。

2.请按照规定范围内的电压给GPS供电。

3.请仔细对照接线图焊接，避免短接烧毁GPS

4.请使用BF4.3.0以上的固件(过低的版本不识别10代芯片)。

5.GPS的安装必须天线朝上，并且远离电机、电源线等有干扰的零件

联系我们

衷心感谢飞友的信任！欢迎选择化骨龙的产品

化骨龙科技 HGLRC

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Manual

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Parameters

Receiver Type： ■GPS/QZSS L1C/A■SBAS EGNOS、GAGAN、MSAS和WAAS
■GLONASS L1OF ■BDS B1I ■Galileo E1B/C

Sensitivity: Tracking and Navigation -166DBM, re-obtain -160dbm, cold start-148dbm

The first fix[1] time: Cold start 29s, hot start 1S

Horizontal positionaccuracy[2]: .02 m CEP

Accuracy of Time Mai Signal: RMS 30ns, 99% 60ns

Speed precision m: 0 m/s.05

Operating limits: Interaction ≤ 4 g, altitude 80,000 m, speed 500 m/s

Frequency of time pulse signal: 1Hz

Potter rate: 9,600 -460800 BPS (default is 115200 bps)

Maximum navigation update rate: 10Hz (default 10 Hz, configuration)

*The default GPS+Galileo+QZSS+SBAS, BDS and Honor are not supported at the same time

1. All satellites are ≥-130dBm
2. CEP 50%, 24 hours static, ≥-130dBm, > 65Vs
3. 50%, 30 m/s, dynamic operation
4. Assuming onboard < 4g platform

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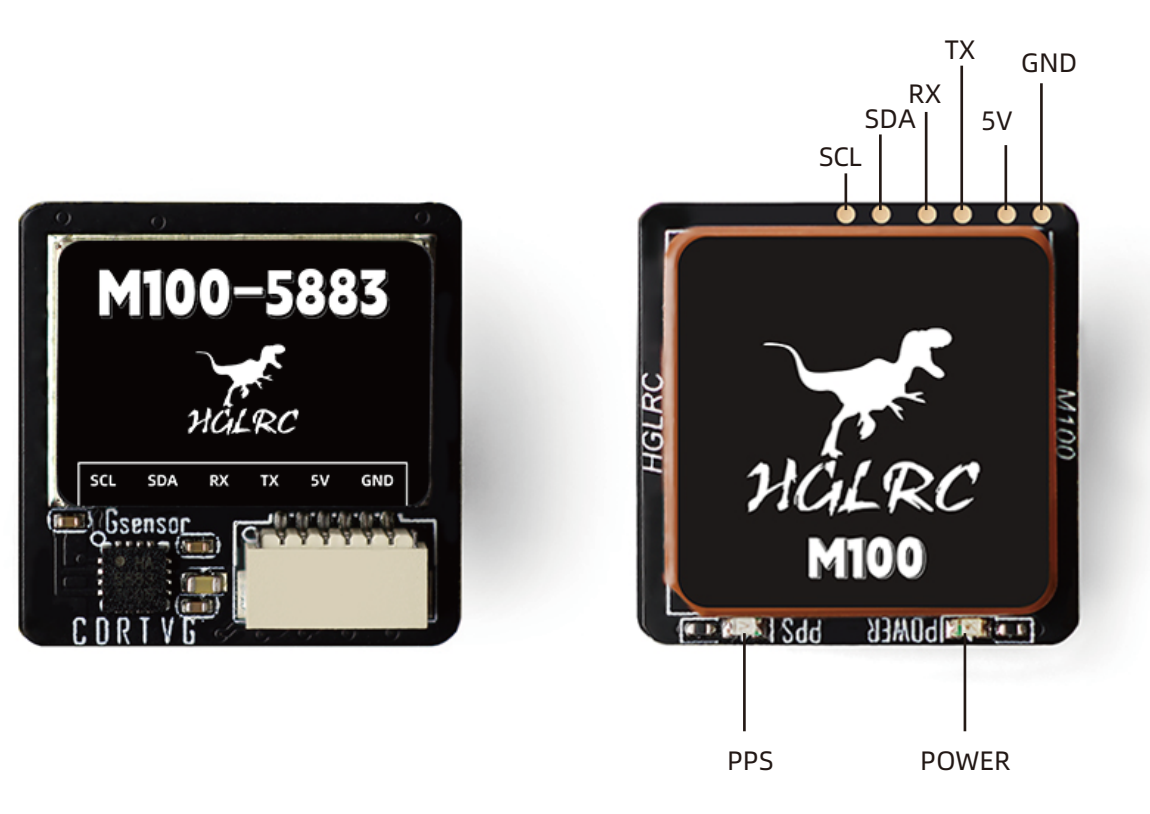
Introduction



Indicator light	PPS (blue light))	Power (red light)
Normal start	normal bright	normal bright
Real position accuracy	Flickering	normal bright

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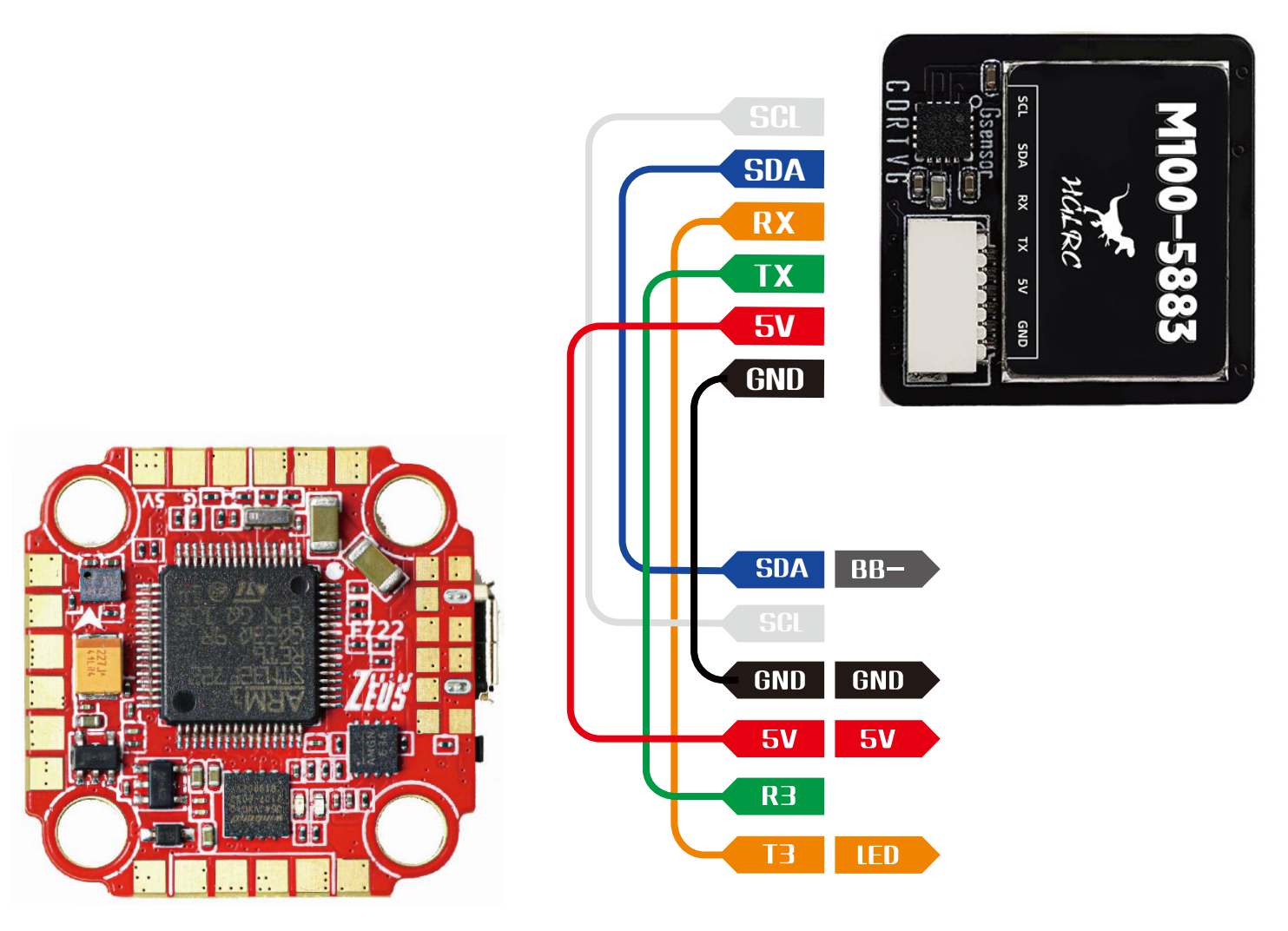
Wiring diagram



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Connect the GPS to any port of the flight controller according to the wiring diagram, and use UART3 as a demonstration

(Note: Be sure to connect to a free serial port or a dedicated GPS serial port)

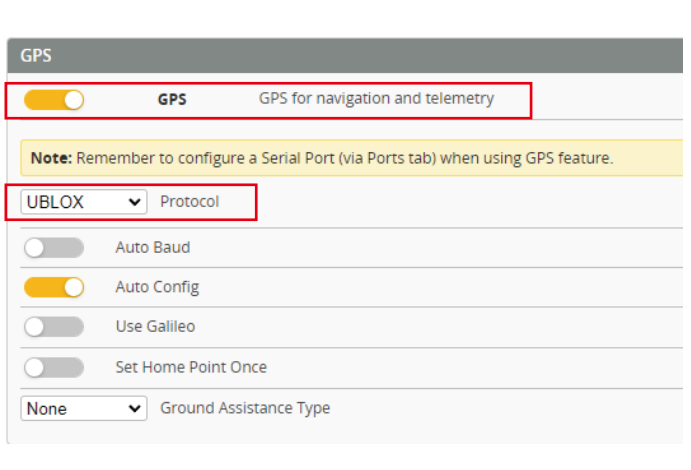
Betaflight settings

Open the port page of Betaflight, set the sensor input type to GPS, and the baud rate to 115200

Find UART3, turn on GPS at sensor input and select baud rate 115200

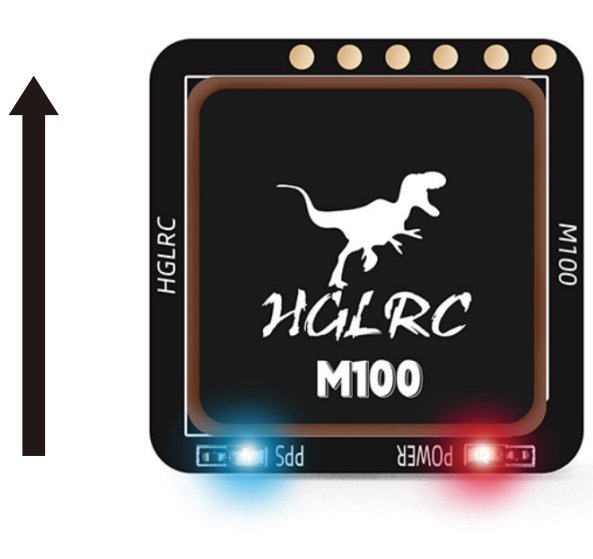
Identifier	Configuration/MSP	Serial Rx	Telemetry Output	Sensor Input	Peripherals
USB VCP	115200	......	......	Disabled AUTO	......
UART1	115200	......	......	Disabled AUTO	......
UART2	115200	......	......	Disabled AUTO	......
UART3	115200	......	......	GPS 115200	......
UART4	115200	......	......	Disabled AUTO	......
UART6	115200	......	......	ESC AUTO	......

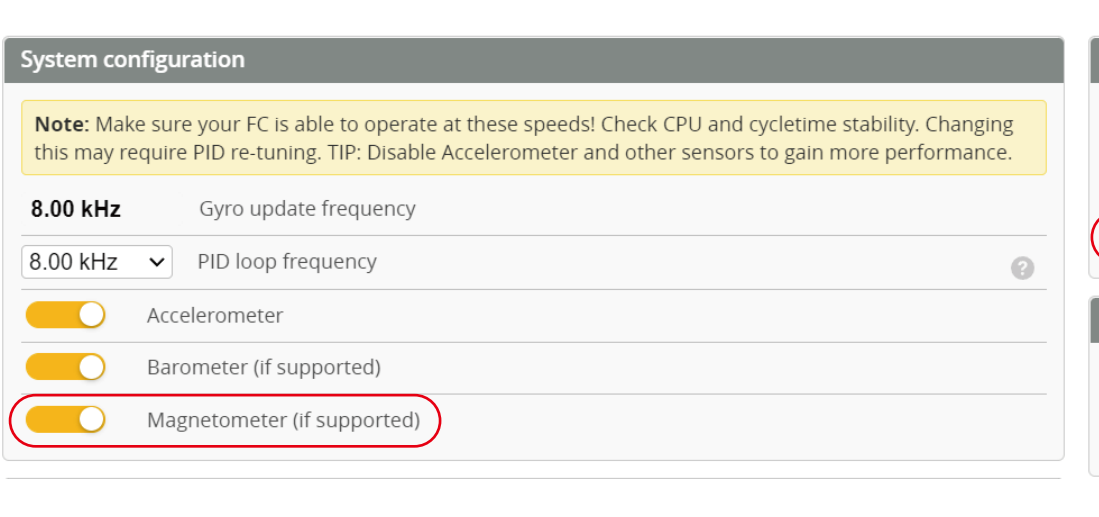
Turn on GPS and enable UBLOX protocol

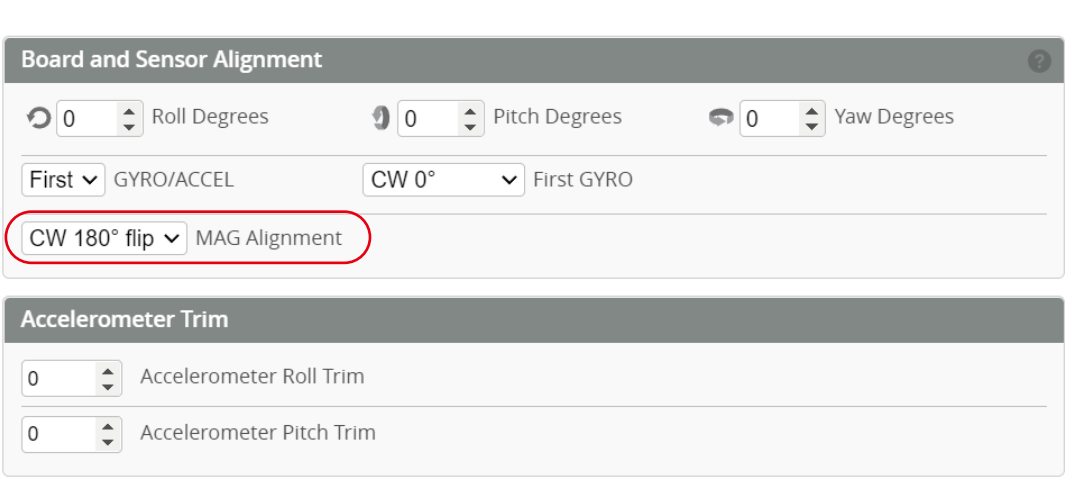


Power on the aircraft, the indicator light will be on when the GPS is working normally, and the GPS logo on the top of Betaflight will be on

Compass direction







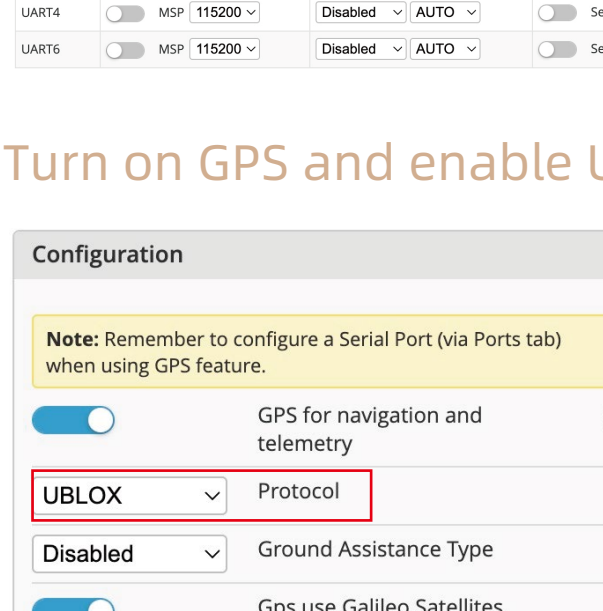
INAV settings

Open the configuration page of INAV, set the sensor input type to GPS, and the baud rate to 115200

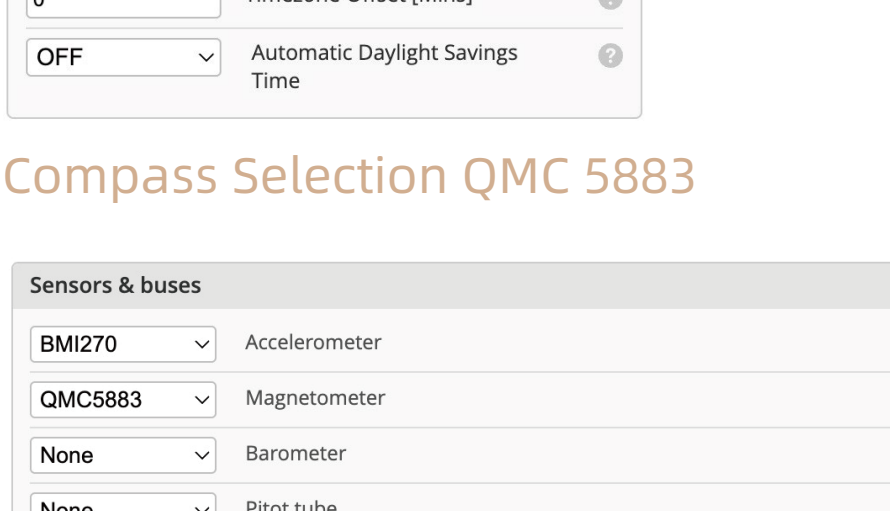
Find UART3, turn on GPS at sensor input and select baud rate 115200

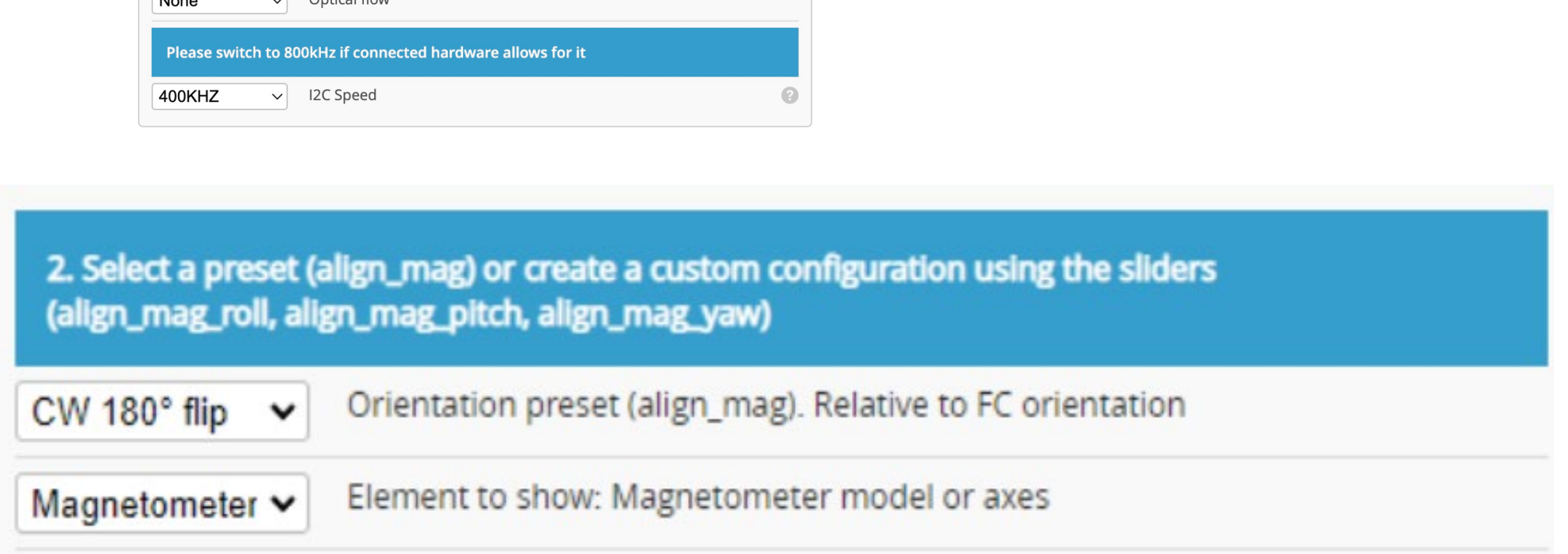
Identifier	Data	Telemetry	RX	Sensors	Peripherals
USB VCP	MSP 115200	Disabled AUTO	Serial RX	Disabled 115200	Disabled 115200
UART1	MSP 115200	Disabled AUTO	Serial RX	Disabled 115200	Disabled 115200
UART2	MSP 115200	Disabled AUTO	Serial RX	Disabled 115200	Disabled 115200
UART3	MSP 115200	Disabled AUTO	Serial RX	GPS 115200	Disabled 115200
UART4	MSP 115200	Disabled AUTO	Serial RX	Disabled 115200	Disabled 115200
UART6	MSP 115200	Disabled AUTO	Serial RX	Disabled 115200	Disabled 115200

Turn on GPS and enable UBLOX protocol

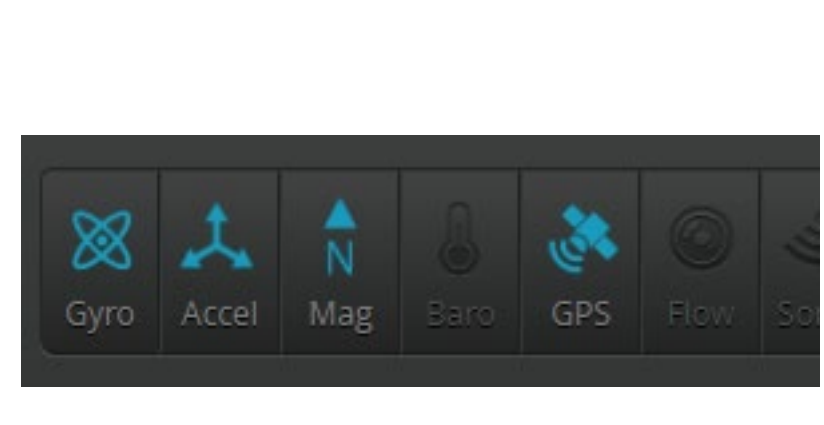


Compass Selection QMC 5883

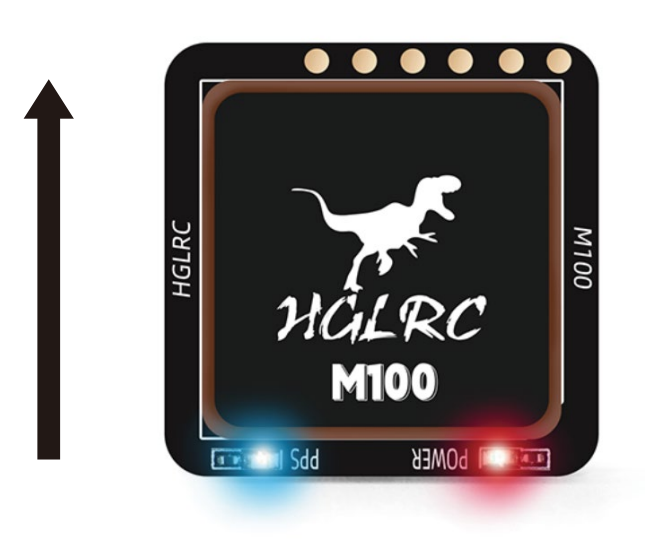




Power on the aircraft, the indicator light is on when the GPS is working normally, and the GPS and compass lights on the top of the inav are on



Compass direction



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Precautions

1. After turning on the compass, please calibrate it before using it.
2. Please supply power to GPS according to the voltage within the specified range.
3. Please carefully solder according to the wiring diagram to avoid short-circuiting and burning the GPS.
4. Please use BF4.3.0 or above firmware (too low version does not recognize the 10th generation chip).
5. GPS must be installed with the antenna facing up and away from motors, power lines and other interfering parts

Contact us

Sincerely thanks for everyone trust! Welcome to choose HGLRC products

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