

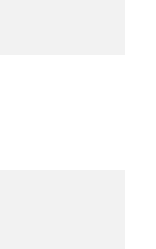


HGLRC M100-5883 GPS

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

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

M100-5883 GPS 使用指南



接口定义



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

M100-5883 GPS 使用指南



接线图



M100-5883 GPS 使用指南



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

名称	设置/MSP	串行数字接收机	速率输出	传感器输入	备注
USB VCP	<input type="checkbox"/> 115200	.....	.....	已禁用	AUTO
UART1	<input type="checkbox"/> 115200	.....	.....	已禁用	AUTO
UART2	<input type="checkbox"/> 115200	.....	.....	已禁用	AUTO
UART3	<input type="checkbox"/> 115200	.....	.....	GPS	115200
UART4	<input type="checkbox"/> 115200	.....	.....	已禁用	AUTO
UART6	<input type="checkbox"/> 115200	.....	.....	电视	AUTO

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

2. 选择一个预设(align_mag)或创建一个自定义配置使用滑块 (align_mag_roll, align_mag_pitch, align_mag_yaw)

CW 180° flip

朝向预设 (align_mag)相对于FC方向

Magnetometer

显示元素

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

M100-5883 GPS 使用指南



注意事项

- 在开启罗盘后, 请先校准后再使用。
- 请按照规定范围内的电压给GPS供电。
- 请仔细对照接线图焊接, 避免短接烧毁GPS
- 请使用BF4.3.0以上的固件(过低的版本不识别10代芯片)。
- 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

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地址: 广东东莞市大朗镇竹山旧园路9号骏通产业园C1栋8楼 (化骨龙科技)

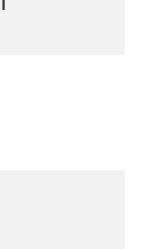


HGLRC M100-5883 GPS

Manual



M100-5883 GPS instruction manual



Parameters

Receiver Type: <input checked="" type="checkbox"/> GPS/QZSS L1C/A <input checked="" type="checkbox"/> SBAS EGNOS、GAGAN、MSAS和WAAS <input checked="" type="checkbox"/> GLONASS L1OF <input checked="" type="checkbox"/> BDS B1I <input checked="" type="checkbox"/> 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 position accuracy 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)

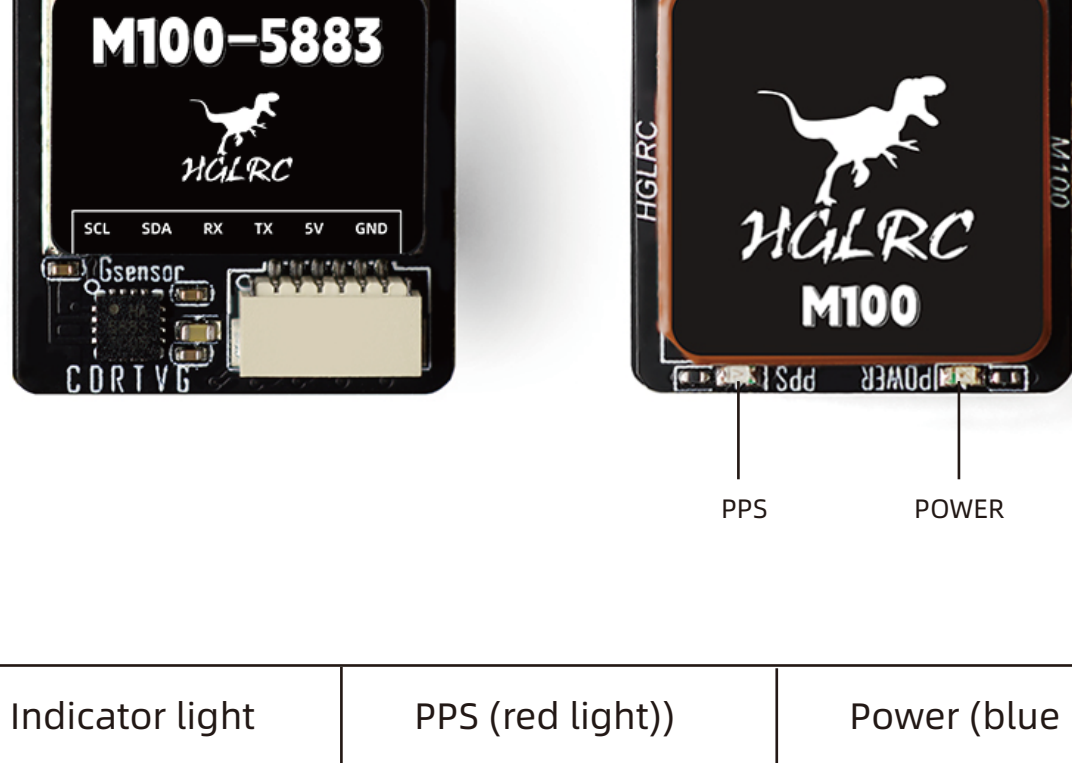
*The default GPS+Galileo+QZSS+SBAS, BDS and Honor are not supported at the same time

1. All satellites are ≥ -130dBm
2. CEP 50%, 24 hours static, ≥ -130dBm, > 6SVs
3. 50%, 30 m/s, dynamic operation
4. Assuming onboard < 4g platform

M100-5883 GPS instruction manual



Introduction

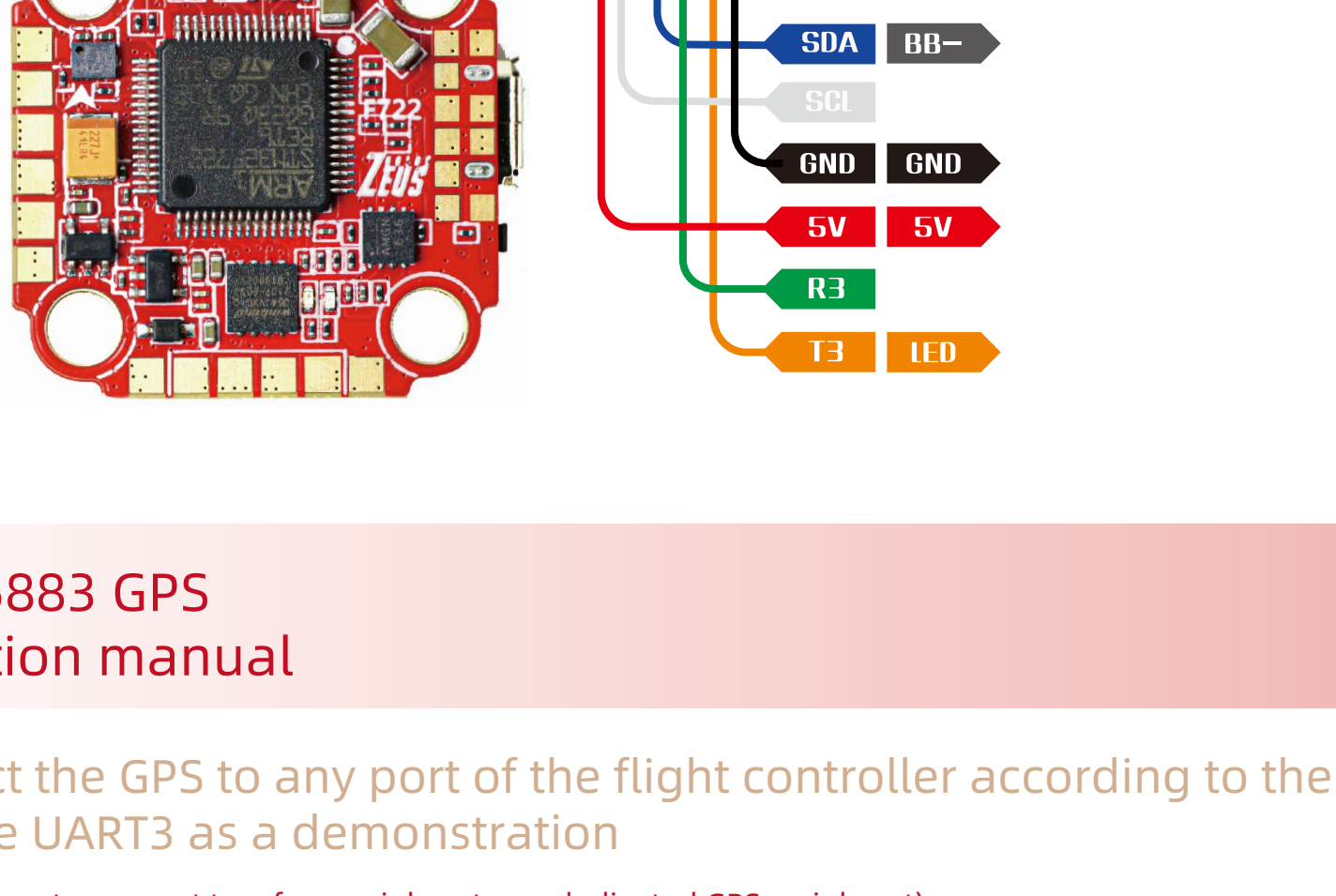


Indicator light	PPS (red light))	Power (blue light)
Normal start	normal bright	normal bright
Real position accuracy	Flickering	normal bright

M100-5883 GPS instruction manual



Wiring diagram



M100-5883 GPS instruction manual



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

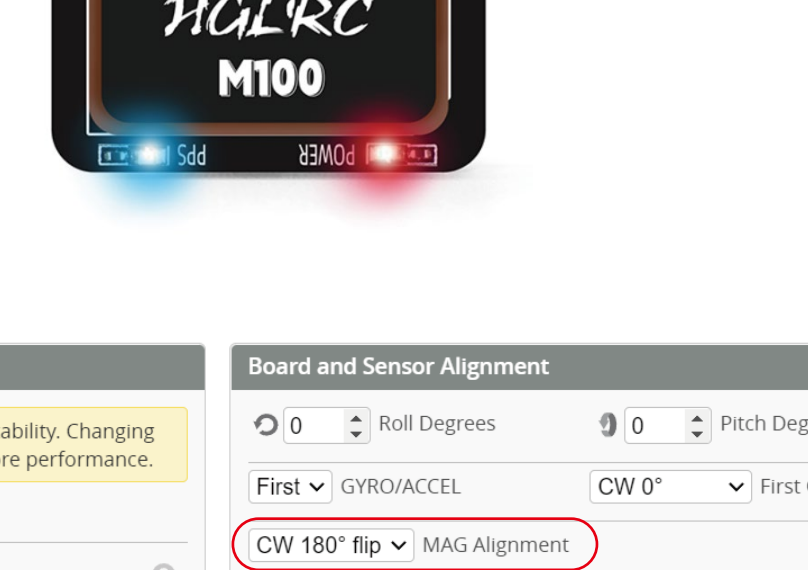
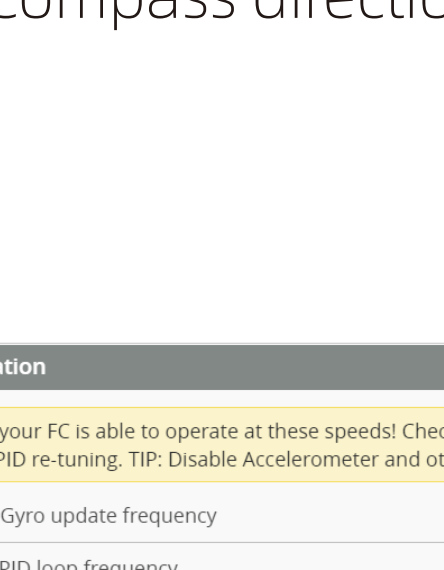
Find UART3, turn on GPS at sensor input and select baud rate 115200

Identifier	Configuration/MSP	Serial Rx	Telemetry Output	Sensor input	Peripherals
USB VCP	<input checked="" type="checkbox"/> 115200	.....	.....	Disabled	AUTO
UART1	<input type="checkbox"/> 115200	.....	.....	Disabled	AUTO
UART2	<input type="checkbox"/> 115200	.....	.....	Disabled	AUTO
UART3	<input checked="" type="checkbox"/> 115200	.....	.....	GPS	115200
UART4	<input type="checkbox"/> 115200	.....	.....	Disabled	AUTO
UART6	<input type="checkbox"/> 115200	.....	.....	ESC	AUTO

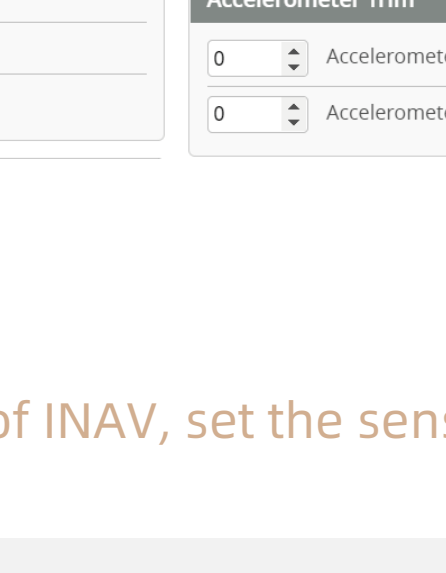
Turn on GPS and enable UBLOX protocol



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



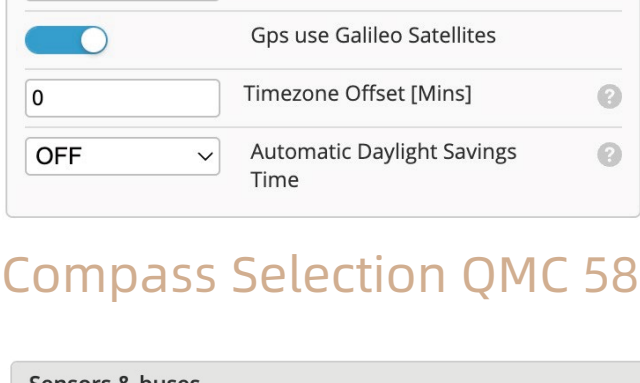
INAV settings

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

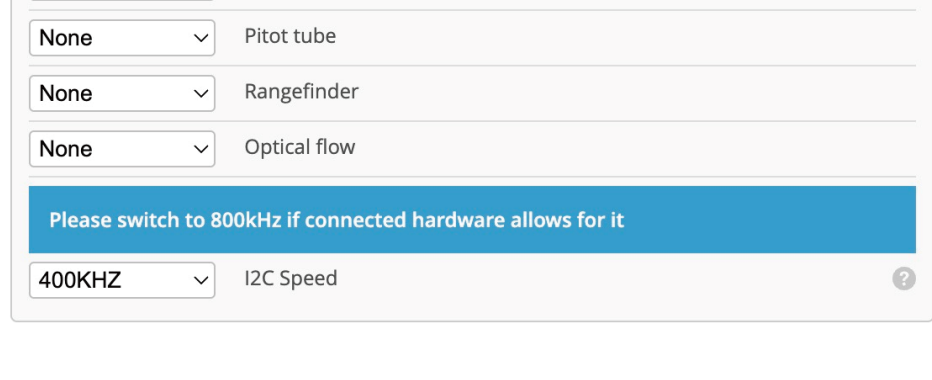
Find UART3, turn on GPS at sensor input and select baud rate 115200

Identifier	Configuration/MSP	Serial Rx	Telemetry Output	Sensor input	Peripherals
USB VCP	<input checked="" type="checkbox"/> 115200	.....	.....	Disabled	AUTO
UART1	<input type="checkbox"/> 115200	.....	.....	Disabled	AUTO
UART2	<input type="checkbox"/> 115200	.....	.....	Disabled	AUTO
UART3	<input checked="" type="checkbox"/> 115200	.....	.....	GPS	115200
UART4	<input type="checkbox"/> 115200	.....	.....	Disabled	AUTO
UART6	<input type="checkbox"/> 115200	.....	.....	ESC	AUTO

Turn on GPS and enable UBLOX protocol



Compass Selection QMC 5883

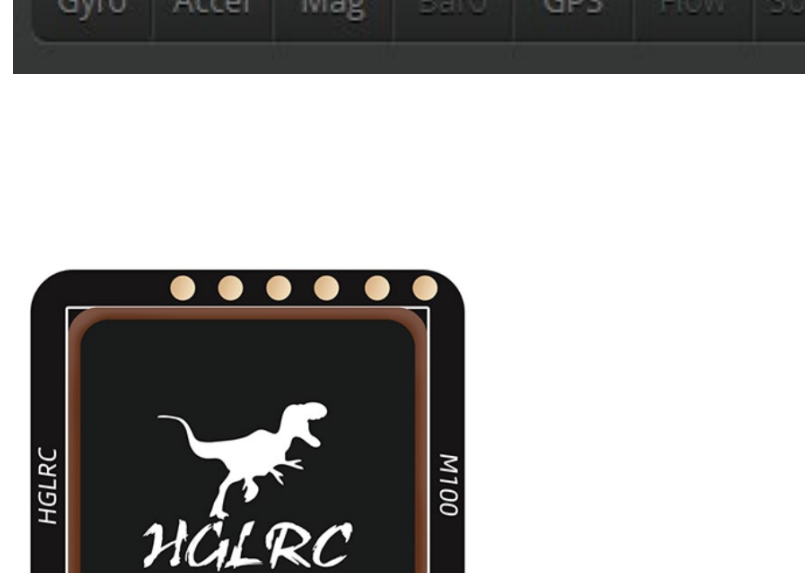
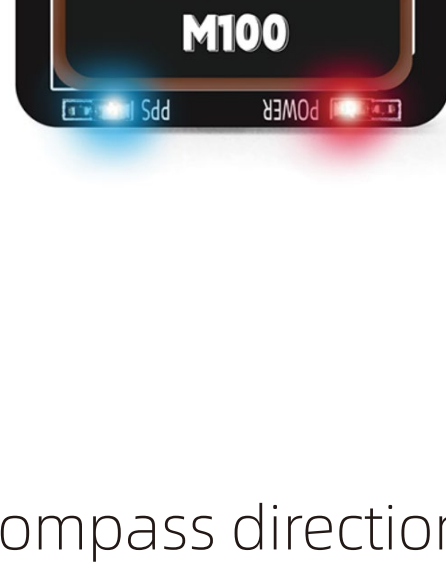


2. Select a preset (align_mag) or create a custom configuration using the sliders (align_mag_roll, align_mag_pitch, align_mag_yaw)

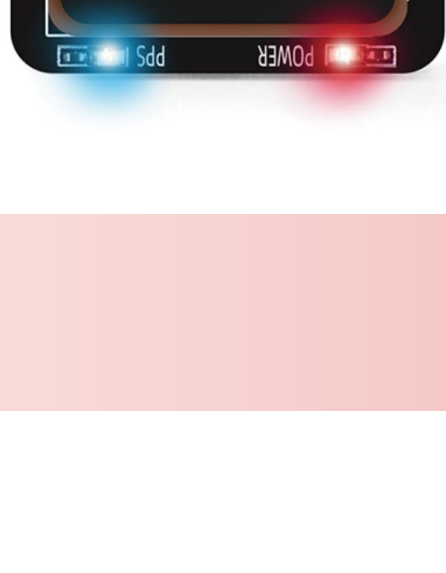
CW 180° flip Orientation preset (align_mag). Relative to FC orientation

Magnetometer Element to show: Magnetometer model or axes

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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