

HGLRC M100-5883 GPS

说明书



产品参数

使用指南

M100-5883 GPS

■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

接收机类型: ■GPS/QZSS L1C/A■SBAS EGNOS、GAGAN、MSAS和WAAS

第一次Fix¹的时间:冷启动29s,热启动1s

水平位置accuracy²: .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≤4g,海拔80000m,速度500m/s

时间脉冲信号的频率: 1Hz 波特率: 9,600 -- 460800 bps (默认为115200 bps)

1. 所有卫星都在≥-130dBm 2. CEP 50%, 24小时静态, ≥-130dBm, > 6SVs

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

M100-5883

3.50%, 30 m/s, 动态运行 4. 假设机载<4g平台

M100-5883 GPS 使用指南

接口定义



GND

SCL

接线图

使用指南



SDA

RX

5V

115200 🗸 USB VCP 115200 🕶 UART1 115200 🕶 UART2

115200 🕶

115200 🕶

115200 🕶

注意:使用 GPS 之前需要先在串口页面设置一个串口。

▼ 协议 自动波特率

UART3

UART4

UART6

UBLOX

系统设置

8.00 kHz

陀螺仪更新频率

INAV设置

MSP 115200 V

MSP 115200 ♥

MSP 115200 **▼**

MSP 115200 ♥

MSP 115200 V

MSP 115200 **▼**

开启 gps 启用 ublox协议

注意: 当使用GPS功能时记得配置一个端口(通过端口界面设置) 启用 GPS 导航

通信协议

罗盘选择 QMC 5883

8.00 kHz v PID 循环更新频率

加速度计

气压计 (如有)

磁力计 (如有)

USB VCP

UART1

UART2

UART3

UART4 UART6

GPS

置酒

UBLOX

Betaflight设置

开启GPS, 启用UBLOX协议 启用 GPS 导航

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

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

已禁用 ✔ AUTO ✔

已禁用 ✔ AUTO ✔

已禁用 ✔ AUTO ✔

GPS V 115200 V

已禁用 ✔ AUTO ✔

电调 V AUTO V

0 0

找到UART3,在传感器输入打开GPS并选择波特率115200

串行数字接收机

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罗盘方向



串行数字接收机

串行数字接收机

串行数字接收机

串行数字接收机

串行数字接收机

串行数字接收机

关闭 🕶 115200 🕶

关闭 🗸 115200 🗸

关闭 🕶 115200 🕶

GPS V 115200 V

关闭 🕶 115200 🕶

关闭 🗸 115200 🗸

打开INAV的配置页面,设置传感器输入类型为GPS,波特率115200

0

0

0

找到UART3,在传感器输入打开GPS并选择波特率115200

关闭

关闭

关闭

关闭

✓ AUTO ✓

▼ AUTO ▼

✓ AUTO ✓

▼ AUTO ▼

▼ AUTO ▼

▼ AUTO ▼

Mag

EDUCATION BOMEB

♣偏航度

地面辅助类型 Disabled 使用伽利略卫星进行GPS定位 时区偏移(分钟) 0 自动夏令时 OFF

传感器 & 总线

BMI270

QMC5883

	NONE	~	气压计					
	NONE	~	空速计					
	NONE	~	测距仪					
	NONE	~	光流计					
4-12	الاعدد الم	/alia	n manista	(2) 人台之也	3)军从田沟仇			
选择一个预设(align_mag)或创建一个自定义配置使用滑块 gn_mag_roll, align_mag_pitch, align_mag_yaw)								
_		_						
180)° flip		朝向预设 (al	ign_mag),相对于	FFC方向			

显示元素

加速度计

罗盘

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

M100

Magnetometer >

CW



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)。

联系我们

衷心感谢飞友的信任! 欢迎选择化骨龙的产品

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。







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公司名称:广东化骨龙科技有限公司

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

Mag



HGLRC M100-5883 GPS Manual



Parameters

M100-5883 GPS

instruction manual

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 fix¹ time: Cold start 29s, hot start 1S

Horizontal positionaccuracy²: .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

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

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

Frequency of time pulse signal: 1Hz

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

2. CEP 50%, 24 hours static, ≥-130dBm, > 6SVs 3. 50%, 30 m/s, dynamic operation

1. All satellites are ≥-130dBm

- M100-5883 GPS instruction manual

4. Assuming onboard < 4g platform

Introduction



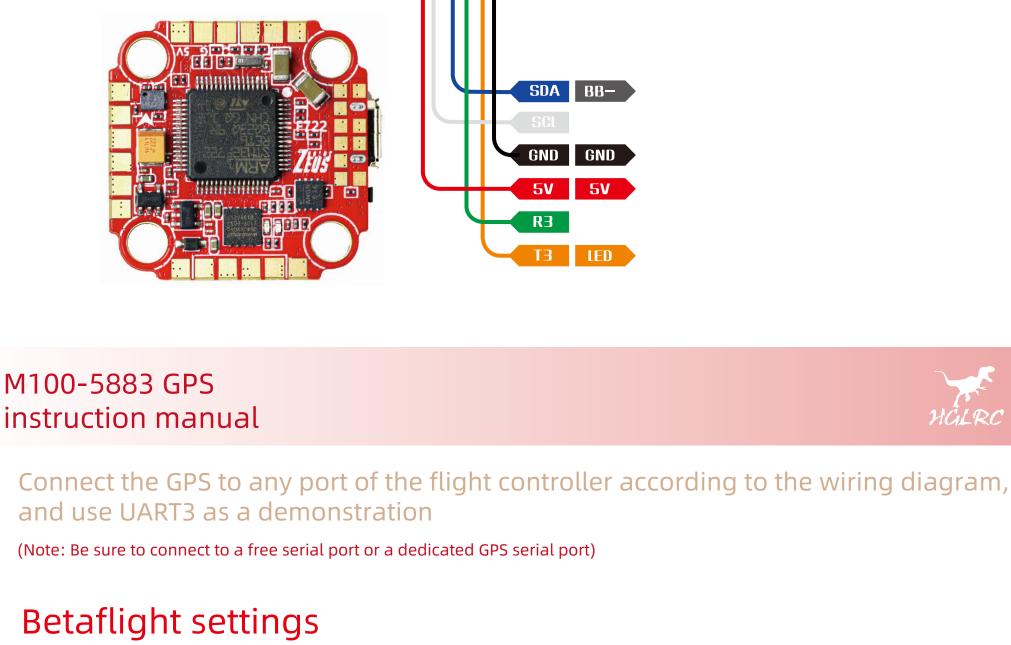
GND

instruction manual	
Wiring diagram	

5V

GND

M100-5883 GPS



Configuration/MSP Serial Rx Telemetry Output USB VCP 115200 🕶 115200 🕶 UART1 • • • • • UART2 115200 🕶

UART3

UART4

UART6

UBLOX

✔ Protocol Auto Baud Auto Config Use Galileo

Set Home Point Once

and the baud rate to 115200

115200 🕶

115200 🕶

115200 🕶

• • • • •

Turn on GPS and enable UBLOX protocol

GPS for navigation and telemetry Note: Remember to configure a Serial Port (via Ports tab) when using GPS feature

GPS

ESC

Open the port page of Betaflight, set the sensor input type to GPS,

Sensor Input Disabled V AUTO V

Disabled ✔ AUTO ✔

Disabled ➤ AUTO ➤

Disabled ▼ AUTO ▼

▼ 115200 ▼

✓ AUTO ✓

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

▼ Ground Assistance Type 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 Mag

System configuration **Board and Sensor Alignment**

0

O CROIL Degrees

CW 180° flip ∨ MAG Alignment

Accelerometer Roll Trim

Accelerometer Pitch Trim

Accelerometer Trim

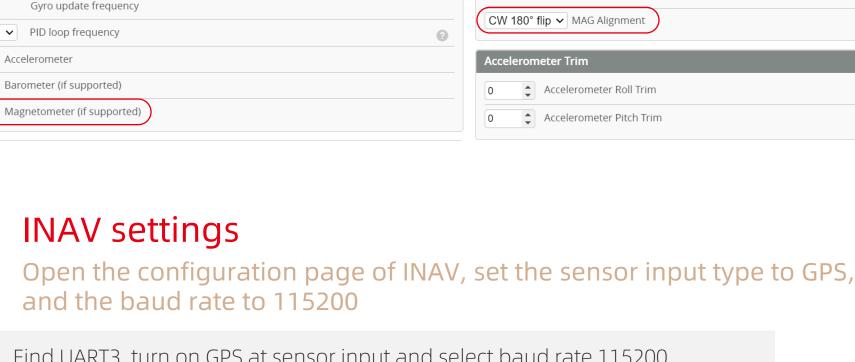
Pitch Degrees

✔ First GYRO

CW 0°

Yaw Degrees

HGLR



8.00 kHz

8.00 kHz

Ports

UART2

UART4

Configuration

UBLOX

Disabled

None

None

None

400KHZ

Magr

when using GPS feature.

MSP 115200 V

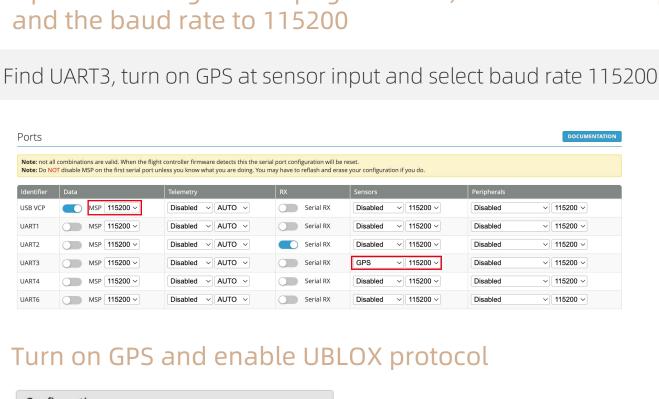
MSP 115200 V

MSP 115200 V

MSP 115200 V

Compass direction

Note: Make sure your FC is able to operate at these speeds! Check CPU and cycletime stability. Changing this may require PID re-tuning. TIP: Disable Accelerometer and other sensors to gain more performance.



e a custom configuration using the sliders

Mag

Serial RX

Serial RX

0

0

Disabled V AUTO V

Disabled V AUTO V

Disabled V AUTO V

Note: Remember to configure a Serial Port (via Ports tab)

telemetry Protocol

GPS for navigation and

Ground Assistance Type

Gps use Galileo Satellites

Automatic Daylight Savings

Timezone Offset [Mins]

Compass Selection QMC 5883

Pitot tube

Rangefinder

Optical flow

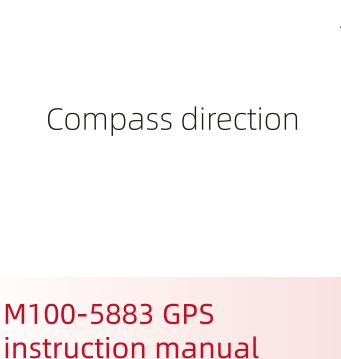
✓ I2C Speed

Please switch to 800kHz if connected hardware allows for it

∨ AUTO ∨

Sensors & buses BMI270 Accelerometer QMC5883 Magnetometer Barometer None

select a preset (align_mag) or create a custom configuration using the sliders gn_mag_roll, align_mag_pitch, align_mag_yaw)						
180° flip Orientation preset (align_mag). Relative to FC orientation						
netometer 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	,					





3. Please carefully solder according to the wiring diagram to avoid short-circuiting and burning the GPS.

Precautions

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

2. Please supply power to GPS according to the voltage within the specified range.

1. After turning on the compass, please calibrate it before using it.

- **Contact us** Sincerely thanks for everyone trust! Welcome to choose HGLRC products

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