



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≤ 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和荣耀同时被支持

1. 所有卫星都在≥-130dBm

2. CEP 50%，24小时静态，≥-130dBm, > 65Vs

3. 50%，30 m/s，动态运行

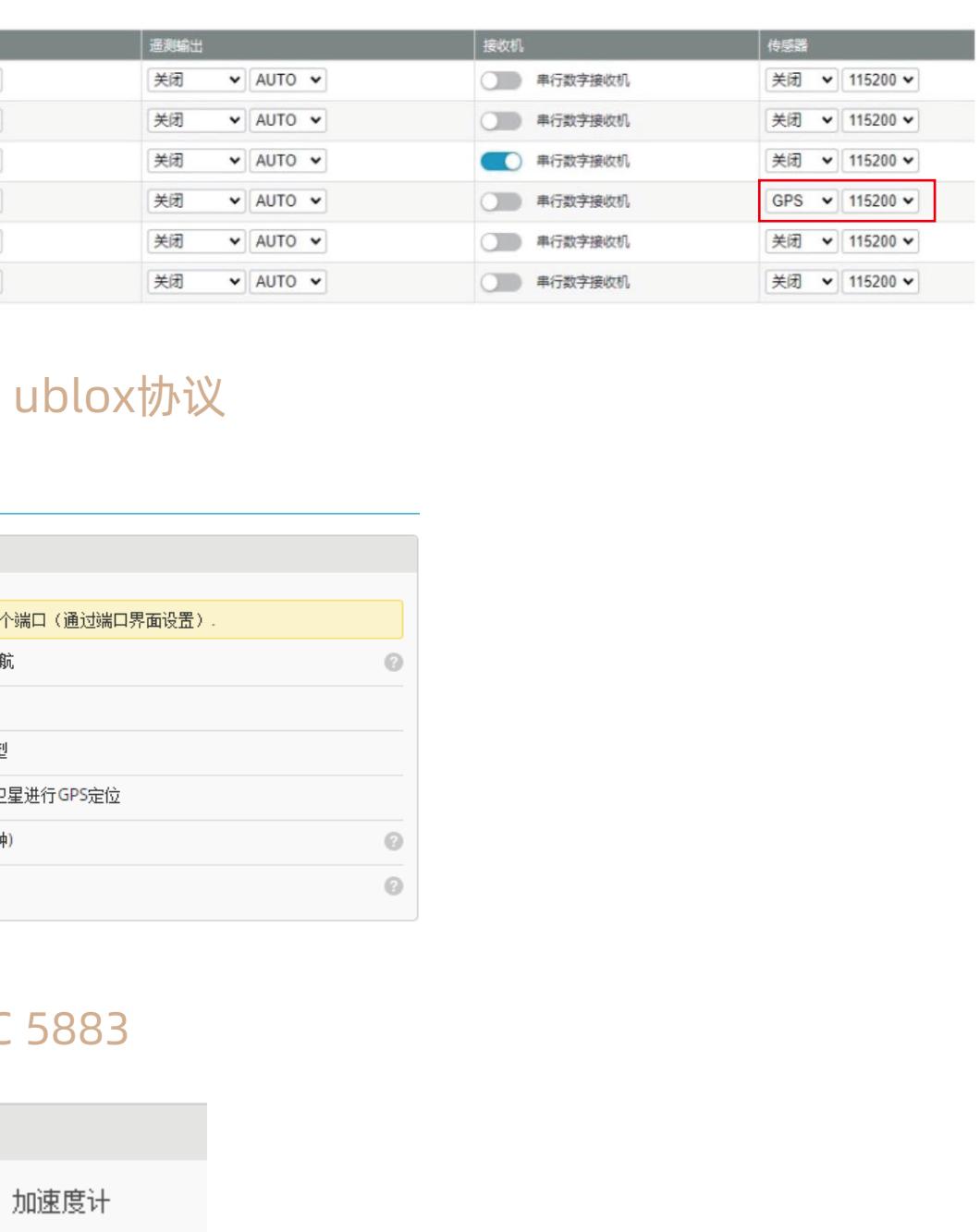
4. 假设机载<4g平台

M100-5883 GPS

使用指南



接口定义



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

标示符	设置/MSP	串行数字接收机	遥测输出	传感器输入	外设
USB VCP	115200	已禁用 ▾ AUTO
UART1	115200	已禁用 ▾ AUTO
UART2	115200	已禁用 ▾ AUTO
UART3	115200	GPS ▾ 115200
UART4	115200	已禁用 ▾ AUTO
UART5	115200	电调 ▾ AUTO
UART6	115200	陀螺仪 ▾ AUTO

开启GPS，启用UBLOX协议

GPS
GPS 由UBLOX提供

禁用GPS接收器在串口界面设置一个串口。

禁用加速度计和其他传感器可以节省电量以获得高性能。

8.00 kHz 检查仪更新频率

8.00 kHz PID 检查仪更新频率

加速计 (如有)

气压计 (如有)

磁力计 (如有)

罗盘 (如有)

陀螺仪 (如有)

光流 (如有)

视觉 (如有)

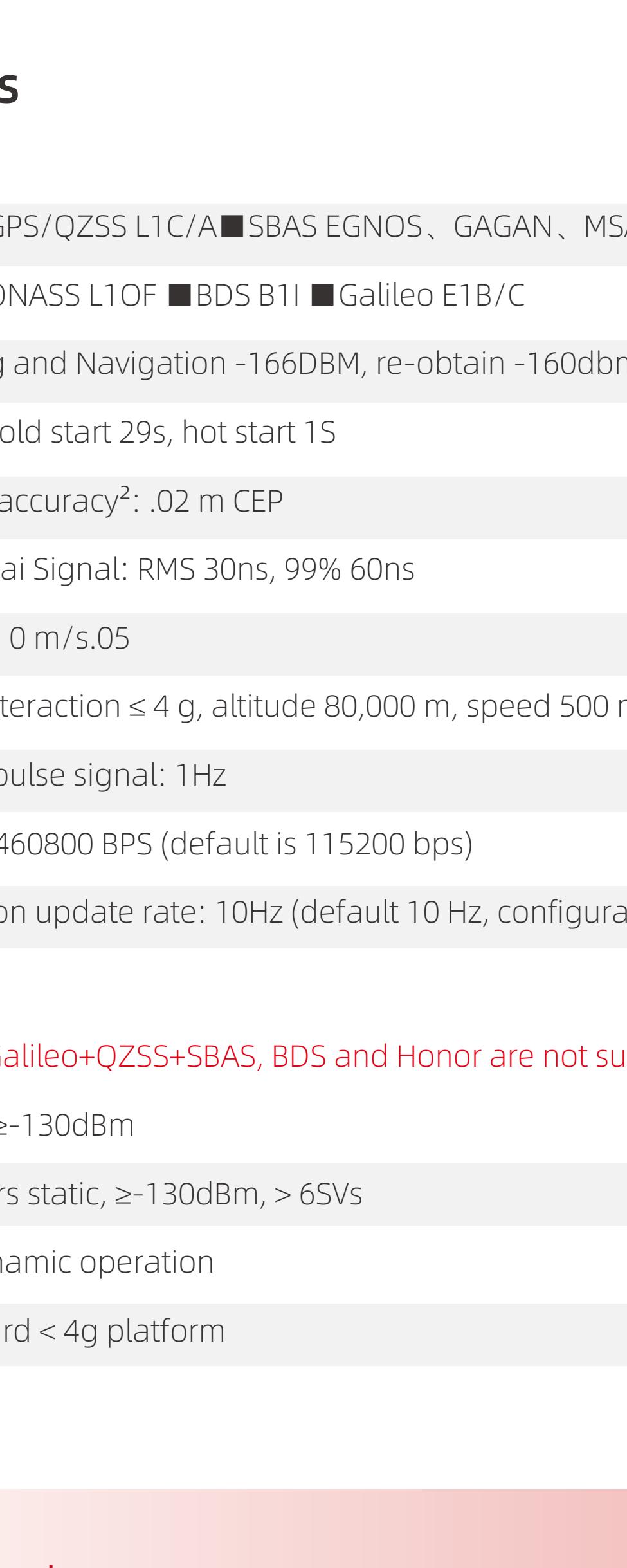
惯性 (如有)

IMU (如有)



HGLRC M100-5883 GPS

Manual



M100-5883 GPS instruction manual



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 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

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

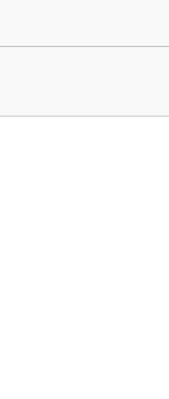
1. All satellites are ≥130dBm

2. CEP 50%, 24 hours static, ≥130dBm, > 6SVs

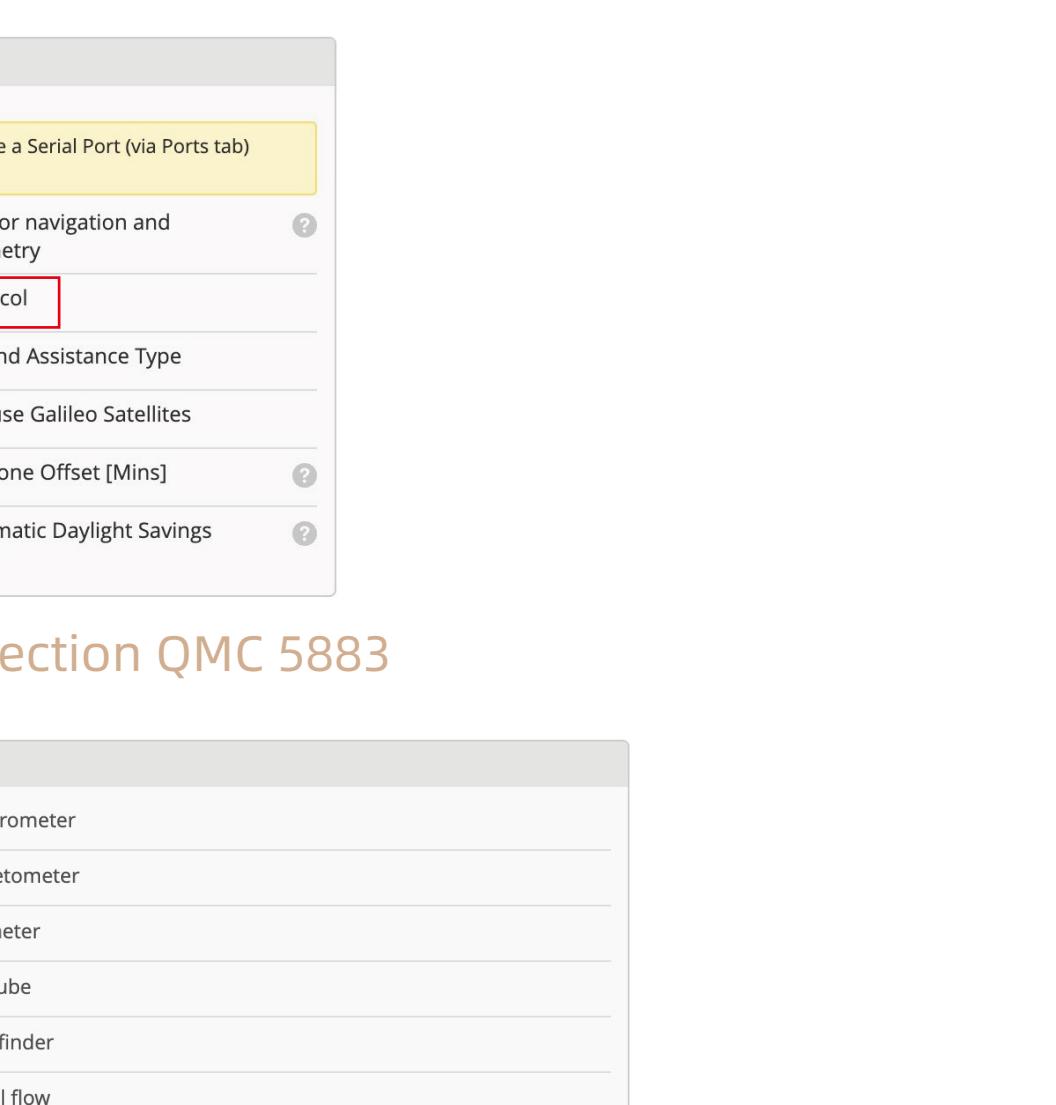
3. 50%, 30 m/s, dynamic operation

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



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

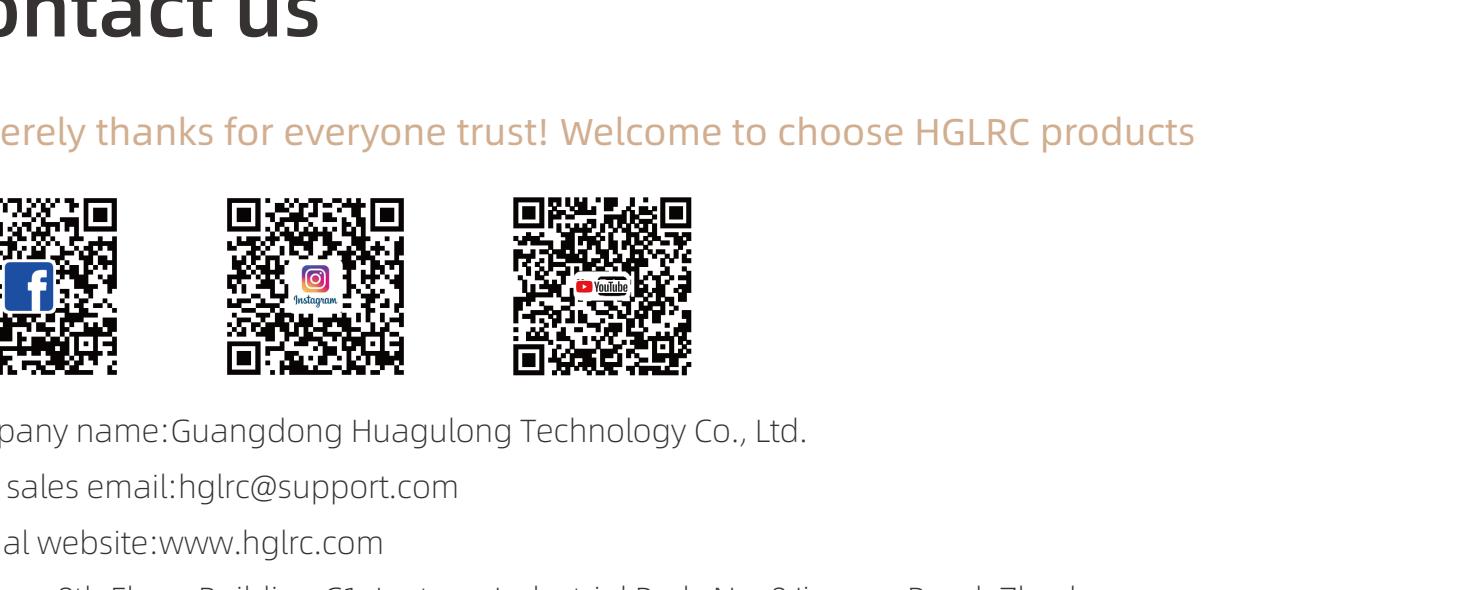
Turn on GPS and enable UBLOX protocol

GPS	UBLOX	Protocol	Protocol
<input checked="" type="checkbox"/> Auto Baud	<input checked="" type="checkbox"/> Auto Config	<input checked="" type="checkbox"/> Use Galileo	<input checked="" type="checkbox"/> Set Home Point Once
<input checked="" type="checkbox"/> Ground Assistance Type			

M100-5883 GPS instruction manual



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



M100-5883 GPS instruction manual



Precautions

- After turning on the compass, please calibrate it before using it.
- Please supply power to GPS according to the voltage within the specified range.
- Please carefully solder according to the wiring diagram to avoid short-circuiting and burning the GPS.
- Please use BF4.3.0 or above firmware (too low version does not recognize the 10th generation chip).
- 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

Company name:Guangdong Huaglong Technology Co., Ltd.

After sales email:hglrc@support.com

Official website:www.hglrc.com

Address:8th Floor, Building C1, Juntong Industrial Park, No. 9 Jiuyuan Road, Zhushan,

Dalang Town, Dongguan City, Guangdong Province 523770,China