

NEQ V2 **Pro**

User Manual

产品说明书



功能概述

NEO V2 Pro 是一款使用UAVCAN标准协议的无人机定位导航模块。

产品包含功能：

GPS定位功能, 提供准确的地理定位信息。

电子罗盘功能, 提供准确的航向和姿态信息。

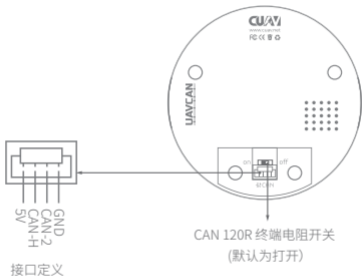
高度测量功能, 提供高精度的气压/高度数据。

状态显示功能, 提供环形RGB状态灯显示功能。

警报提醒功能, 提供硬件状态的声音提示功能。

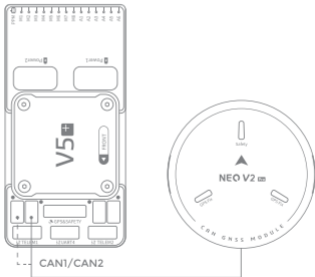
安全保护功能, 提供物理按键解锁保护功能。





连接方法

用CAN连接线将GPS连接至飞控的CAN1或CAN2接口，其它品牌飞控连接至CAN总线接口。



飞控参数设置

使用前需要设置飞控参数启用Neo V2 pro;根据飞控的固件有不同设置方法。

ArduPilot固件:在Mission planner的全部参数表设置以下参数并在写入后重启:

CAN_P1_DRIVER 设置为1.
CAN_P2_DRIVER 设置为1.
NTF_LED_TYPES 设置为231.
GPS_TYPE 设置为9(如果作为GPS1).

CAN_P1_DRIVER	1	
CAN_P2_DRIVER	1	
NTF_LED_TYPES	231	
GPS_TYPE	9	
GPS_TYPE2	0	

产品规格参数

处理器	STM32F412
指南针	RM3100
气压计	气压计
卫星接收器	ublox第八代卫星接收器 (NEO M8N)
工作频段	GPS/QZSS L1 C/A, 格格纳斯 L10F 北斗 B1I, 伽利略 E1B/C SBAS L1 C/A: WAAS, EGNOS, MSAS, GAGAN
导航刷新率	10HZ(最高)
水平定位精度	2M

捕获速度	冷启动 26S
	再次捕获 1S
	辅助启动 2S
灵敏度	追踪 & 导航 -167dBm
	冷启动 热启动 -148dBm
	重新捕获 -160dBm
通信协议	标准UAVCAN
固件升级	支持
支持飞控类型	Ardupilot/PX4*
接口类型	GHR-04V-S
工作电压	5V
工作温度	-10~70°C
尺寸	60mm*60mm*16mm(不含支架)
重量	33g(不含支架)

配件清单

NEO V2 Pro模块	×1
GPS支架	×1
CAN连接线	×1

注意事项

- 产品内部具有磁力计, 请勿在强磁环境中储存与使用。
- 请在开阔地域使用, 对于封闭环境、室内可能会影响定位精度。
- 请不要自行拆修。

相关资料

更多使用教程, 请访问官方文档中心:<http://doc.cuav.net>

*使用说明书如有更新恕不另行通知, 请前往官网www.cuav.net或文档中心doc.cuav.net下载最新版产品说明书。

Overview

NEO V2 Pro is a UAVCAN standard positioning and navigation module.

Product contains features:

GPS positioning function provides accurate geolocation information.

Electronic compass function provides accurate heading and attitude information.

Altitude measurement function provides high-precision pressure / altitude data.

Status display function, providing circular RGB status light display function.

Alarm reminder function, providing audible reminder function of hardware status.

Security protection function, providing physical key unlock protection function.



Safety switch & light

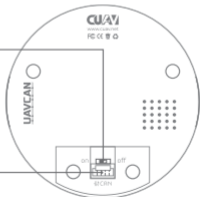
Head orientation

GPS status light

Blinking: GPS position obtained
Steady on: No GPS positioning

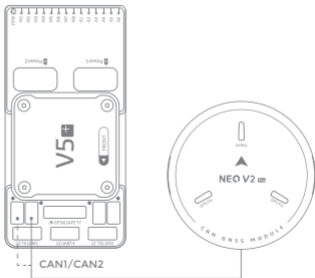
CAN 120R terminal resistance
switch(Open by default)

Interface definition



Connection method

Use the CAN cable to connect the GPS to the CAN1 or CAN2 interface of the flight control, other
The brand flight control is connected to the CAN bus interface.



Autopilot parameter settings

Before use, you need to set flight control parameters to enable Neo V2 pro; there are different setting methods according to the flight control firmware.

ArduPilot firmware: Set the following parameters in all parameter tables of Mission planner and restart after writing:

CAN_P1_DRIVER is set to 1.
CAN_P2_DRIVER is set to 1.
NTF_LED_TYPES is set to 231.
GPS_TYPE is set to 9 (if used as GPS1).

CAN_P1_DRIVER	1	
CAN_P2_DRIVER	1	
NTF_LED_TYPES	231	
GPS_TYPE	9	
GPS_TYPE2	0	

Product specifications

Processor	STM32F412
Compass	RM3100
Barometer	MS5611
GNSS receiver	ublox M8N
Concurrently	GPS/QZSS L1 C/A, Glonass L10F BeiDou B1I, Galileo E1B/C SBAS L1 C/A: WAAS, EGNOS, MSAS, GAGAN
Nav.update rate	10HZ(Max)
Position accuracy	2M

Acquisition	Cold start 26S Hot start 1S Aided start 2S
Sensitivity	Tracking and nav. -167dBm Cold start Hot start -148dBm Reacquisition -160dBm
Protocol	UAVCAN
Firmware Upgrade	Support
Flight controller Support	Ardupilot/PX4*
Interface Type	GHR-04V-S
Input voltage	5V
Operating temperature	-10~70°C
Size	60mm*60mm*16mm(without stand)
Weight	33g (without stand)

Packing list

NEO V2 Pro Module	x1
GPS Stand	x1
CAN Connect cable	x1

Notes

- There is a magnetometer inside the product. Do not store or use it in a strong magnetic environment.
- Please use it in open areas. It may affect positioning accuracy in closed environments and indoors.
- Do not disassemble by yourself.

More information

For more tutorials, please visit the official documentation center:
<http://doc.cuav.net>

* The manual is subject to change without notice. Please visit the official website www.cuav.net or the document center doc.cuav.net to download the latest version of the manual.



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