

V5 Autopilot

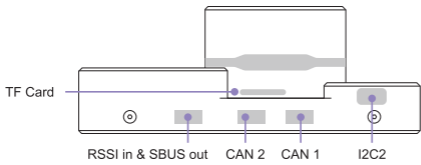
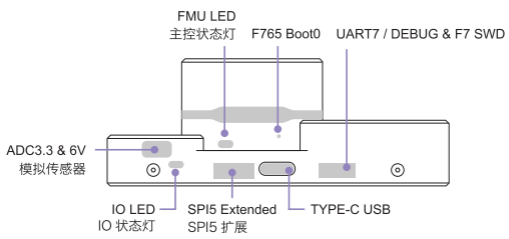
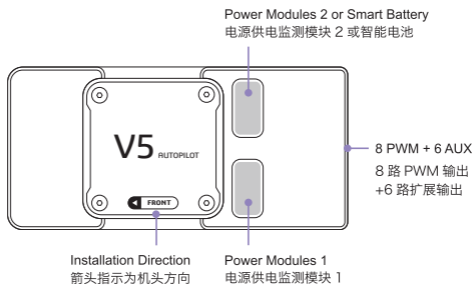
产品说明书

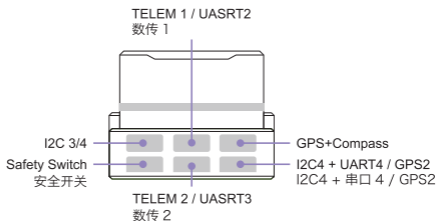
Product Specification

CUAV

www.cuav.net

接口定义 Interface Definition





使用帮助 Instruction

- 1 打开 QGC 地面站
Open QGroundControl



下载地址 (download address) :

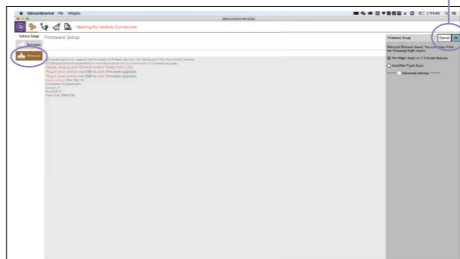
https://docs.qgroundcontrol.com/en/getting_started/download_and_install.html

- 2 将 V5 与地面站连接, 下载固件

Connect V5 with QGC and download Firmware.

b. 点击 OK 开始下载
b. Click OK to download

a. 点击
Firmware
a. Click
Firmware



- 3 更多帮助请参阅官方文档

For more help please read V5 documentation.

<http://doc.cuav.net/flight-controller/v5-autopilot>

硬件参数 Hardware Parametre

硬件参数 Hardware parameters	
主处理器 FMU Processor	STM32F765 (32 Bit Arm® Cortex®-M7, 216MHz, 2MB Flash, 512KB RAM)
协处理器 IO Processor	STM32F100 (32 Bit Arm® Cortex®-M3, 24MHz, 8KB SRAM)
传感器 Sensor	
加速器 Accelarameter	ICM-20602/ICM-20689/BMI055
陀螺仪 Gyroscope	ICM-20602/ICM-20689/BMI055
电子罗盘 Compass	IST8310
气压计 Barameter	MS5611
接口 Interface	
UASRT	2
UART	3
I2C	4
PWM Output (输出)	IO 8 Standard (标准) PWM IO + 6 Programmable(可编程) IO
遥控器信号输入协议 RC Signal Input Protocol	PPM/SBUS/DSM/DSM2
RSSI Input (输入)	PWM or 3.3 Analog Voltage (模拟电压)
CAN 标准总线 CAN Standard Bus	2
电流电压输入 Current Voltage Input	2
安全开关 Safety Switch	1
GPS Interface (接口)	1
Debug/F7 SWD Interface (接口)	1
USB Interface (接口)	1 (Type-C)
SPI Interface (接口)	1
工作环境及物理参数 Working Condition and Physical Parameter	
飞控工作电压 Flight Controller Operating Voltage	4.8 ~ 5.4V
PM 工作电压 Power Module Operating Voltage	10 ~ 58V
USB 电压 USB Voltage	5V ± 0.25V
伺服输入 Servo Input	0 ~ 36V
工作温度 Operating Temperature	-20 ~ 80℃
尺寸 Measure	
长 X 宽 X 高 L*W*H	89*42.5*33mm
重量 Weight	90g

配件清单 Parts List



I2C / CAN Hub Board

X1



ADC 6.6 Wire

X1



I2C (2) Wire

X1



I2C (4) Wire

X1



RSSI Wire

X1



CAN Wire

X2



安全开关蜂鸣器 + 配线
Safety Switch Buzzer + Wire

X1



USB (Type-C) Wire

X1



TTL Debug Platelet + SWD Wire

X1



Power Module + Wire

X1

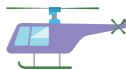
支持机型 Fit Airframe



3-8 旋翼
Copter



固定翼
Plane



直升飞机
Helicopter



垂直起降
VTOL



无人船
Unmanned Boat



无人车
Unmanned Vehicle

安全引导 Fly Safe



遵守当地法规飞行。
Fly under the local regulations.



机场 8km 范围内禁止飞行。
Don't fly within 5 miles of airports.



禁止在人、房屋或车辆上方飞行。
Don't fly over people, houses or vehicles.



禁止在场馆上方飞行。
Don't fly near stadiums.



禁止在雨、强风或雾中飞行。
Don't fly in rain, high winds or fog.



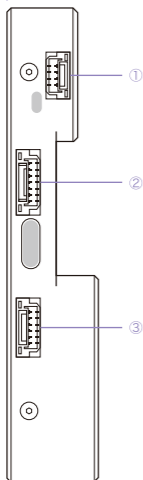
120m 高度下飞行。
Always fly under 400ft.



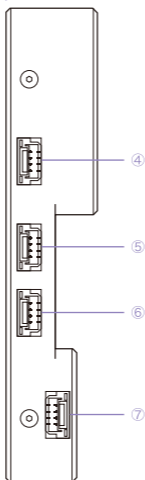
禁止触碰旋转中的螺旋桨。
Don't touch moving propellers.

详细接口定义 Interface Definition in Detail

| Front View 前视图



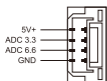
| Back View 后视图



Ps: names with * means interface that match Dronecode standard. For details please see following link:

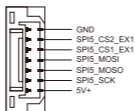
带 * 号为 Dronecode 标准接口
详细接口定义请参照：
[https://wiki.dronecode.org/workgroup/connectors/start?s\[\]=connector](https://wiki.dronecode.org/workgroup/connectors/start?s[]=connector)

① ADC 1 / 2*

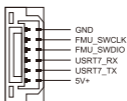


Ps: ADC 3.3 = ADC1_IN14 (SPARE1)
ADC 6.6 = ADC1_IN4 (SPARE2)

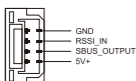
② SPI 5*



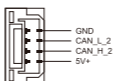
③ DSU 7



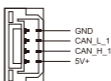
④ RSSI*



⑤ CAN 2*



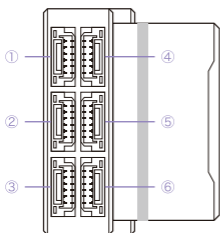
⑥ CAN 1*



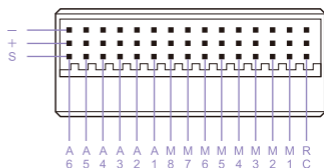
⑦ I2C 2*



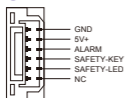
| Left View 左视图



| Right View 右视图



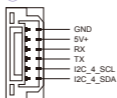
① SAFETY



② TELEM 2 / UASRT 3



③ UART 4 / GPS 2



④ I2C 3/4



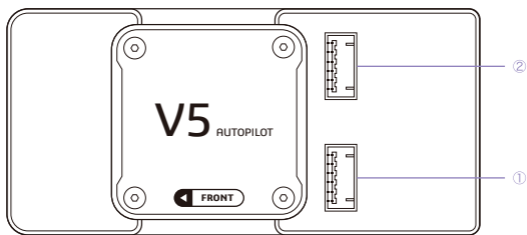
⑤ TELEM 1 / UASRT 2



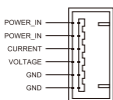
⑥ GPS 1



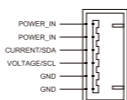
| Top View 俯视图



① POWER MODULES 1 (PM1)



② POWER MODULES 2 (PM2) or SMART BATTERY



Ps: POWER_IN = 4.8 ~ 5.4V
By default PM2 is ADC Sensor.