

CAN *PMU*

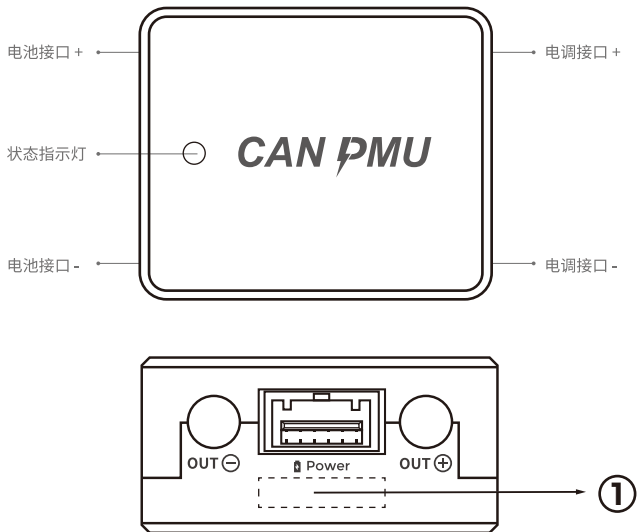
高精度电压电流检测模块产品说明书

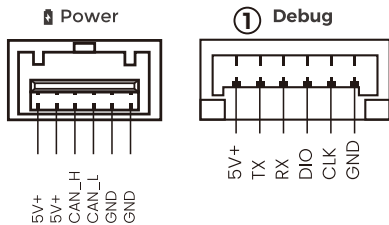
CUAY

欢迎使用CAN PMU产品!

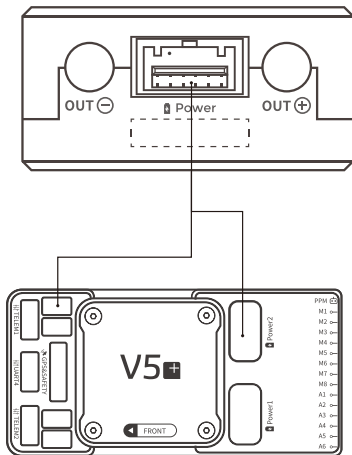
使用前请先阅读本说明!

CAN PMU标识定义

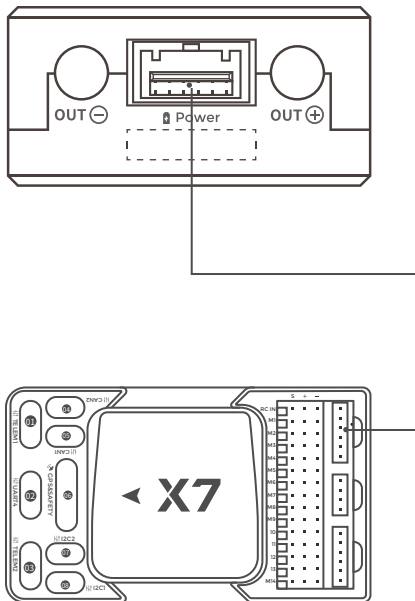




CAN PMU连接示意图



CAN PMU连接示意图



软件设置

ArduPilot固件(飞行控制器的固件)

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=1
- CAN_P2_DRIVER=1
- BATT_MONITOR=8 (如果使用监视器1)

注意:请使用AC3.6/AP3.9(含)以上版本的固件



The screenshot shows the Mission Planner parameter table. The 'CAN' section is highlighted in blue, and the 'BATT_MONITOR' parameter is highlighted with a red box. The table contains the following data:

| Parameter Name | Value | Default | Description |
|-------------------|---------|---------------|--|
| CAN_P1_BTRATE | 1000000 | 10000 1000000 | Bit rate can be set up to from 10000 to 1000000 |
| CAN_P1_DRIVER | 1 | 0 | 0 Disabled 1 First driver 2 Second driver Enabling this option enables use of CAN buses |
| CAN_P2_BTRATE | 1000000 | 10000 1000000 | Bit rate can be set up to from 10000 to 1000000 |
| CAN_P2_DRIVER | 1 | 0 | 0 Disabled 1 First driver 2 Second driver Enabling this option enables use of CAN buses |
| CAN_UAVCAN_CONFIG | 1 | 0 | 0 Disabled 1 First driver 2 Second driver CAN Device ID to be outside SLCAN, 0 means no routing |

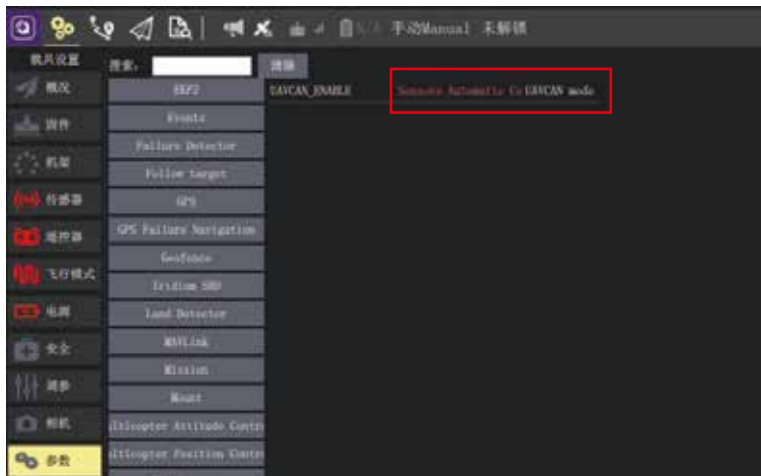
| | | | |
|--------------|---|---|--|
| BATT_MONITOR | 8 | 0 | 0 Disabled 3 Analog Voltage Only 4 Analog Voltage and Current 5 Solo 6 Beboop 7 SMCBlue-Maxwell 8 UAVCAN BatteryInfo 9 BLHeli ESC 10 SmartOFF following 11 FuelFlow 12 FuelLevelPWM Controls enabling monitoring of the battery's voltage and current |
|--------------|---|---|--|

PX4固件(飞行控制器的固件)

在QGroundControl参数列表中设置以下参数并在写入后重启:

- Uavcan_enable设置为sensors Automatic config(自动配置)

注意:PX4固件在1.10或更高版本中支持UAVCAN电源检测模块



规格参数

基本参数

| | |
|--------|--------------------------------------|
| 处理器 | STM32F412 100Mhz 512K Flash 256K RAM |
| 输入电压 | 6-62V(2-15S) |
| 最大电流 | 110A |
| 电压准确度* | ±0.05V |
| 电流准确度 | ±0.1A |
| 分辨率 | 0.01A/V |

| | |
|-------------|----------------|
| 最大输出功率 | 6000W/90S |
| 最大稳定输出功率 | 5000W |
| 稳压输出(Power) | 5.4V/5A |
| 通信协议 | UAVCAN |
| 工作温度 | -20°C ~ +100°C |
| 固件升级 | 支持 |
| 校准设置 | 工厂校准, 用户无需校准 |

接口类型

| | |
|--------|--------------------------|
| IN/OUT | XT90(线材端)/Amass 8.0(模块端) |
| Power | 5025850670 |

产品外观

| | |
|----|----------------------|
| 尺寸 | 46.5mm×38.5mm×22.5mm |
| 重量 | 76g |

配件清单

| | |
|--------------|----|
| CAN PMU电调连接线 | X1 |
| X7系列飞控电源线 | X1 |
| v5系列飞控电源线 | X1 |
| Pixhawk飞控连接线 | X1 |

注意事项

- 请仔细阅读产品的使用说明书
- 连接电池前, 请仔细检查连线
- 请在额定的电压、电流、功率下使用
- 请阅读文档中心进行配置和使用
- 严禁自行拆装

固件升级

固件升级教程请访问CUAV文档中心:<http://doc.cuav.net>

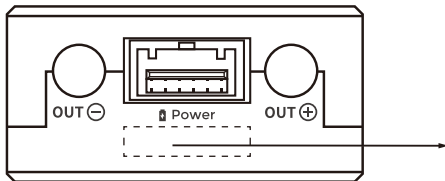
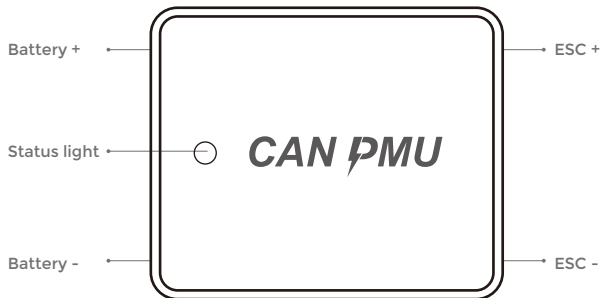
更多资料

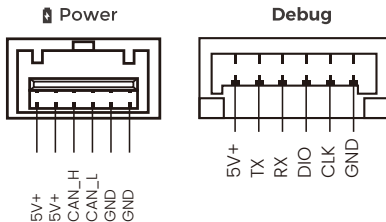
关于产品的更多信息, 请访问CUAV官方文档中心: <http://doc.cuav.net>
及官方网站: <http://www.cuav.net>

Thank you for choosing CAN PMU !

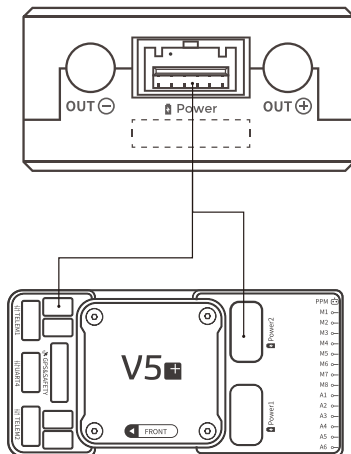
Please read this guide before using!

CAN PMU interface definition

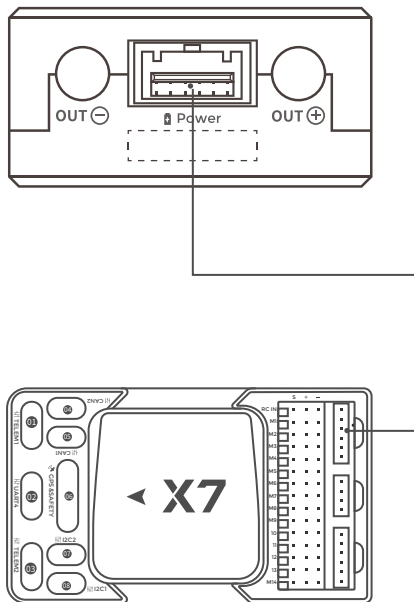




CAN PMU connection schematic diagram



CAN PMU connection schematic diagram



Software settings

ArduPilot firmware (flight controller firmware)

Set the following parameters in the Mission planner's full parameter list and restart after writing:

- CAN_P1_DRIVER=1
- CAN_P2_DRIVER=1
- BATT_MONITOR=8 (If using monitor 1)

Note: Please use the firmware of AC3.6/AP3.9 (included) or higher.



The screenshot shows the Mission Planner interface with the 'Full Parameter List' tab selected. The parameters are as follows:

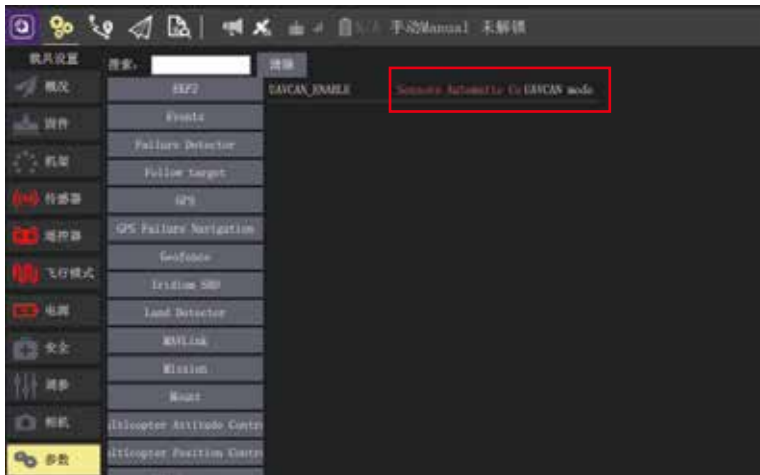
| Parameter Name | Value | Unit | Description |
|-----------------|---------|------|--|
| CAN_P1_DRIVER | 1 | | 0 Disabled 1 First driver 2 Second driver |
| CAN_P2_DRIVER | 1 | | 0 Disabled 1 First driver 2 Second driver |
| CAN_P1_BAUD | 1000000 | | Bit rate can be set up to from 10000 to 1000000 |
| CAN_P2_BAUD | 1000000 | | Bit rate can be set up to from 10000 to 1000000 |
| CAN_P1_FILTER | 1 | | Enabling this option enables use of CAN filters |
| CAN_P2_FILTER | 1 | | Enabling this option enables use of CAN filters |
| CAN_SCAN_CONFIG | 1 | | CAN Device ID to be suitable SLCAN, 9 means no routing |
| BATT_MONITOR | 8 | | 0 Disabled 3 Analog Voltage Only 4 Analog Voltage and Current 5 Solo 6 Beep 7 SMBus-Maxwell 8 UAVCAN BatteryInfo 9 SLHel ESC 10 SmartON following 11 FuelFlow 12 Fuel_evoPWM |

PX4 firmware (flight controller firmware)

Set the following parameters in the QGroundControl parameter list and restart after writing:

- Uavcan_enable set to sensors Automatic config

Note: PX4 firmware supports UAVCAN power detection module in 1.10 or higher.



Specifications

Basic parameters

| | |
|------------------|--------------------------------------|
| Processor | STM32F412 100Mhz 512K Flash 256K RAM |
| Voltage input | 6-62V(2-15S) |
| Max current | 110A |
| Voltage accuracy | ±0.05V |
| Current accuracy | ±0.1A |
| Resolution | 0.01A/V |

| | |
|----------------------------|-------------------|
| Max output power | 6000W/90S |
| Max stable power | 5000W |
| Power port output protocol | 5.4V/5A UAVCAN |
| Operating temp | -20°C ~ +100°C |
| Firmware upgrade | Support |
| Calibration | No need |

Interface Type

| | |
|--------|---------------------------------------|
| IN/OUT | XT90(Cable end)/Amass 8.0(Module end) |
| Power | 5025850670 |

Appearance

| | |
|--------|----------------------|
| Size | 46.5mm×38.5mm×22.5mm |
| Weight | 76g |

Packing List

| | |
|-----------------------|----|
| CAN PMU | X1 |
| X7 series power cable | X1 |
| V5 Series Power Cable | X1 |

Notes

- Please read the product manual carefully.
- Please check the connection carefully before connecting the battery
- Please use at rated voltage, current and power
- Please read the documentation center for configuration and use
- Do not disassemble

Firmware upgrade

Please visit the CUAV Documentation Center for a firmware upgrade tutorial:
<http://doc.cuav.net>

More info

For more information on the product, please visit the CUAV Official Documentation Center:<http://doc.cuav.net>
And official website:<http://www.cuav.net>



www.cuav.net