Wireless Air Flow Controller

无线风量控制板 V4 修改意见

* 原理图中PB3、PB4、PB5是否连错？可以去除JTAG功能仅保留SW接口
* 移除pressure sensor在板上预留的位置
* OLED显示屏排针位置摆放错误，应旋转180度放置。不必在板上预留显示屏的空间，将显示屏用排线连接出来，将来固定在外壳上。
* 修改引脚连接方案：

|  |  |  |  |
| --- | --- | --- | --- |
| 模块 | 接口 | 引脚 | 片上资源 |
| JTAG | JTMS/SWDIO | PA13 | SW/JTAG |
| JTCK/SWCLK | PA14 |
| JTDI | PA15 |
| JTDO | PB3 |
| JNTRST | PB4 |
| RS485 | USART\_TX | PA9 | USART1  DMA1\_Ch4/5 |
| USART\_RX | PA10 |
| WIFI | USART\_TX | PA2 | USART2  DMA1\_Ch7/6 |
| USART\_RX | PA3 |
| OLED | D0\_SCK | PA15 | IO模拟通信 |
| D1\_SDA | PC9 |
| OLED\_RST | PC8 |
| OLED\_DC | PC7 |
| Pressure | I2C\_SCL | PB6 | IO模拟通信 |
| I2C\_SDA | PB7 |
| SD card | SD\_CS | PA4 | SPI1  DMA1\_Ch2/3  GPIOB12\_Out\_PP |
| SPI\_SCK | PA5 |
| SPI\_MISO | PA6 |
| SPI\_MOSI | PA7 |
| Flash | Flash\_CS | PA8 | GPIOB13\_Out\_PP |
| INA194 | ADC | PA1 | ADC1\_Ch4  DMA1\_Ch1 |
| Servo | PWM | PC6 | TIM3\_Ch1 |
| CO2 | PWM\_Capture | PA0 | TIM5\_Ch1  DMA2\_Ch5 |
| USB | USB\_DM | PA11 | USB |
| USB\_DP | PA12 |

* WIFI模块选用尺寸更小的型号。建议使用基于ESP8266的安信可ESP-07s模块。
* 取消电源接口供电，统一用USB供电。
* 中央掏空部分采用大舵机的方案，挖大一圈的孔
* 修改PCB板尺寸至7\*7，安排紧凑一些。



* 重新定义USB type-C接口连接方式：

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| A1 | A2 | A3 | A4 | A5 | A6 | A7 | A8 | A9 | A10 | A11 | A12 |
| GND | TX1+ | TX1- | VBUS | CC1 | D+ | D- | SBU1 | VBUS | RX2- | RX2+ | GND |
| GND | 3V3 | NC | VUSB | RS485A | D+ | D- | RS485B | VUSB | SWDIO | SWCLK | GND |
|  | | | | | | | | | | | |
| GND | SWCLK | SWDIO | VUSB | RS485B | D- | D+ | RS485A | VUSB | NC | 3V3 | GND |
| GND | RX1+ | RX1- | VBUS | SBU2 | D- | D+ | CC2 | VBUS | TX2- | TX2+ | GND |
| B12 | B11 | B10 | B9 | B8 | B7 | B6 | B5 | B4 | B3 | B2 | B1 |

* 制作USB type-C接口的线材转换小板，板上有2个USB type-C母头接口（内部的线全部相连，便于供电），RS485接线端子，STM32下载器P20接口，一个micro-USB 2.0母头接口用于连接5V电源。

