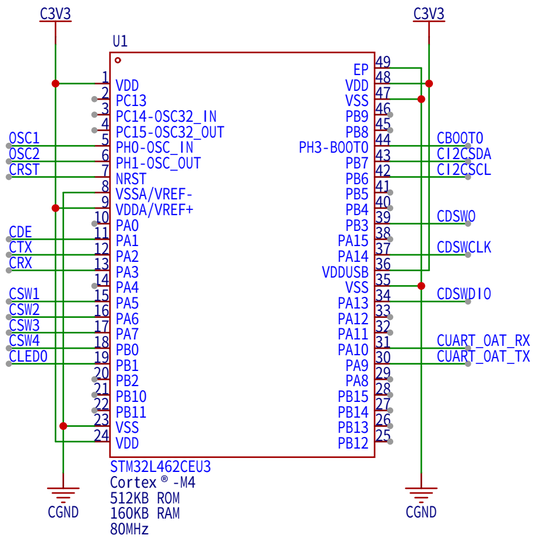
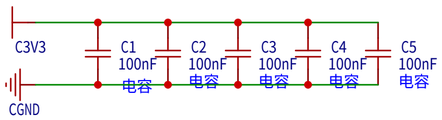
CPU

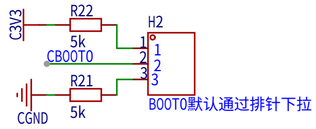




功能与芯片引脚对应表

CDE	PA1
CTX	PA2
CRX	PA3
CSW1	PA5
CSW2	PA6
CSW3	PA7
CSW4	PB0
CLED0	PB1
CI2CSDA	PB7
CI2CSCL	PB6
CUART_OAT_RX	PA10
CUART_OAT_TX	PA9

串口下载程序选项



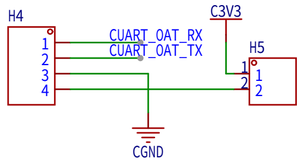


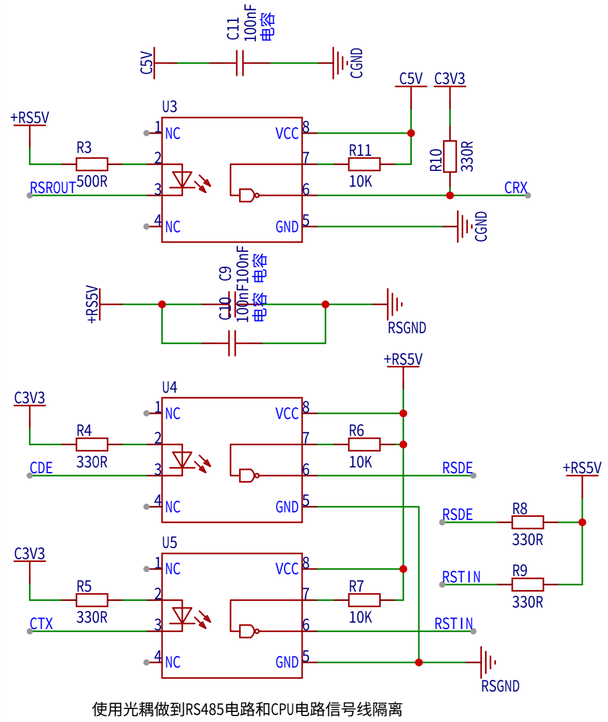
Table 6. Boot modes

nBOOT1 FLASH_OPTR[23]	nBOOT0 FLASH_OPTR[27]	BOOT0 pin PH3	nSWBOOT0 FLASH_OPTR[26]	Main Flash empty(1)	Boot Memory Space Alias
X	X	0	1	0	Main Flash memory is selected as boot area
X	X	0	1	1	System memory is selected as boot area
X	1	X	0	X	Main Flash memory is selected as boot area
0	X	1	1	X	Embedded SRAM1 is selected as boot area
0	0	X	0	X	Embedded SRAM1 is selected as boot area
1	X	1	1	X	System memory is selected as boot area
1	0	X	0	X	System memory is selected as boot area

1. A Flash empty check mechanism is implemented to force the boot from system Flash if the first Flash memory location is not programmed (0xFFFF FFFF) and if the boot selection was configured to boot from the main Flash.

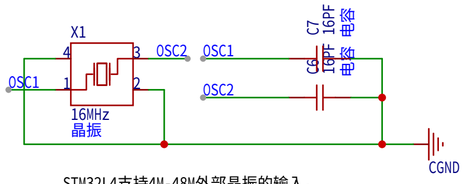
根据STM32L462参考手册，芯片启动可通过BOOT0引脚和FLASH_OPTR寄存器部分位选择启动方式
所以可以通过启动到芯片内置系统存储区后上位机直接通过串口下载程序到芯片
而开发时也可以通过此串口输出调试信息

隔离光耦



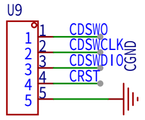
使用光耦做到RS485电路和CPU电路信号线隔离

16MHz主控晶振



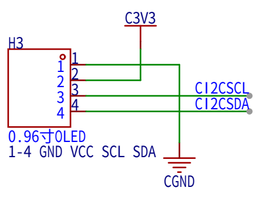
STM32L4支持4M-48M外部晶振的输入，
需要根据数据手册查询与之相适配的电容C6 C7

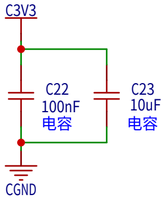
调试接口



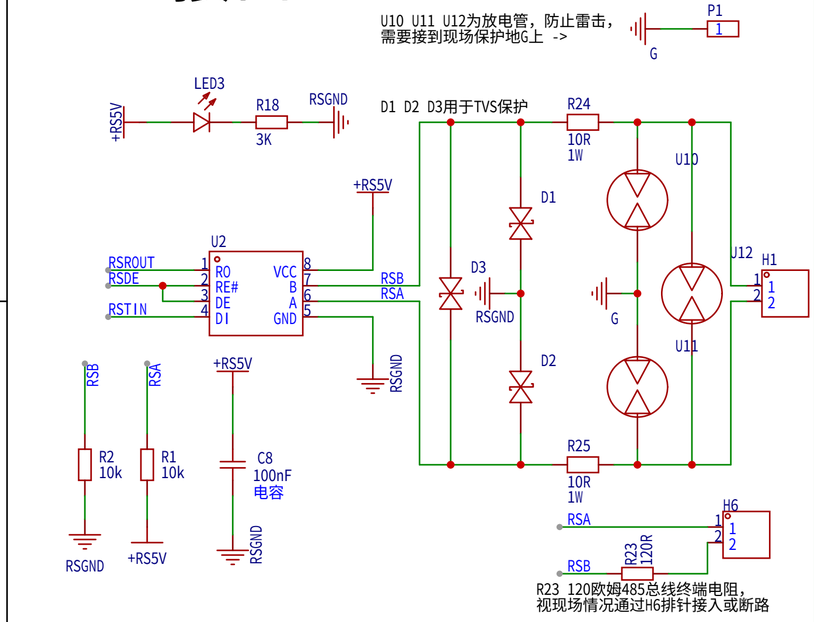
1-3引脚使用三线SW模式进行调试
第四引脚为复位线，用于仿真器发送硬件复位信号
第五引脚为地线

I2C LCD显示屏



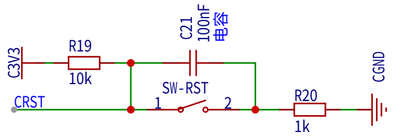


RS485接口

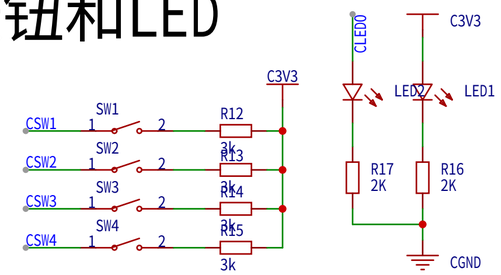


R23 120欧姆485总线终端电阻，
视现场情况通过H6排针接入或断路

复位按钮

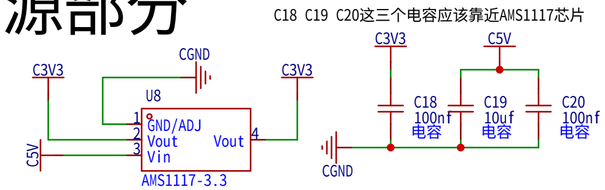


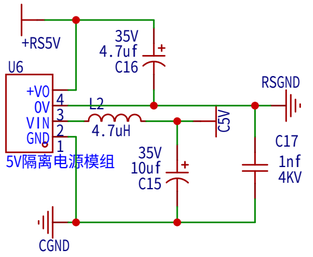
按钮和LED



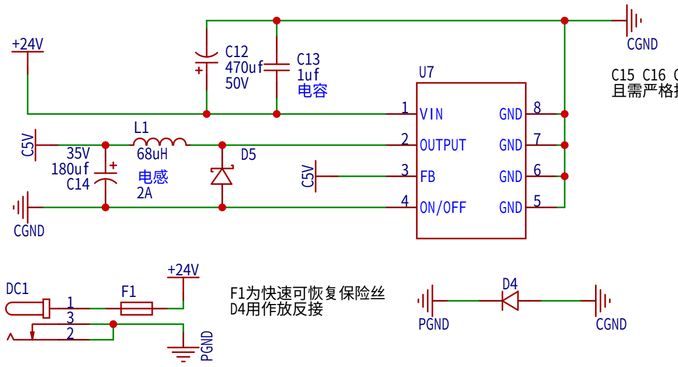
电源部分

C18 C19 C20这三个电容应该靠近AMS1117芯片





C15 C16 C17这三个电容应该靠近5V隔离电源模组
且需严格按照芯片手册选用合适类型和大小的电容和电感



F1为快速可恢复保险丝
D4用作放反接

Schematic	STM32L462-MODBUS	Update Date	2022-04-11
		Create Date	2022-04-05
Page	P1	Part Number	JLCPCB-001
Drawed	嘉立创EDA	现场总线大作业	
Reviewed	嘉立创EDA		
		VER	V0.1
		SIZE	A3
		PAGE 1 OF 1	
立创EDA		深圳嘉立创科技发展有限公司	