1、PCB板中：可修改元器件坐标进行超级微小移动

2、Shift+B：覆铜刷新；Shift+X原理图与PCB来回切换

3、自动拼板：https://www.bilibili.com/video/av53277748/?p=3

4、手动拼版：https://www.bilibili.com/video/av53277748/?p=1

5、复用布局布线

Table 1. TXS0108E Pullup Results Summary

RESISTOR VALUE (kΩ)	V_{OL} (V)	V_{OH} (V)
No external resistor	0.029	3.18
4.7	0.264	3.19
9.8	0.169	3.19
47	0.059	3.19
100	0.038	3.19

国产润石RS0108可替换TXS0108EPWR

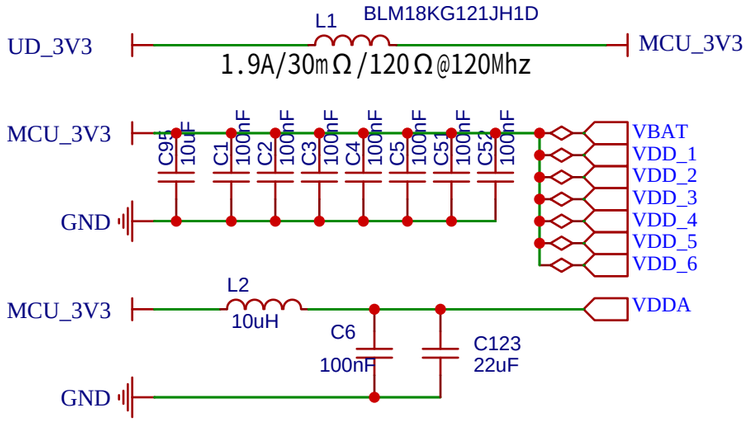
https://baijiahao.baidu.com/s?id=1693178475197095496&wfr=spider&for=pc

Schematic	MainBoardV5.5	Update Date	2023-05-30
		Create Date	2023-04-04
Page	工具 注意事项	Part Number	
Drawed	MainBoardV5.0		
Reviewed			
	VER	SIZE	PAGE 1 OF 13
嘉立创EDA			

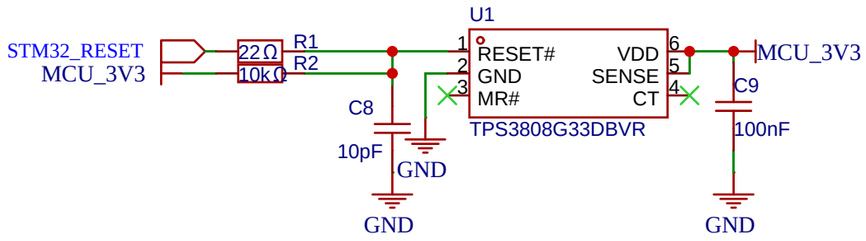
1、2路网口：级联功能
2、3路Type-A：升级和扫码枪和U盘
3、2路DB9：扫码枪和RS232
4、1路Type-B：接大屏
5、1路无线：接串口
6、8路HX711：称重
7、1路 8pin：接小屏
8、1路 4pin：接按键
9、1路 2pin：接电源

Schematic	MainBoardV5.5	Update Date	2023-04-04
		Create Date	2023-04-04
Page	产品功能要求	Part Number	
Drawed	MainBoardV5.0		
Reviewed			
	VER	SIZE	PAGE 2 OF 13
嘉立创EDA			

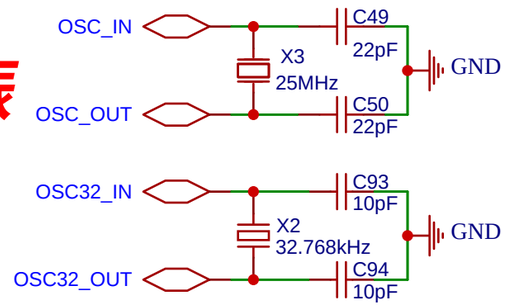
MCU电源及控制



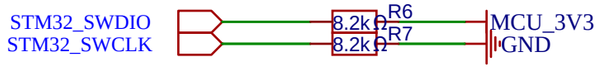
MCU复位电路



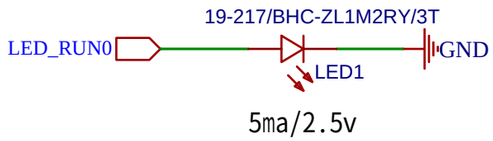
MCU晶振

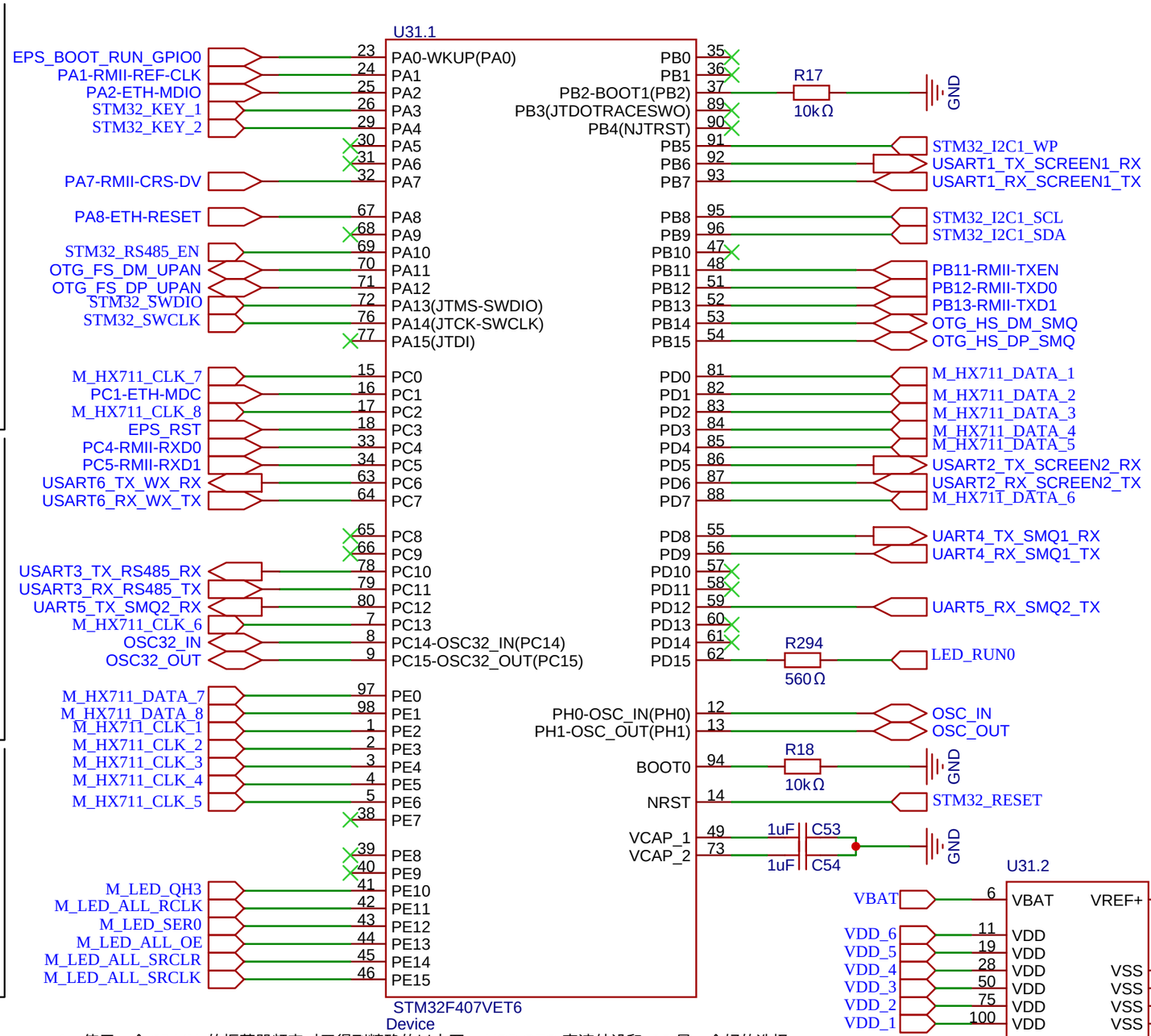


上下拉



MCU运行指示灯



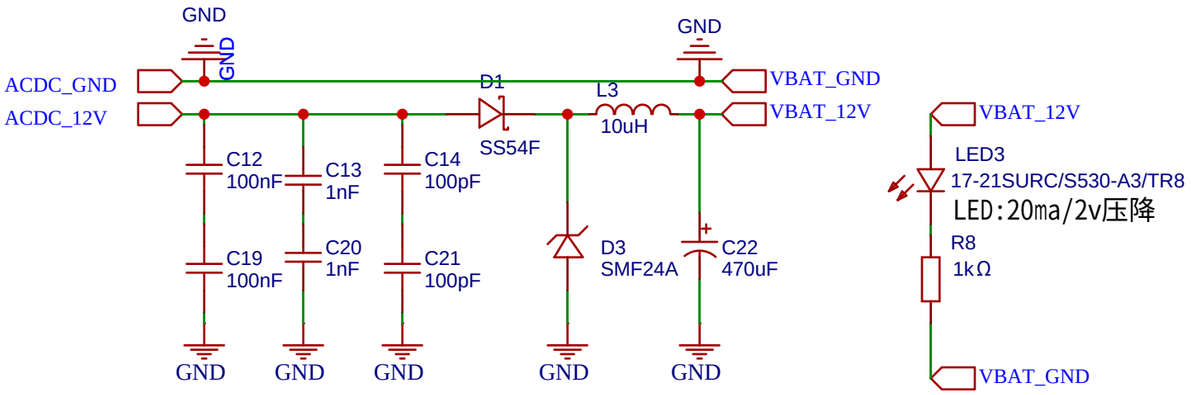


1、使用一个 25 MHz的振荡器频率对于得到精确的以太网、 USB OTG 高速外设和 I2S 是一个好的选择
2、VBAT 引脚可连至外部电池 (1.65 V < VBAT< 3.6 V)。
　　如果没有使用任何外部电池，建议将该引脚连接到带有 100 nF 外部去耦陶瓷电容的 VDD 上。
3、VDDA 引脚必须连至两个外部去耦电容 （100 nF 陶瓷电容 +1 μF 钽电容或陶瓷电容）

Schematic	MainBoardV5.5	Update Date	2023-05-30
		Create Date	2023-04-04
Page	Sch_STM32F407VET6	Part Number	
Drawed		MainBoardV5.0	
Reviewed			
		VER / SIZE / PAGE 3 OF 13	
嘉立创EDA		V1.0 / A4	嘉立创EDA

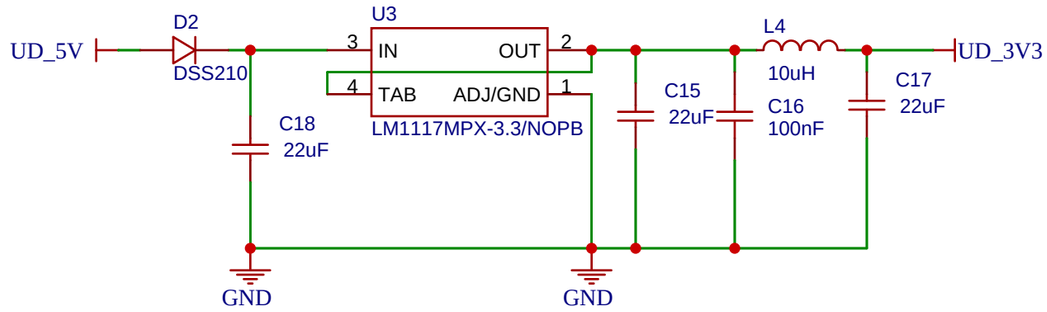
DC12v电源输入保护

防反接、滤波、指示灯



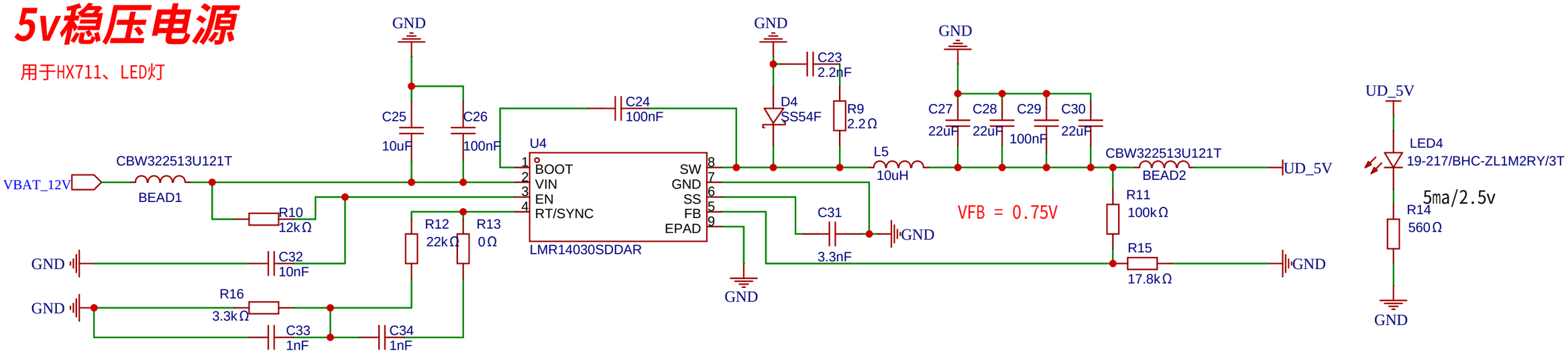
UD_3V3稳压电源

用于MCU



5v稳压电源

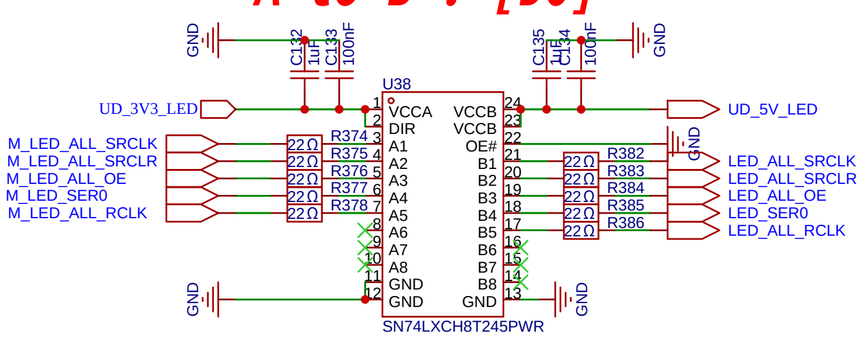
用于HX711、LED灯

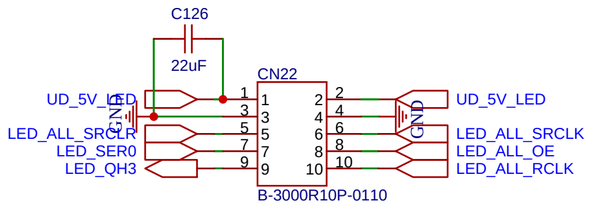


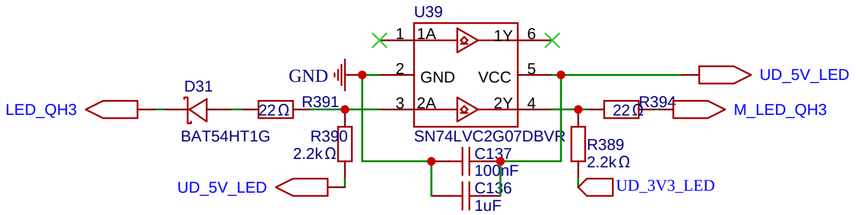
Schematic	MainBoardV5.5	Update Date	2023-05-30
		Create Date	2023-04-04
Page	Sch_Power	Part Number	
Drawed		MainBoardV5.0	
Reviewed			
		VER / SIZE / PAGE 4 OF 13	
嘉立创EDA		V1.0 / A4	嘉立创EDA

电平转换：灯-驱动

A to B : [DO]







最大输出电流：±35ma

SER:串行数据输入

OE:低电平输出有效，高电平时禁止输出（高阻态）

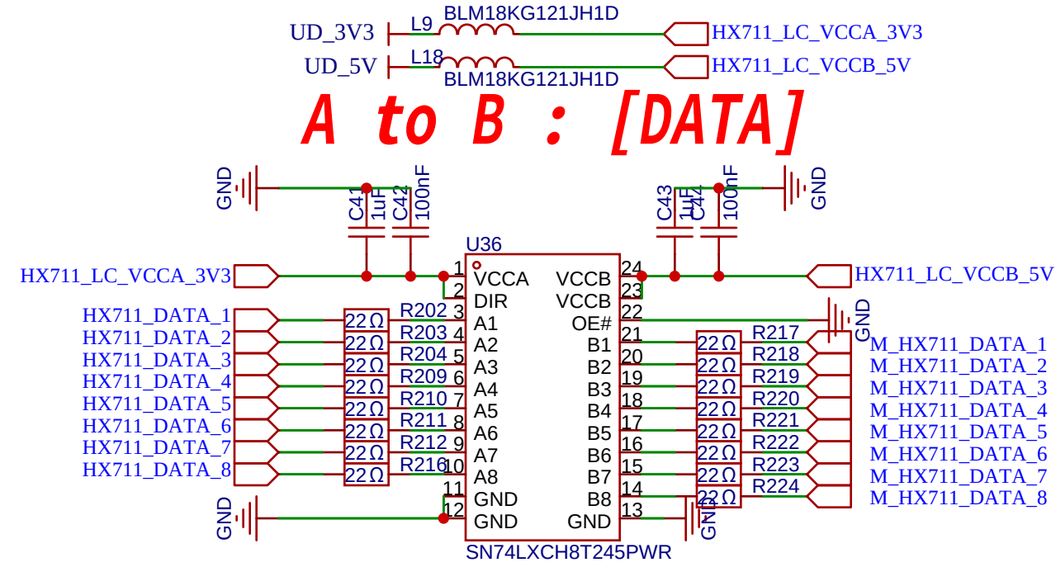
RCLK:上升沿时移位寄存器的数据进入存储寄存器

SRCLK:上升沿时数据寄存器的数据移位,QA->QB->....->QH

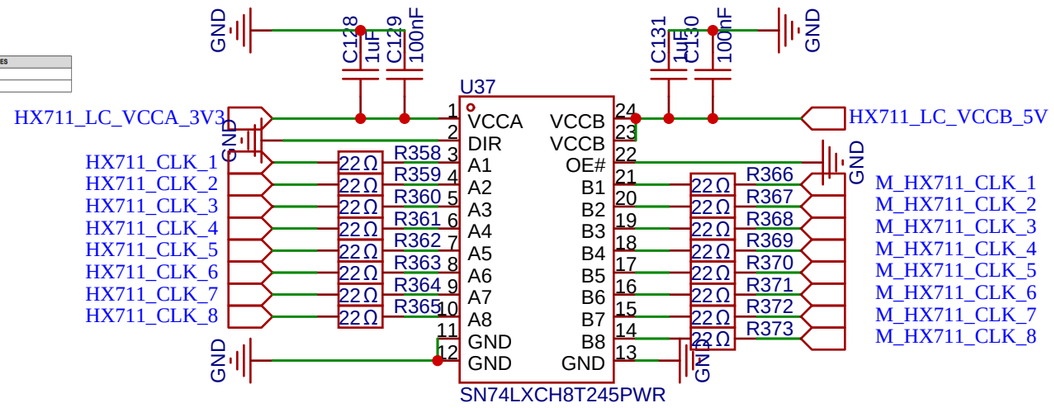
SRCLR:低电平移位寄存器清零

Schematic	MainBoardV5.5	Update Date	2023-05-29
		Create Date	2023-04-04
Page	Sch_LedCtrl	Part Number	
Drawed		MainBoardV5.0	
Reviewed			
		VER / SIZE / PAGE 5 OF 13	
嘉立创EDA	V1.0 / A4	嘉立创EDA	

A to B : [DATA]



B to A : [CLK]



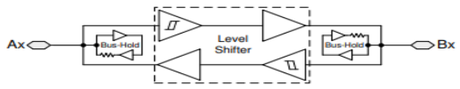


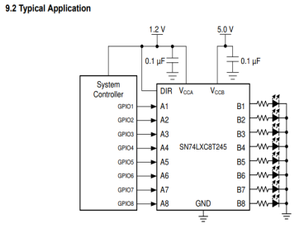
图 8-4. Schematic Description of Location of Bus-Hold Circuits

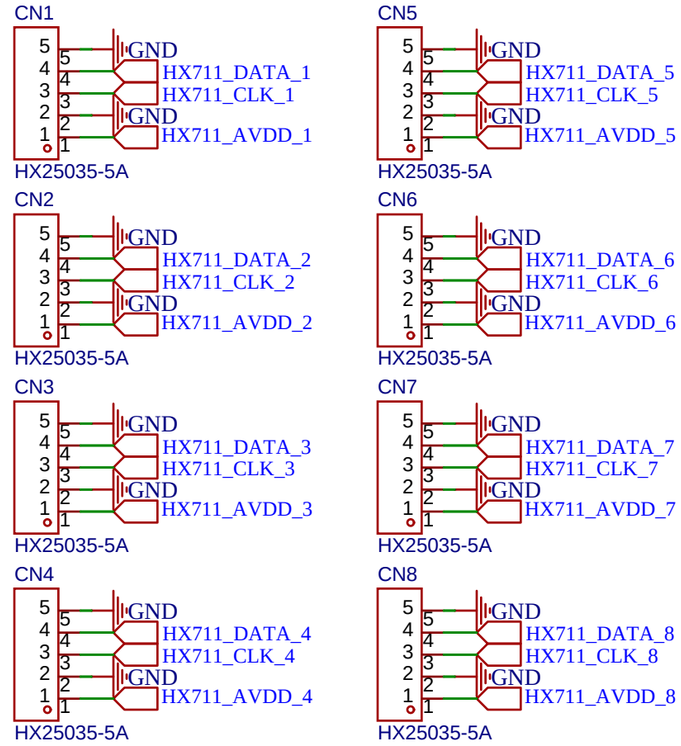
8.4 Device Functional Modes

表 8-1. Function Table(1)

CONTROL INPUTS		Port Status		OPERATION
OE	DIR	A PORT	B PORT	
L	L	Output (Enabled)	Input (Hi-Z)	B data to A bus
L	H	Input (Hi-Z)	Output (Enabled)	A data to B bus
H	X	Input (Hi-Z)	Input (Hi-Z)	Isolation

(1) Input circuits of the data I/Os are always active.

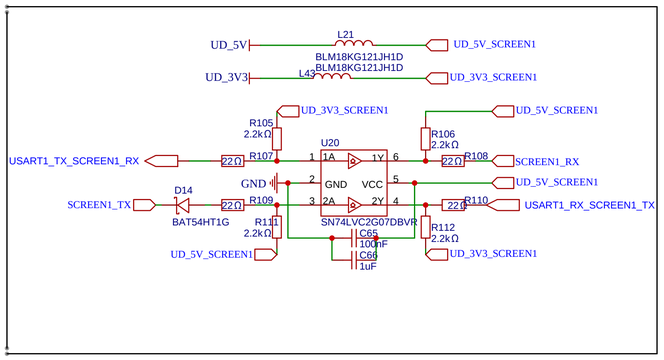


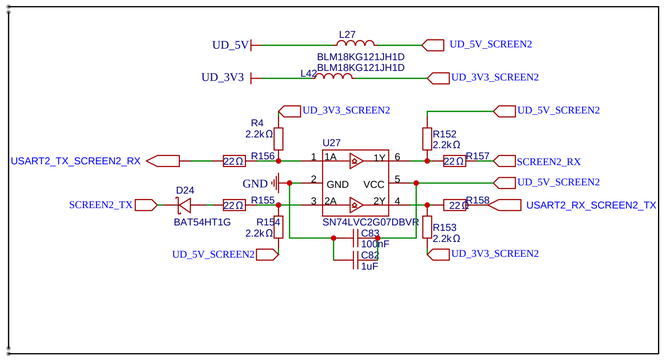


电平转换：HX711-CLK&DATA

Schematic	MainBoardV5.5	Update Date	2023-05-30
		Create Date	2023-04-04
Page	Sch_LevelChange_HX711	Part Number	
Drawed		MainBoardV5.0	
Reviewed			
		VER	V1.0
		SIZE	A2
		PAGE 6 OF 13	
嘉立创EDA		嘉立创EDA	

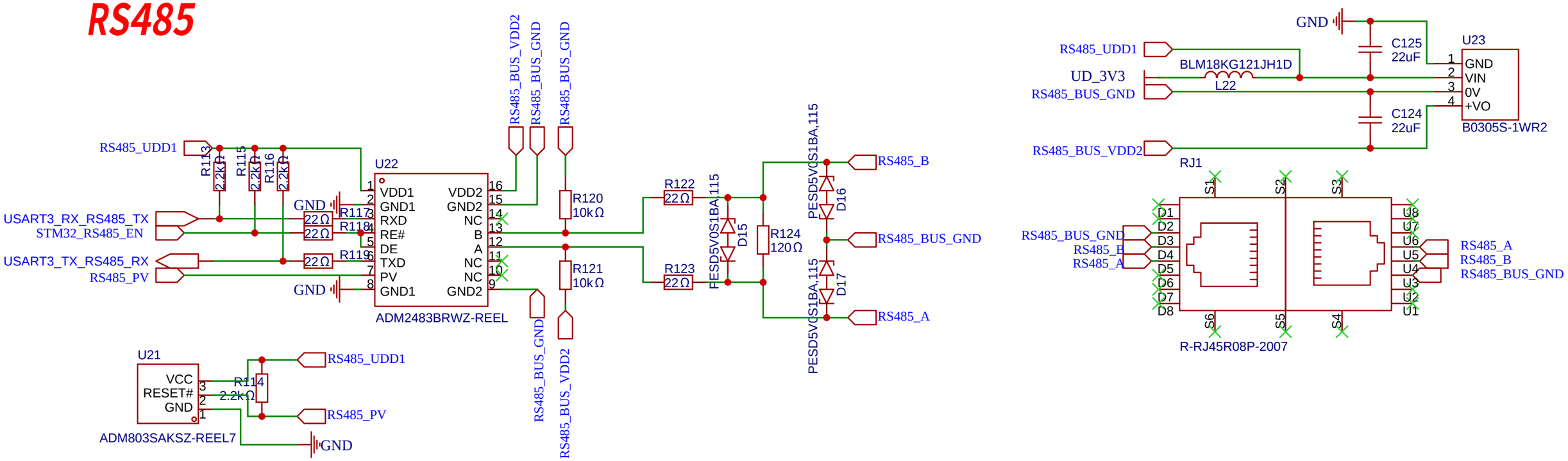
电平转换：屏-串口



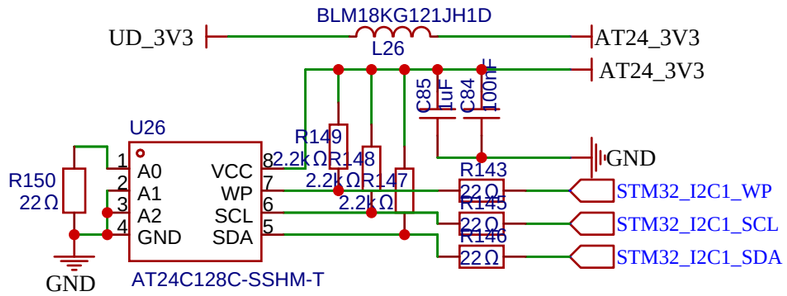


Schematic	MainBoardV5.5	Update Date	2023-05-30
		Create Date	2023-04-04
Page	Sch_LevelChange_Screen	Part Number	
Drawed		MainBoardV5.0	
Reviewed			
		VER / SIZE / PAGE 7 OF 13	
嘉立创EDA		V1.0 / A2	嘉立创EDA

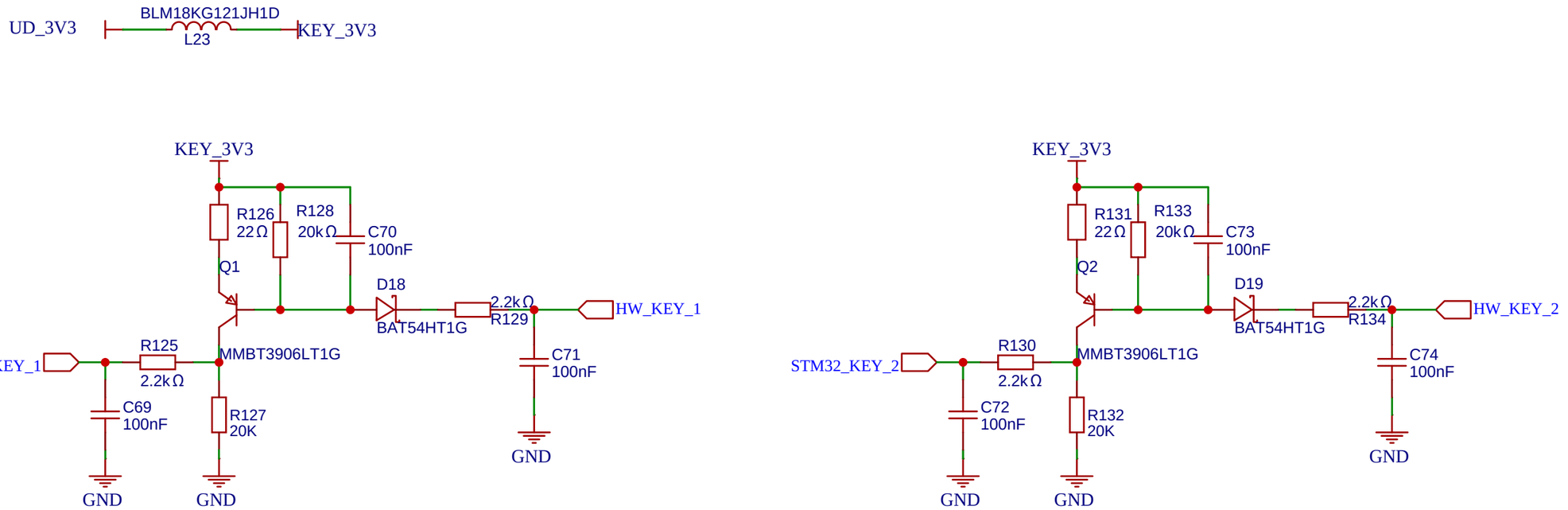
RS485



FLASH



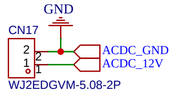
Schematic	MainBoardV5.5	Update Date	2023-05-30
		Create Date	2023-04-04
Page	Sch_RS485_FLASH	Part Number	
Drawed		MainBoardV5.0	
Reviewed			
		VER / SIZE / PAGE 8 OF 13	
嘉立创EDA		V1.0 / A4	嘉立创EDA



Schematic	MainBoardV5.5	Update Date	2023-05-19
		Create Date	2023-04-04
Page	Sch_KeyCtrl	Part Number	
Drawed	MainBoardV5.0		
Reviewed			
	VER	SIZE	PAGE 9 OF 13
嘉立创EDA	V1.0	A2	嘉立创EDA

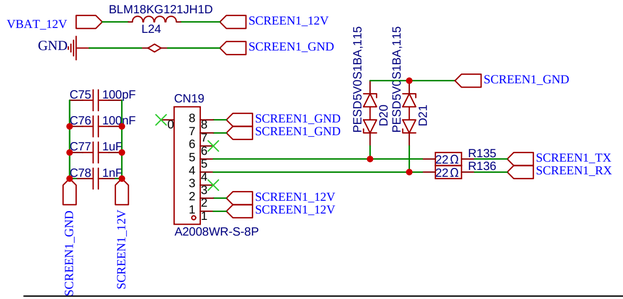
SCREEN1_GND
SCREEN1_GND
SCREEN1_GND

12V稳压电源输入端子：12v/2A

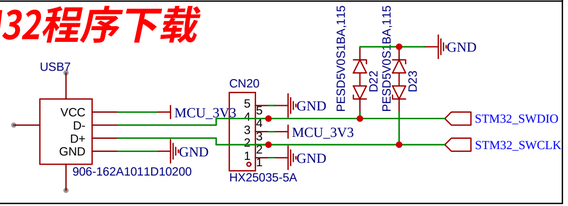


YY05显示屏电源及信号

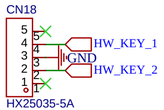
磁珠：120Ω @100mhz /3A 100mΩ



STM32程序下载

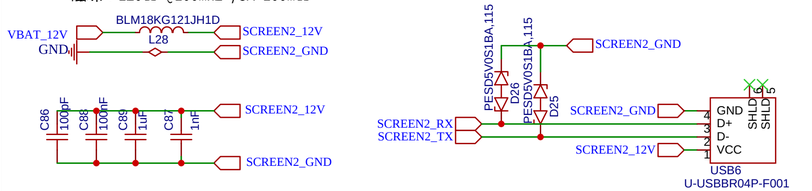


物理按键



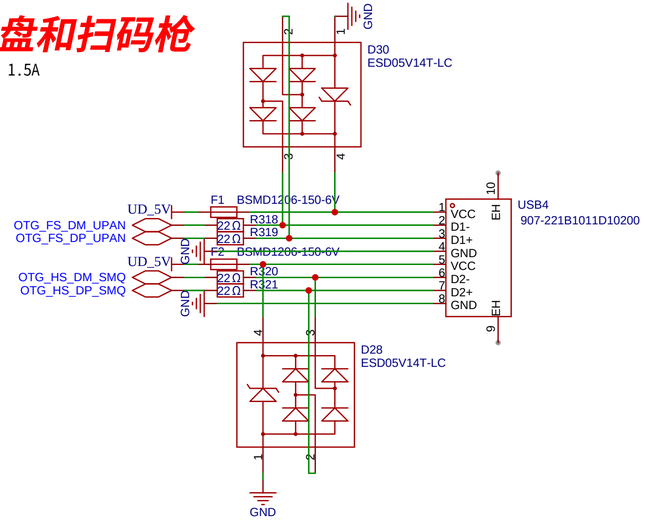
YY05_2显示屏电源及信号

磁珠：120Ω @100mhz /3A 100mΩ



USB-A:U盘和扫码枪

快恢复保险丝：6V 1.5A

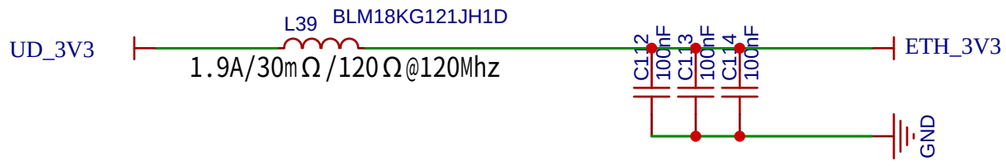


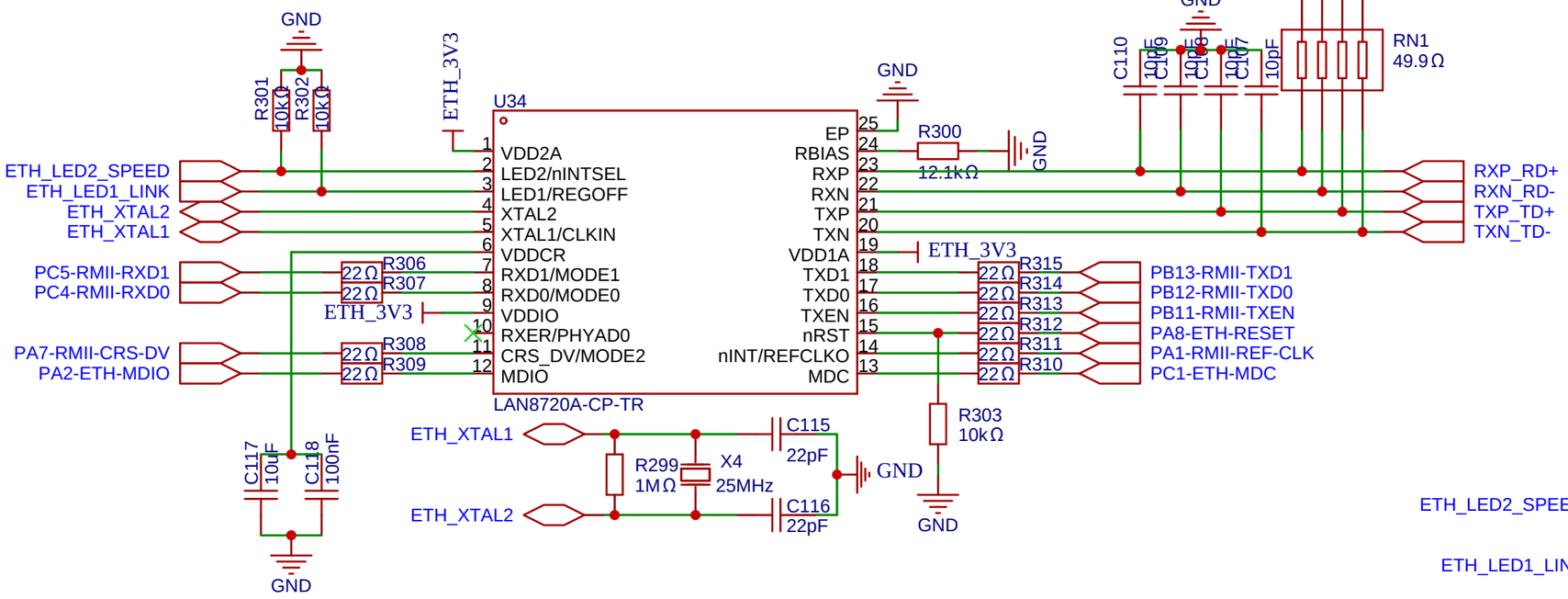
Schematic		Update Date	
		Create Date	
Page		Part Number	
Drawed			
Reviewed			
	VER	SIZE	PAGE OF

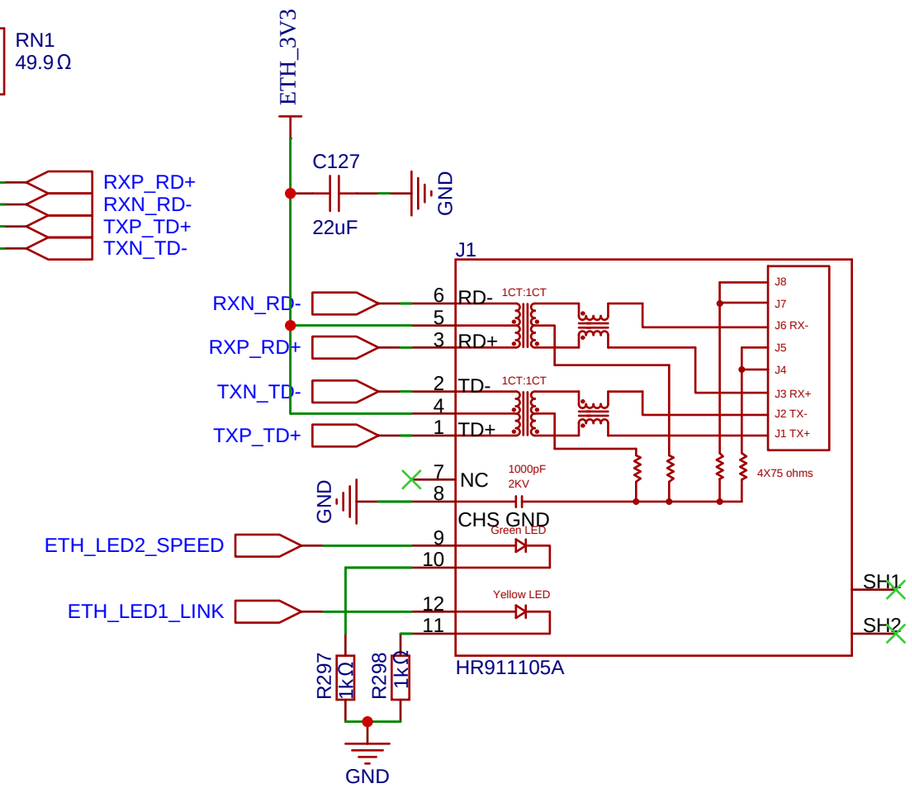
嘉立创EDA

MainBoardV5.5
Sch_Connect
2023-05-30
2023-04-04
MainBoardV5.0
10
13
V1.0
A2
嘉立创EDA

以太网LAN8720A







Schematic	MainBoardV5.5	Update Date	2023-05-21
		Create Date	2023-05-21
Page	Sch_Ethernet	Part Number	
Drawed		MainBoardV5.0	
Reviewed			
		VER	SIZE	PAGE 11 OF 13
嘉立创EDA		V1.0	A4	嘉立创EDA

WIFI-EPS8266

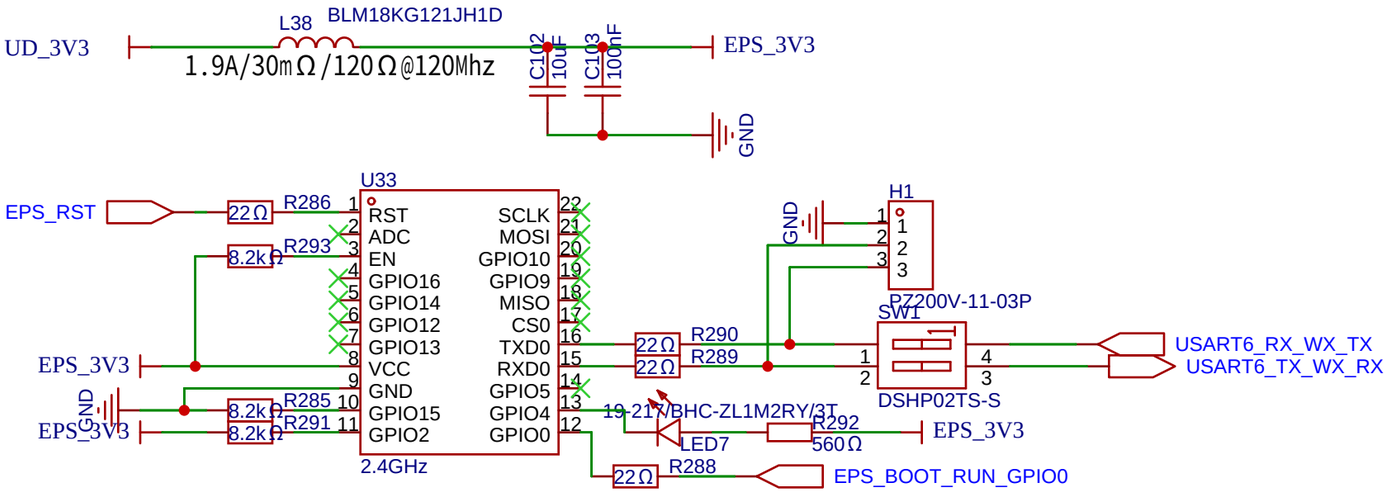


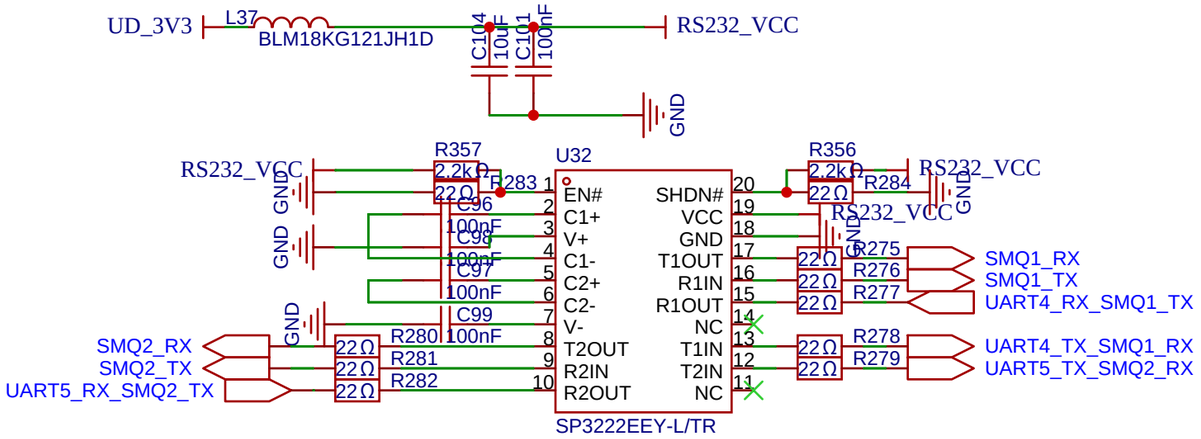
表 模组启动模式说明

模式	CH_PD(EN)	RST	GPIO15	GPIO0	GPIO2	TXD0
下载模式	高	高	低	低	高	高
运行模式	高	高	低	高	高	高

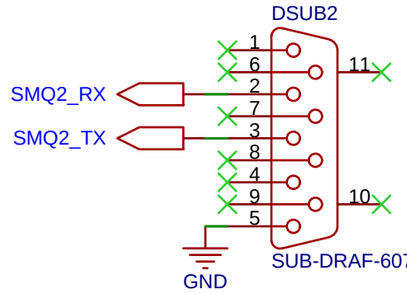
注意：部分引脚已经内部上拉，请参考原理图

Schematic	MainBoardV5.5	Update Date	2023-05-22
		Create Date	2023-05-21
Page	Sch_Wifi	Part Number	
Drawed		MainBoardV5.0	
Reviewed			
		VER	SIZE
		V1.0	A4
嘉立创EDA		PAGE 12 OF 13	
		嘉立创EDA	

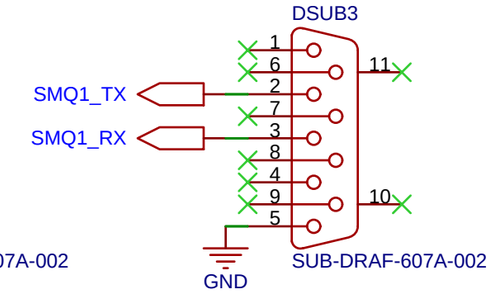
RS232扫码枪



直连



交叉



Schematic	MainBoardV5.5	Update Date	2023-05-21
		Create Date	2023-05-21
Page	Sch_RS232	Part Number	
Drawed	MainBoardV5.0		
Reviewed			
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