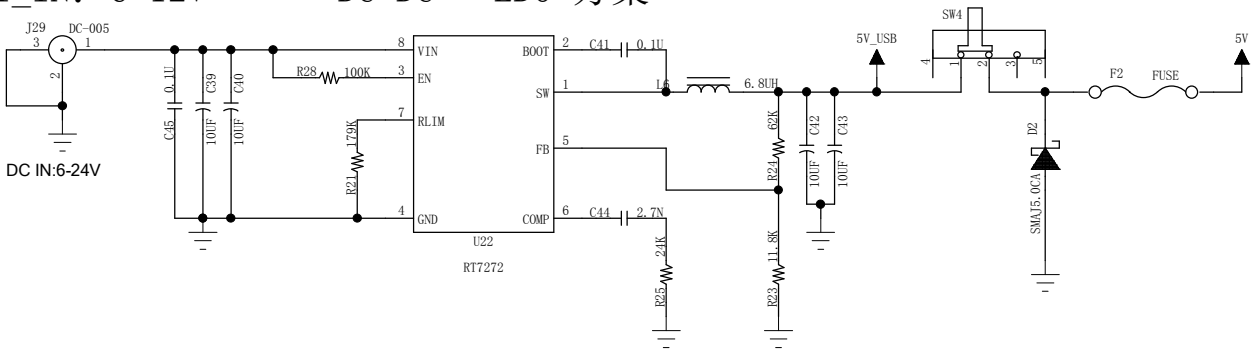
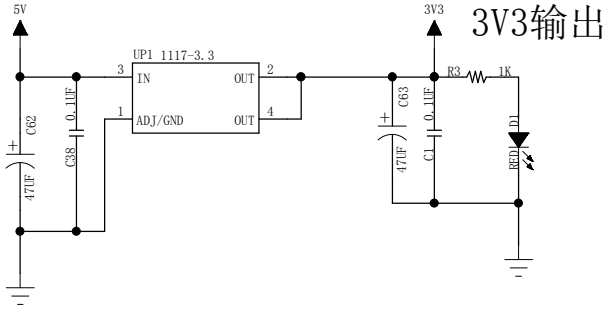
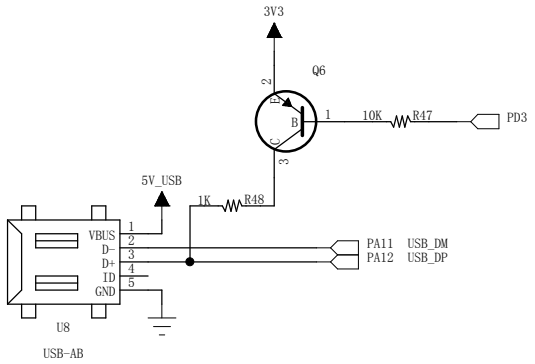
# 电源供电

DI_IN：6-12V　　DC DC + LDO 方案



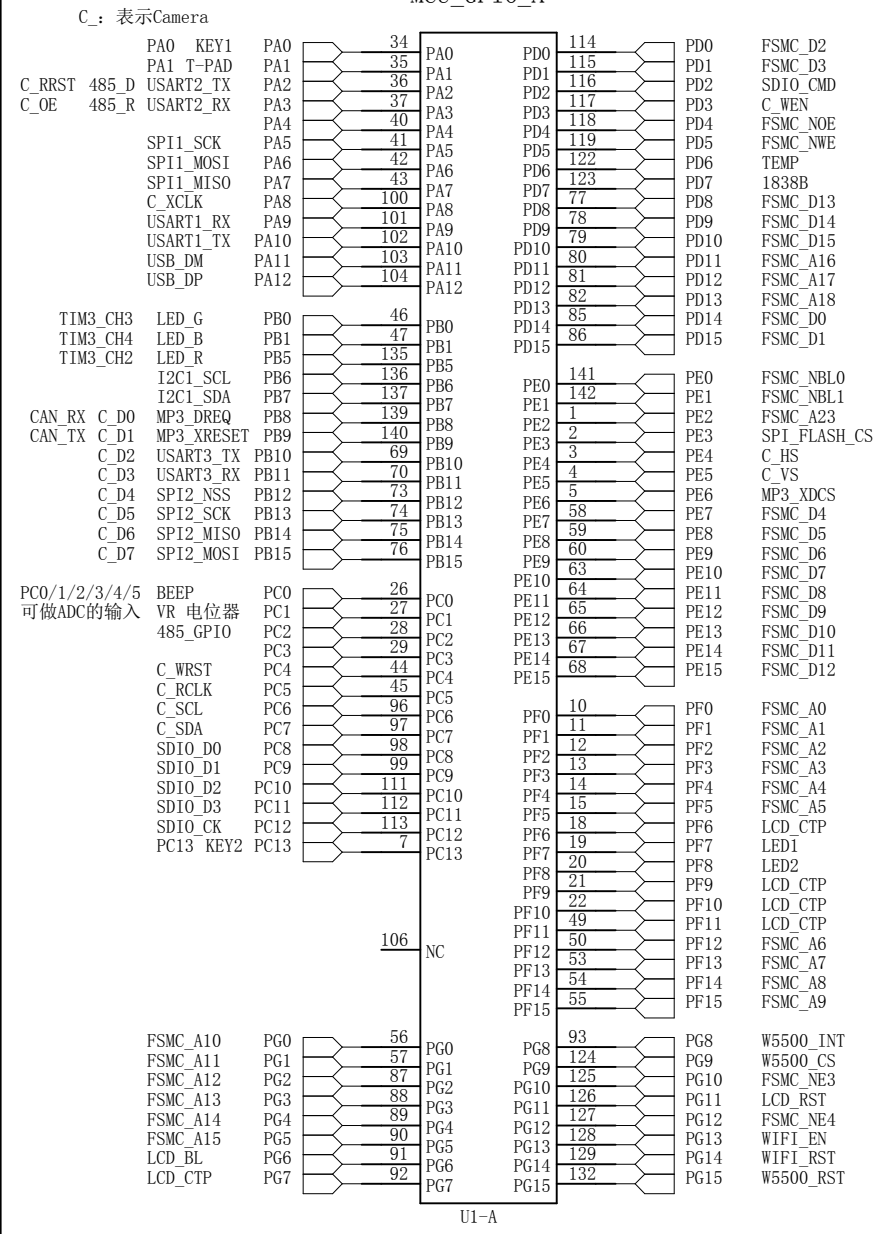




USB-Device



## MCU_GPIO_A

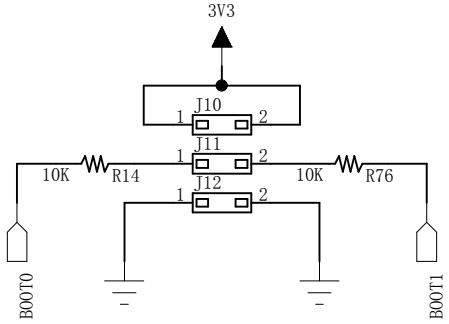
C_：表示Camera



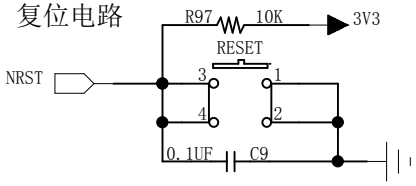

## BOOT设置

| BOOT0 | BOOT1 | 启动方式 |
|---|---|---|
| 0 | X | 内部FLASH |
| 1 | 0 | 系统存储器/ISP模式 |
| 1 | 1 | 内部SRAM |

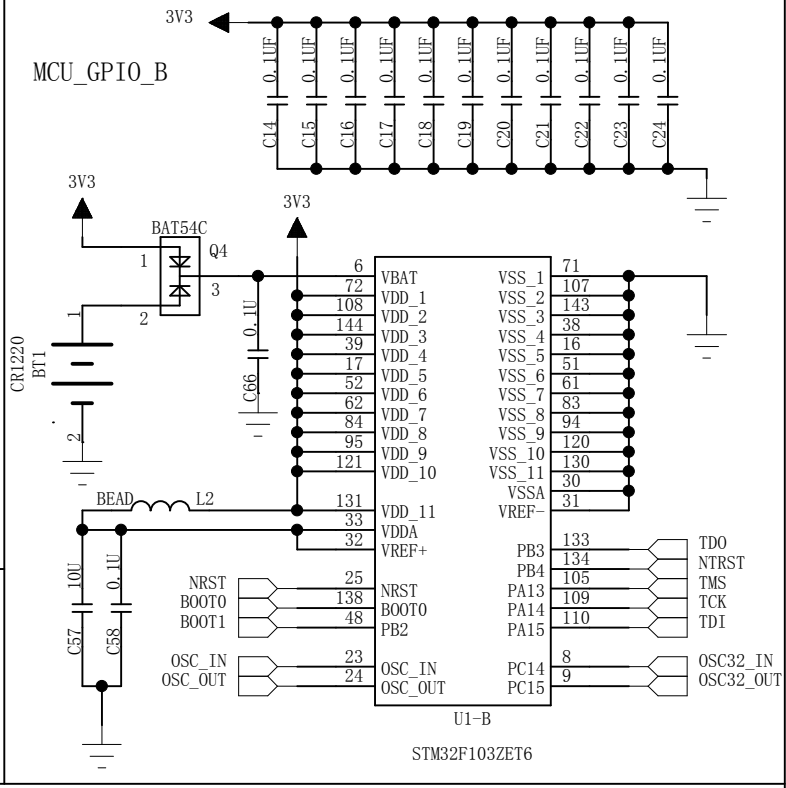
默认配置是内部FLASH，BOOT0&1接地




## 复位电路

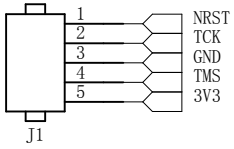



## MCU_GPIO_B



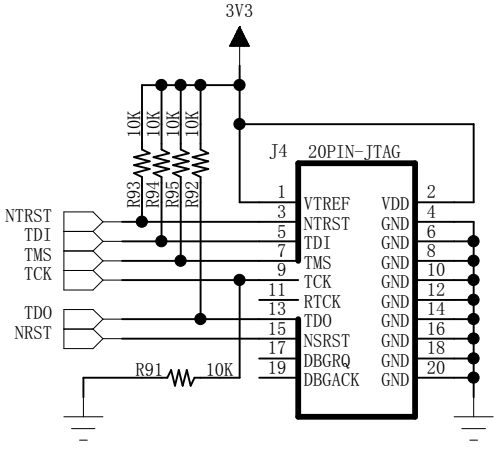

## JTAG下载接口

NRST可接可不接

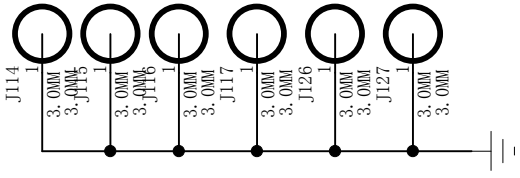



XH2.54-5P

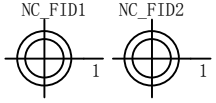
3V3可对目标板供电



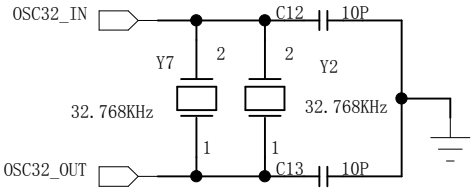

## 3M 螺丝孔



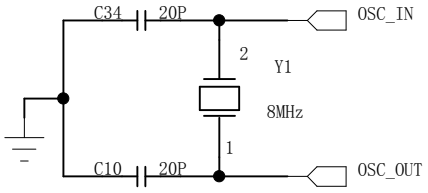

## MARK 点



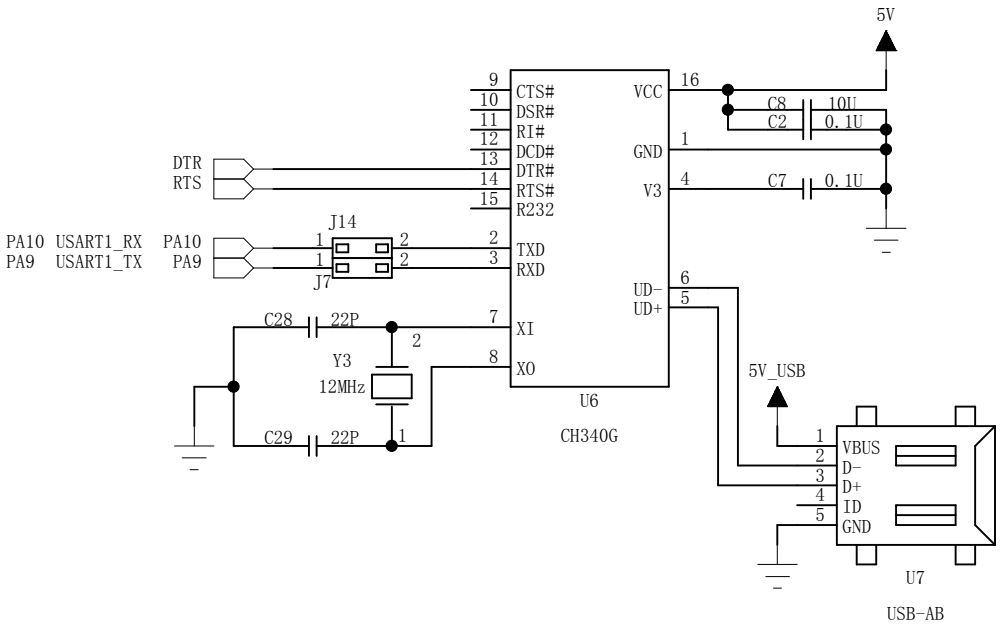

## 晶振电路



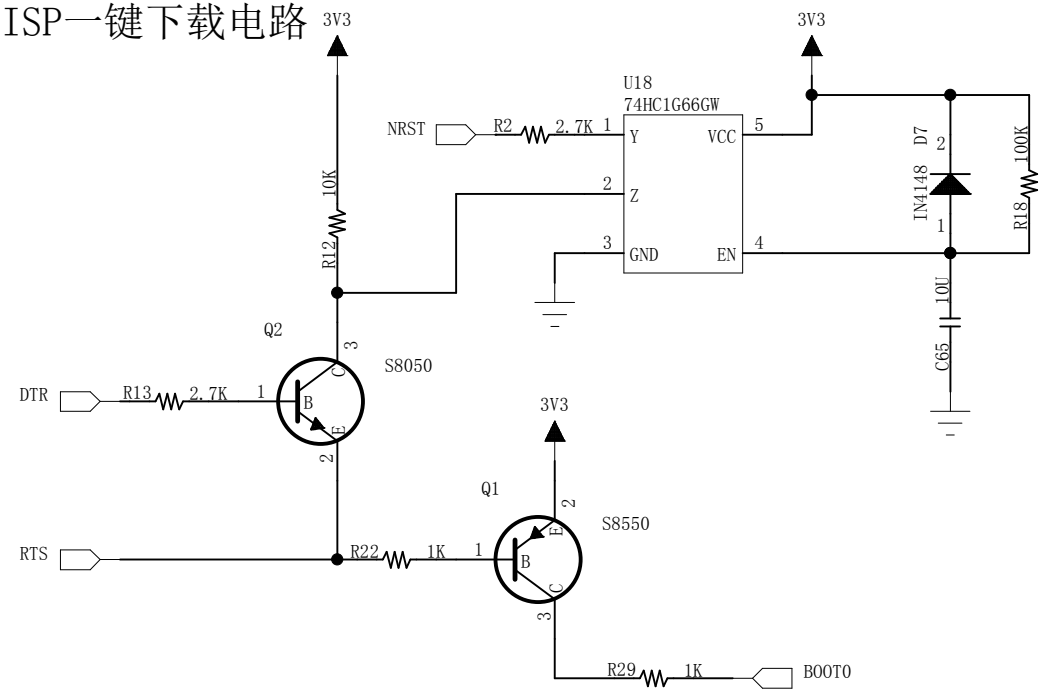

32.768KHZ 晶振只贴一个



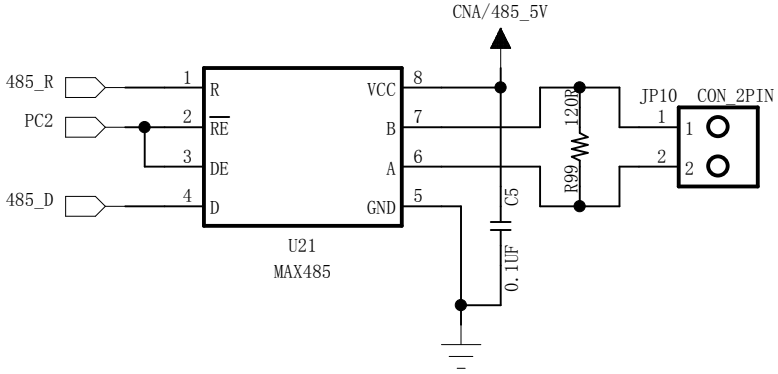
## USB转串口

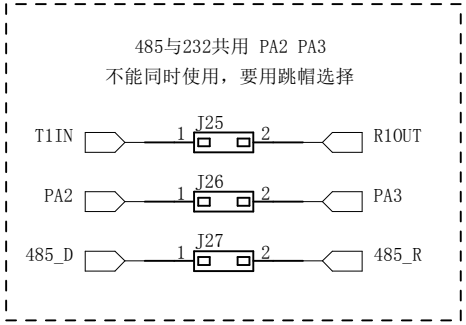



## ISP一键下载电路



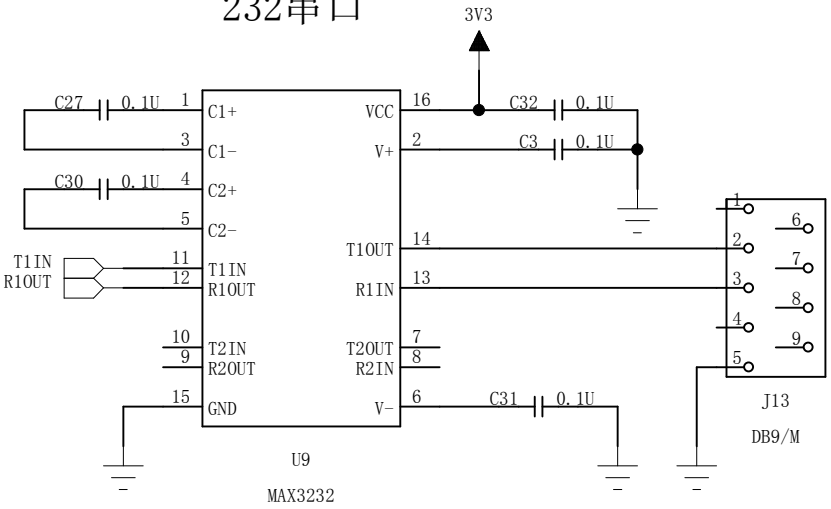

## 485

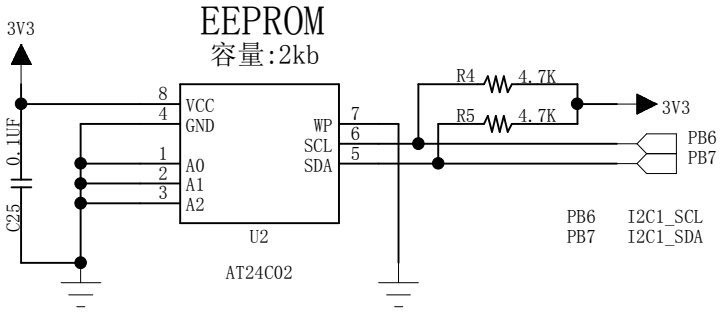


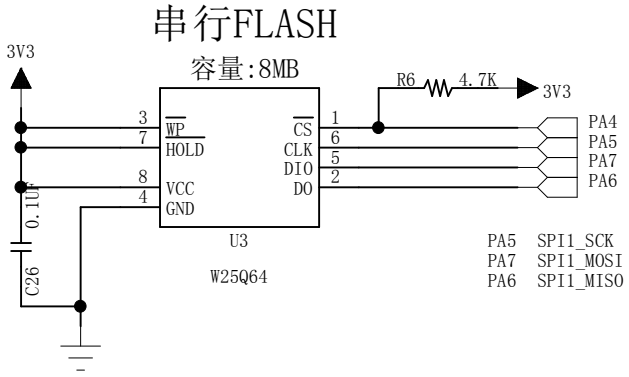



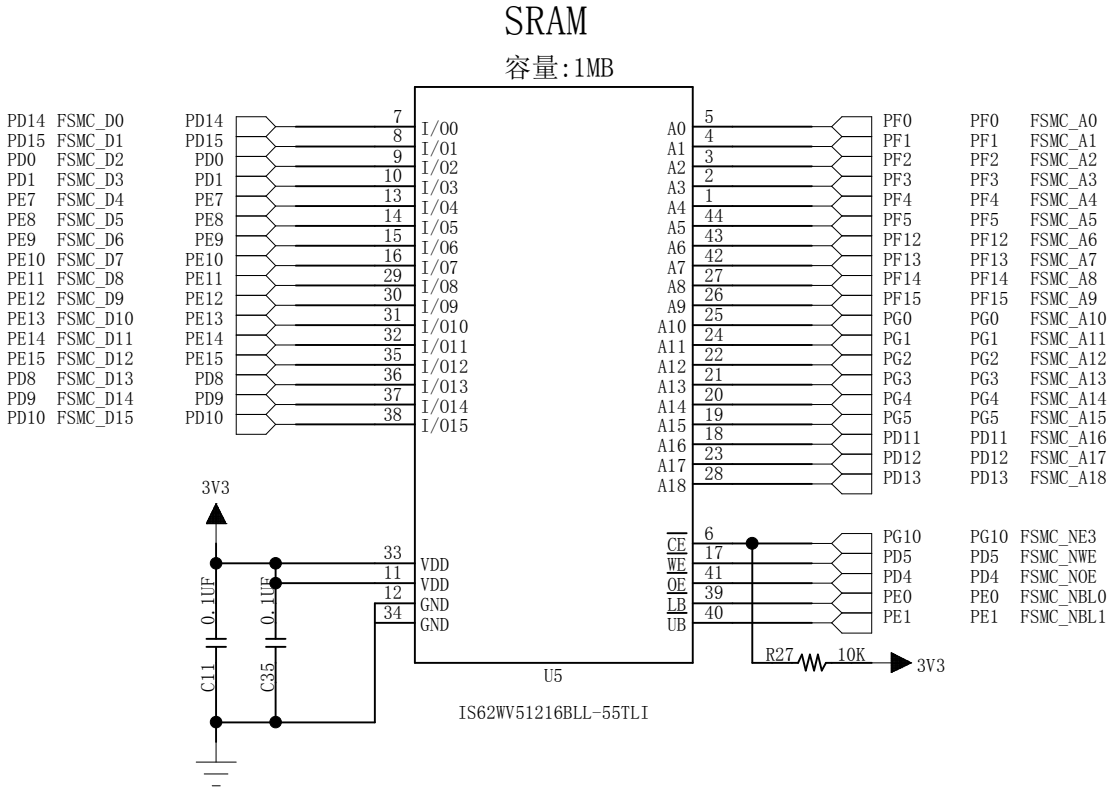

485_D PA2 USART2_TX
485_R PA3 USART2_RX

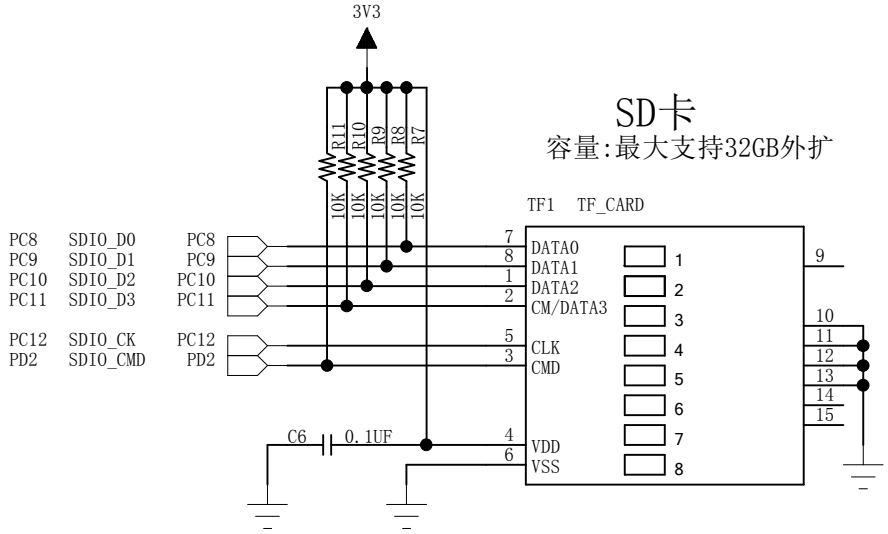
## 232串口



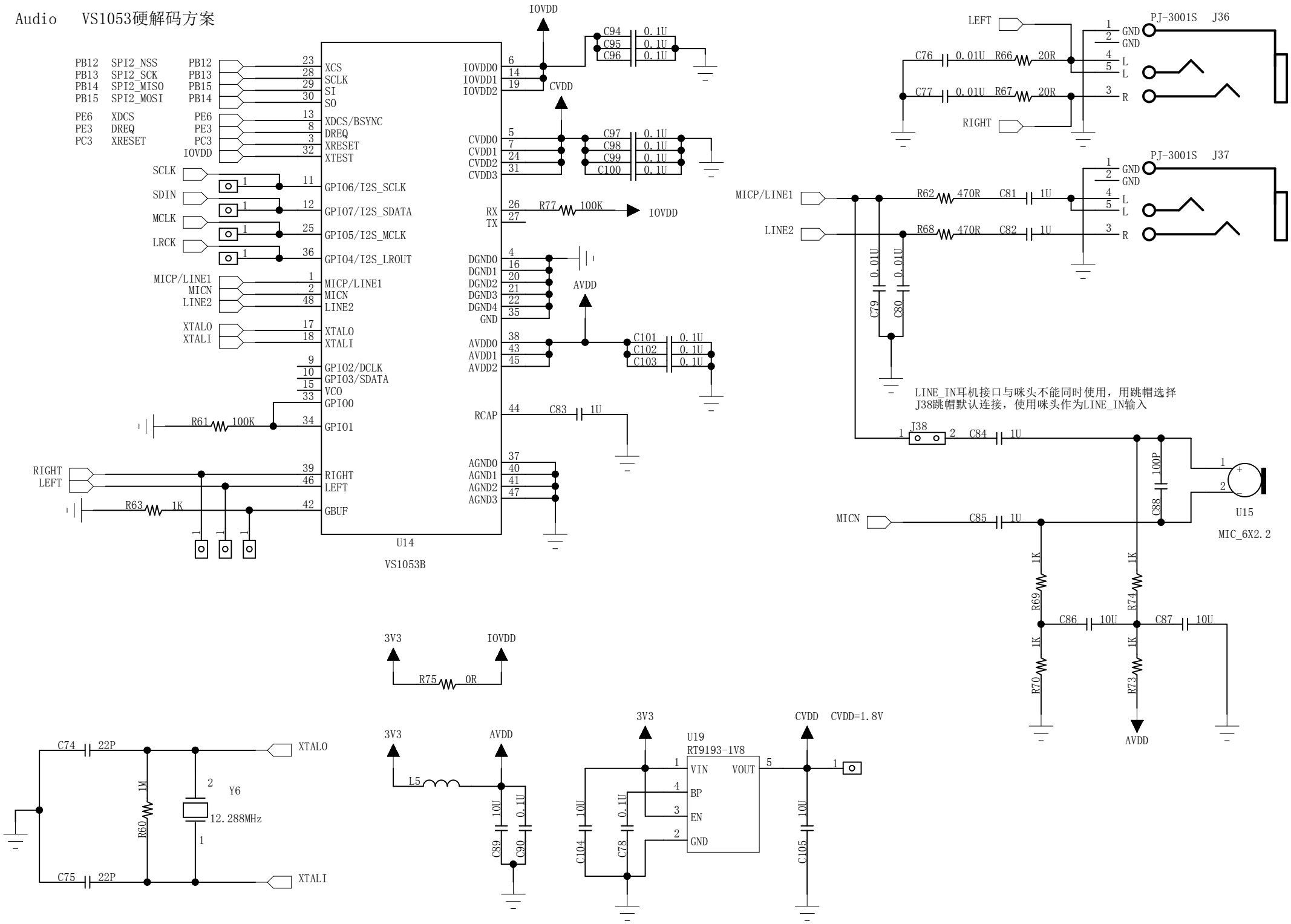

EEPROM
容量:2kb
3V3
C25
0.1UF
VCC
GND
A0
A1
A2
WP
SCL
SDA
U2
AT24C02
R4 4.7K
R5 4.7K
3V3
PB6
PB7
PB6 I2C1_SCL
PB7 I2C1_SDA


串行FLASH
容量:8MB
3V3
C26
0.1UF
WP
HOLD
VCC
GND
CS
CLK
DIO
DO
U3
W25Q64
R6 4.7K
3V3
PA4
PA5
PA7
PA6
PA5 SPI1_SCK
PA7 SPI1_MOSI
PA6 SPI1_MISO

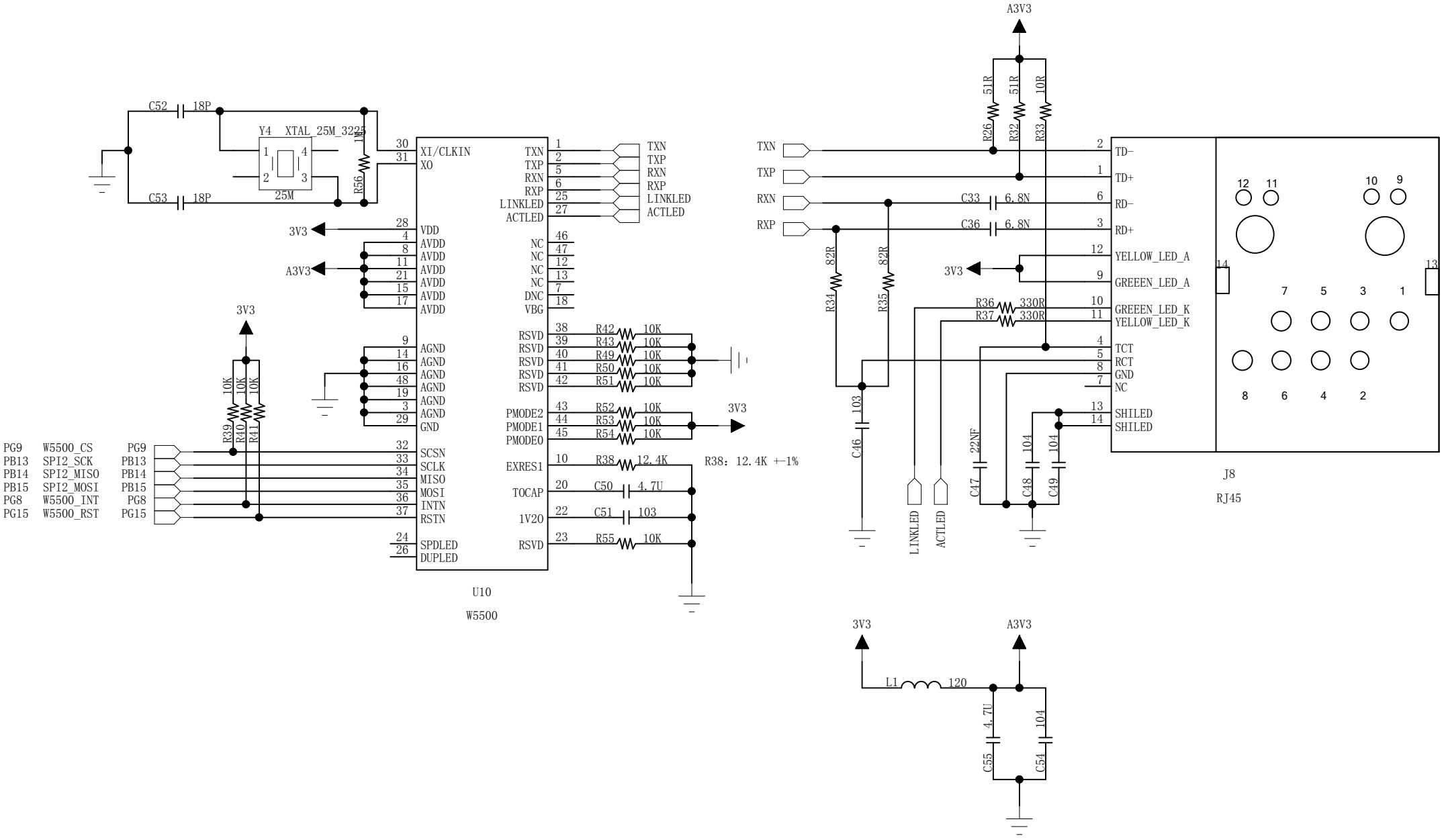

SRAM
容量:1MB
PD14 FSMC_D0
PD15 FSMC_D1
PD0 FSMC_D2
PD1 FSMC_D3
PE7 FSMC_D4
PE8 FSMC_D5
PE9 FSMC_D6
PE10 FSMC_D7
PE11 FSMC_D8
PE12 FSMC_D9
PE13 FSMC_D10
PE14 FSMC_D11
PE15 FSMC_D12
PD8 FSMC_D13
PD9 FSMC_D14
PD10 FSMC_D15
I/00
I/01
I/02
I/03
I/04
I/05
I/06
I/07
I/08
I/09
I/010
I/011
I/012
I/013
I/014
I/015
A0
A1
A2
A3
A4
A5
A6
A7
A8
A9
A10
A11
A12
A13
A14
A15
A16
A17
A18
PF0 FSMC_A0
PF1 FSMC_A1
PF2 FSMC_A2
PF3 FSMC_A3
PF4 FSMC_A4
PF5 FSMC_A5
PF12 FSMC_A6
PF13 FSMC_A7
PF14 FSMC_A8
PF15 FSMC_A9
PG0 FSMC_A10
PG1 FSMC_A11
PG2 FSMC_A12
PG3 FSMC_A13
PG4 FSMC_A14
PG5 FSMC_A15
PD11 FSMC_A16
PD12 FSMC_A17
PD13 FSMC_A18
CE
WE
OE
LB
UB
PG10 FSMC_NE3
PD5 FSMC_NWE
PD4 FSMC_NOE
PE0 FSMC_NBL0
PE1 FSMC_NBL1
R27 10K
3V3
3V3
C11
C35
0.1UF
VDD
VDD
GND
GND
U5
IS62WV51216BLL-55TLI


SD卡
容量:最大支持32GB外扩
3V3
R11
R10
R9
R8
R7
10K
TF1 TF_CARD
PC8 SDIO_D0
PC9 SDIO_D1
PC10 SDIO_D2
PC11 SDIO_D3
PC12 SDIO_CK
PD2 SDIO_CMD
DATA0
DATA1
DATA2
CM/DATA3
CLK
CMD
VDD
VSS
C6
0.1UF

Audio　VS1053硬解码方案



# 以太网　　W5500方案　　集成硬件TCP/IP协议栈

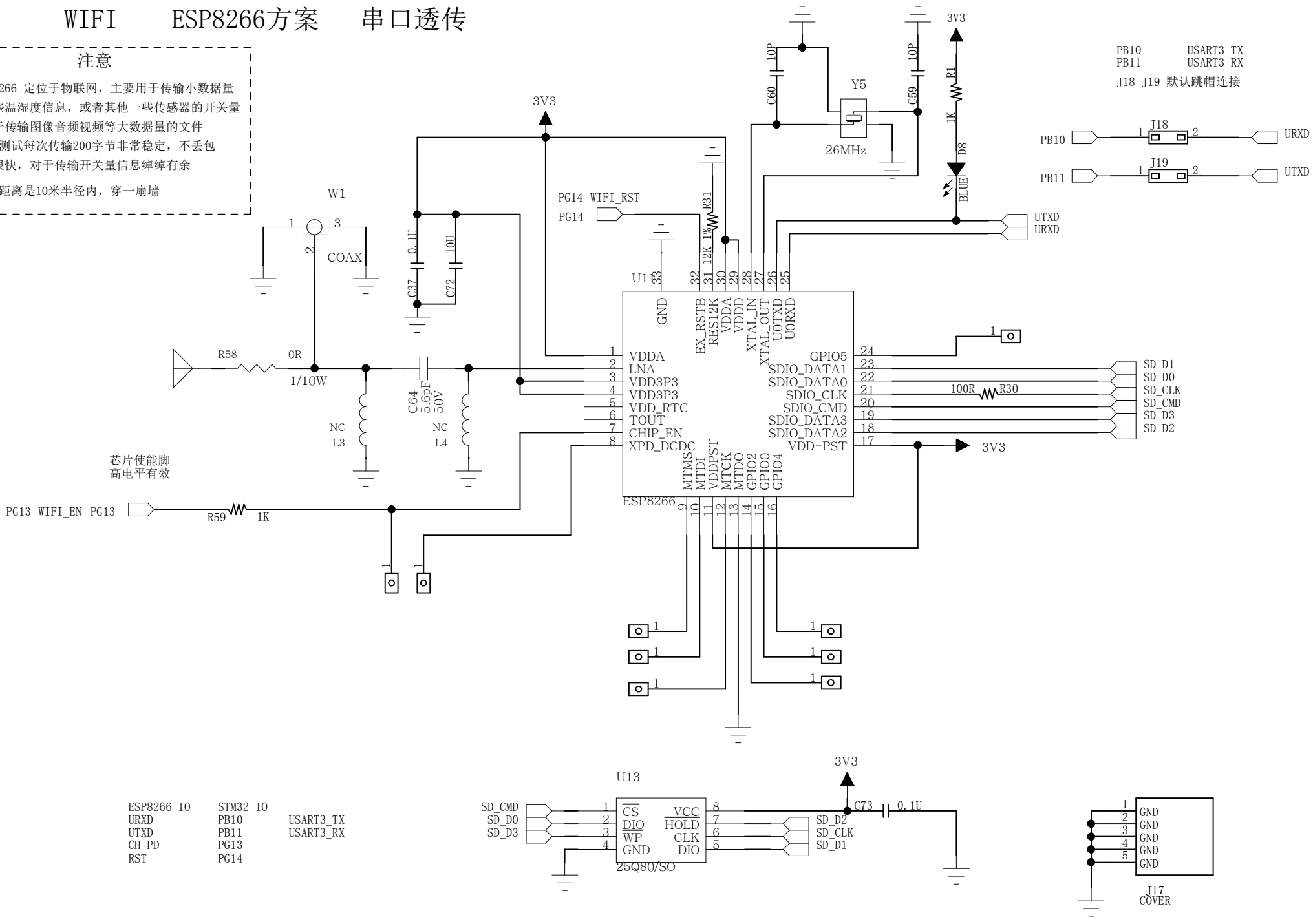


# WIFI　ESP8266方案　串口透传

## 注意

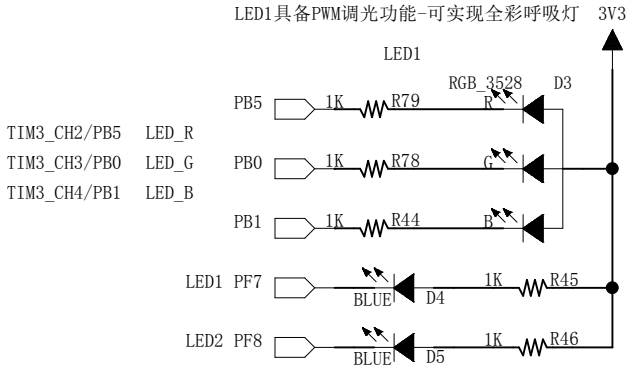
1、ESP8266 定位于物联网，主要用于传输小数据量
比如一些温湿度信息，或者其他一些传感器的开关量
不能用于传输图像音频视频等大数据量的文件
2、我们测试每次传输200字节非常稳定，不丢包
速度也很快，对于传输开关量信息绰绰有余

3、测试距离是10米半径内，穿一扇墙

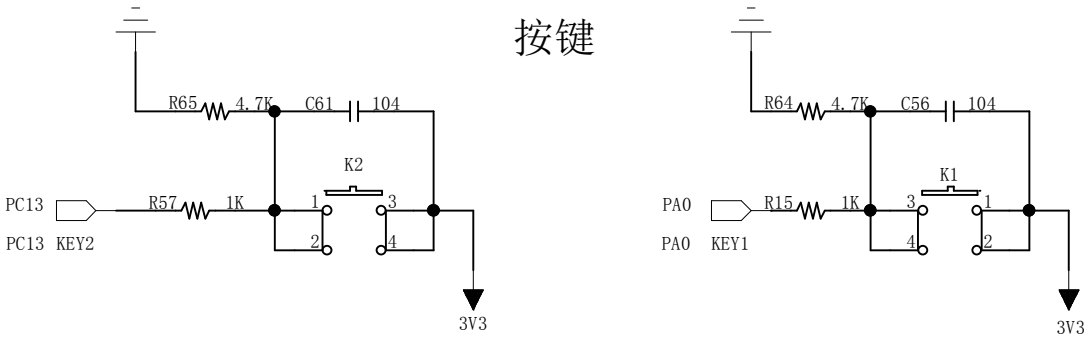



| ESP8266 IO | STM32 IO | |
|---|---|---|
| URXD | PB10 | USART3_TX |
| UTXD | PB11 | USART3_RX |
| CH-PD | PG13 | |
| RST | PG14 | |

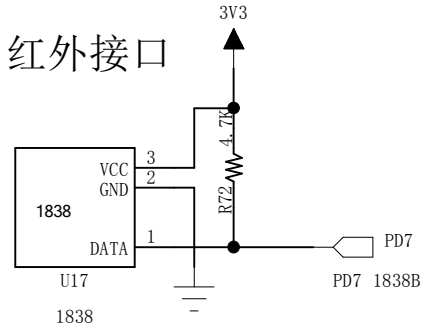
## LED



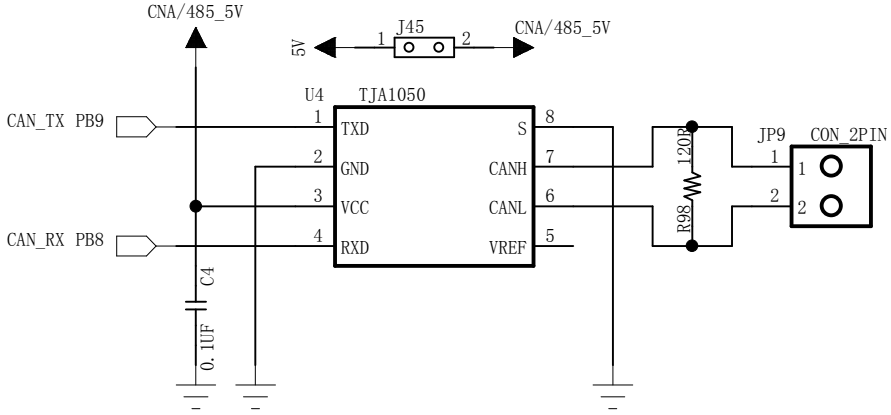

## 按键




## 红外接口

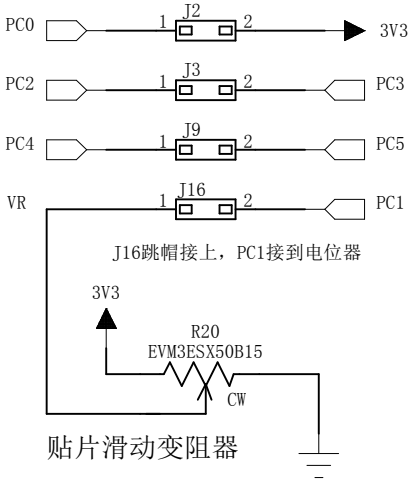



## CAN



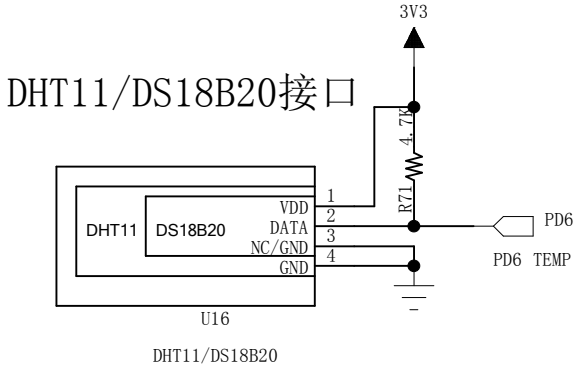

## ADC/DAC

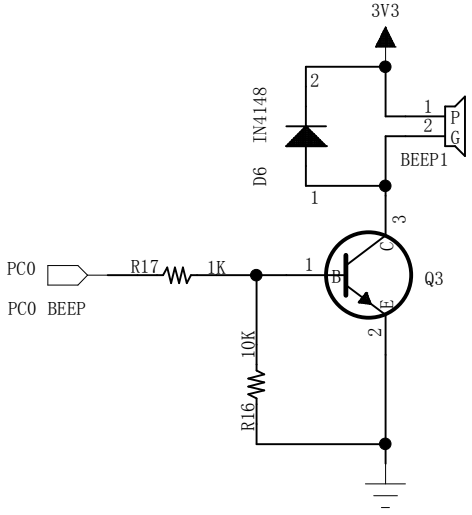
J2 J3 J9 J16组合成一个 2x4P 的排针

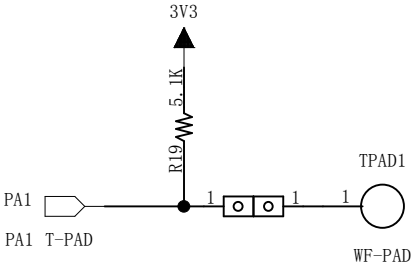



贴片滑动变阻器

## DHT11/DS18B20接口



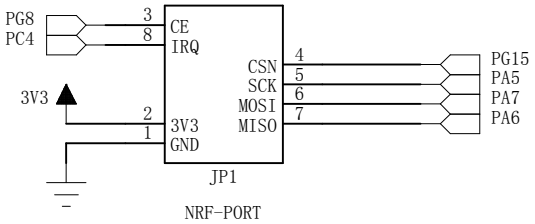



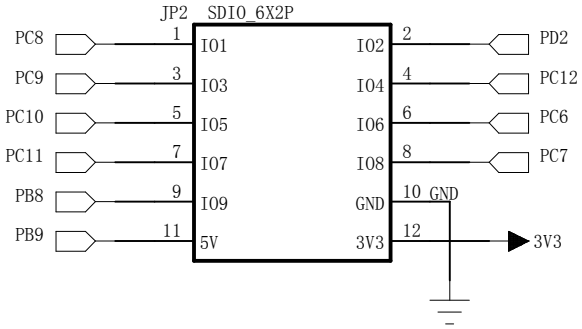

电容按键

程序上用的是ADC的捕获功能

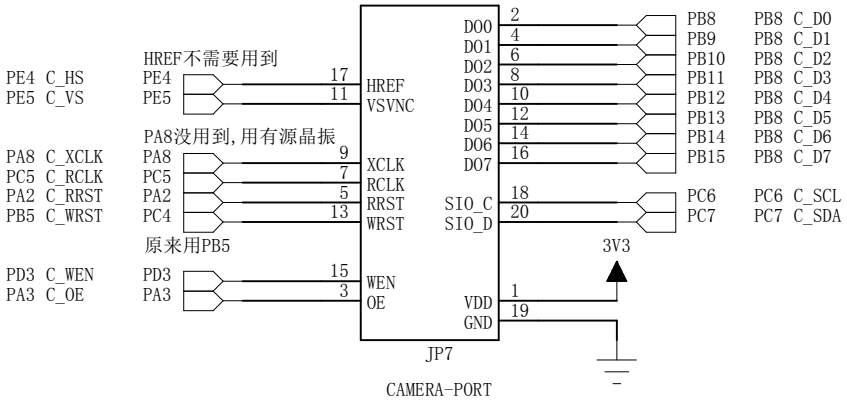
## NRF24L01接口



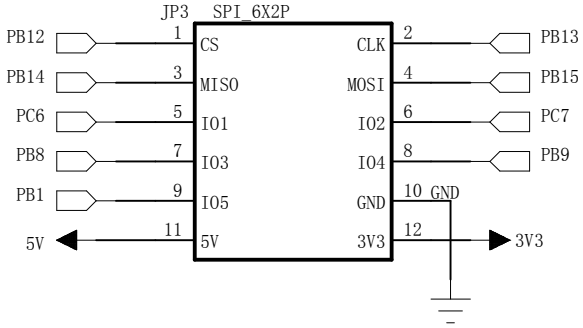

## SDIO接口



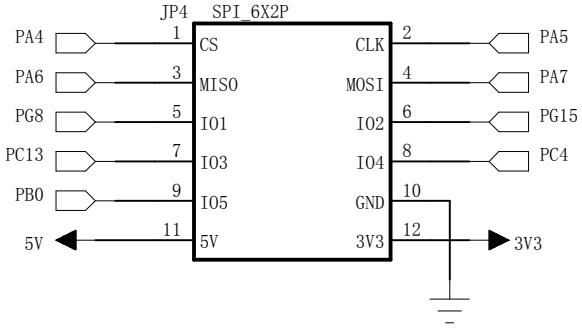

## 摄像头接口




## SPI2/I2S接口

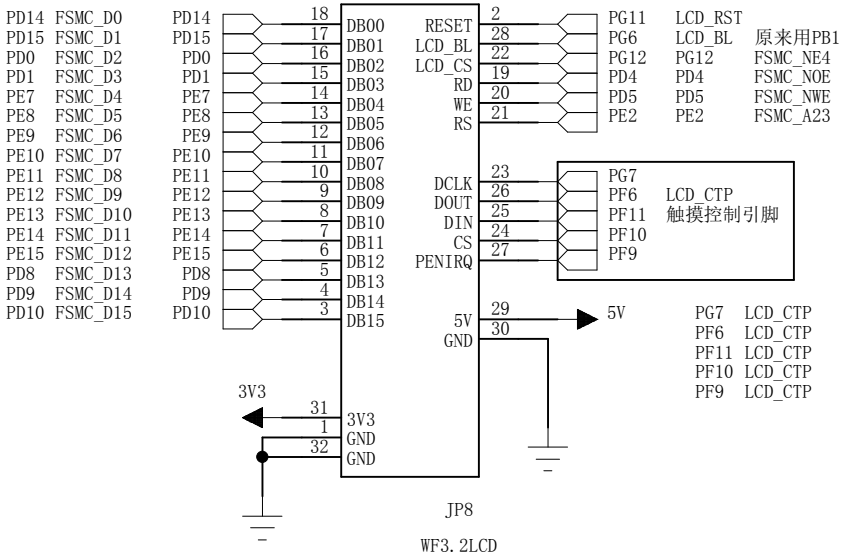



## SPI1接口

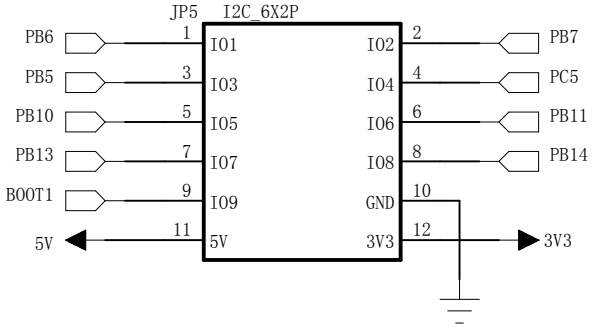


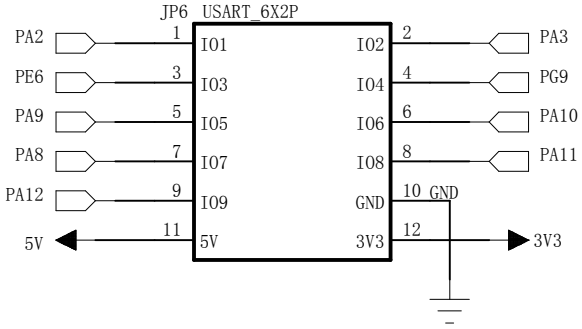

## 液晶接口

## 支持3.2寸/5寸液晶




## I2C1 / 2 接口




## UART1/ 2 接口