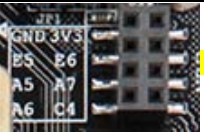


Port	Color Code
A	
B	
C	
D	
E	

Last Update
04-Mar-21



GND 3V3

C5 C6

A5 A7

A6 C4

**ON TOP RIGHT, NRF PORT
ERRTA ON THE PRINT
ON THE BOARD
If showed E5 E6,
should be C5 C6**


Function	Device	Port	Pin	Hardware Config
Button	KEY1	A	0	External Pulled Low
	KEY2	C	13	External Pulled Low
C_Key	T_CAP	A	1	External Pulled Up
		D	14	LCD data bus 0
		D	15	LCD data bus 1
		D	0	LCD data bus 2
		D	1	LCD data bus 3
		E	7	LCD data bus 4
		E	8	LCD data bus 5
		E	9	LCD data bus 6
		E	10	LCD data bus 7
		E	11	LCD data bus 8
TFT	LCD Display	E	12	LCD data bus 9
		E	13	LCD data bus 10
		E	14	LCD data bus 11
		E	15	LCD data bus 12
		D	8	LCD data bus 13
		D	9	LCD data bus 14
		D	10	LCD data bus 15
		E	1	LCD Reset
		D	12	LCD Backlight
		D	7	LCD ~Select
LCD Touch	LCD Touch	D	4	LCD ~Output Enable
		D	5	LCD ~Write Enable
		D	11	LCD CMD or Data
		E	0	LCD Touch CLK
		E	3	LCD Touch Dout
		E	2	LCD Touch Din
		D	13	LCD Touch Select
		E	4	LCD Touch IRQ

Function	Device	Port	Pin	Hardware Config
Color LED	LED R	B	5	active low
	LED G	B	0	active low
	LED B	B	1	active low
SDIO	SD D0	C	8	SD DB0 Pulled Up
	SD D1	C	9	SD DB1 Pulled Up
	SD D2	C	10	SD DB2 Pulled Up
	SD D3	C	11	SD DB3 Pulled Up
	SD CLK	C	12	SD Clock
	SD CMD	D	2	SD Cmd Pulled Up
USB	USB-	A	11	-
	USB+	A	12	-
	USB_EN	D	6	USB Device Enable
UART	USART1_TX	A	9	-
	USART1_RX	A	10	-
VR	Variable Resistor	C	1	-
Buzzer	Buzzer	A	8	-
IIC (EEPROM)	I2C1_SCL	B	6	External Pulled Up
	I2C1_SDA	B	7	External Pulled Up
8MB Flash	SPI Flash CS	C	0	External Pulled Up
	SPI Flash CLK	A	5	-
	SPI Flash MOSI	A	7	-
	SPI Flash MISO	A	6	-
OSC32	OSC32IN	C	14	32k Oscillator
	OSC32OUT	C	15	32k Oscillator

Function	Device	Port	Pin	Hardware Config
Camera	Camera data bus 0	B	8	WIFI_EN
	Camera data bus 1	B	9	WIFI_RST
	Camera data bus 2	B	10	WIFI_URxD
	Camera data bus 3	B	11	WIFI_UTxD
	Camera data bus 4	B	12	-
	Camera data bus 5	B	13	-
	Camera data bus 6	B	14	-
	Camera data bus 7	B	15	-
	Camera control SCL	C	6	Open Drain
	Camera control SDA	C	7	Open Drain
	Camera control HS	C	2	-
	Camera control VS	C	3	-
	Camera FIFO XCLK	A	8	-
	Camera FIFO RCLK	C	5	-
	Camera FIFO RRST	A	2	-
IR	IR Data	E	5	External Pulled Up
	DHT11 Data	E	6	External Pulled Up
	BOOT1	B	2	GND
NC	Not Connected	A	4	-
SWD to JTAG	TDO	B	3	-
	NTRST	B	4	-
	TMS	A	13	To Debugger
	TCK	A	14	-
	TDI	A	15	-

Below pins are connected by removable jumpers by default,
the pin can be accessed by removing the corresponding jumper.

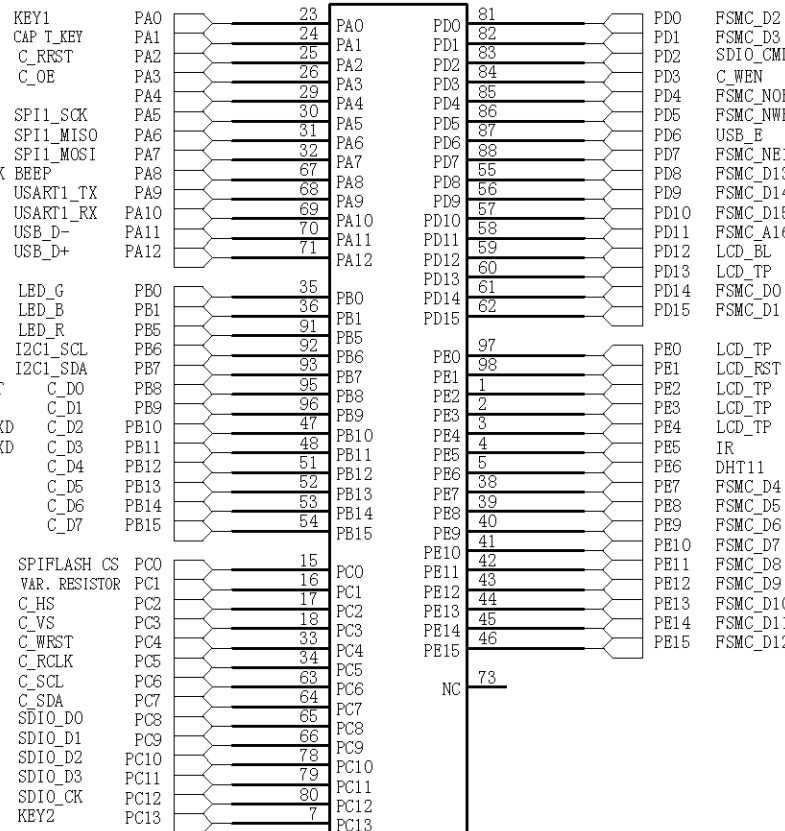
Function	Device	Port	Pin	Hardware Config
C_Key	T_CAP	A	1	External Pulled Up
VR	Variable Resistor	C	1	-
Buzzer	Buzzer	A	8	-
WIFI	WiFi Rx/D	B	10	WIFI_URxD
WIFI	WiFi Tx/D	B	11	WIFI_UTxD



**It is IMPORTANT for you to KEEP J17 as shown on LEFT.
ANY CHANGE OF JUMPERS WILL RESULT FAIL TO DOWNLOAD
PLEASE ALTER IT UNLESS YOU KNOW WHAT YOU ARE DOING.**

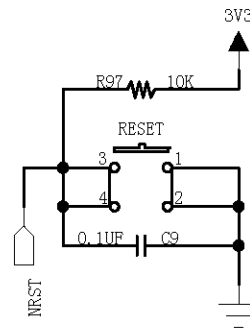
MCU_GPIO_A

C_: Stands For Camera

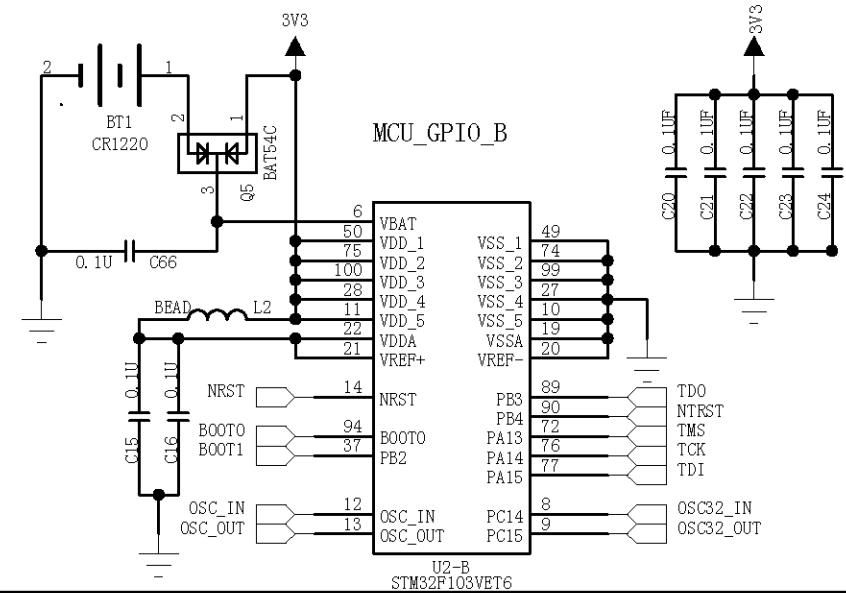


U2-A
STM32F103VET6

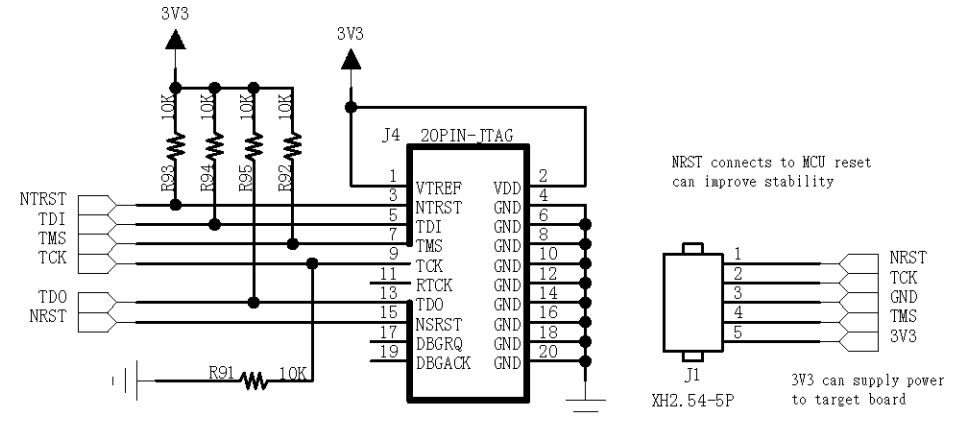
RESET CIRCUIT



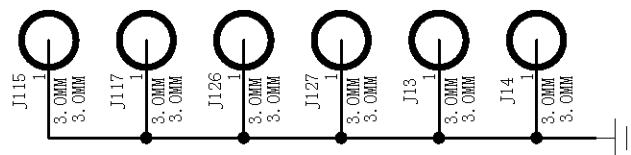
MCU_GPIO_B



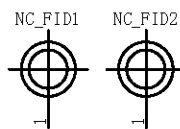
JTAG



3M SCREW HOLE



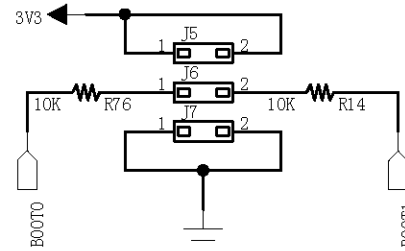
MARK



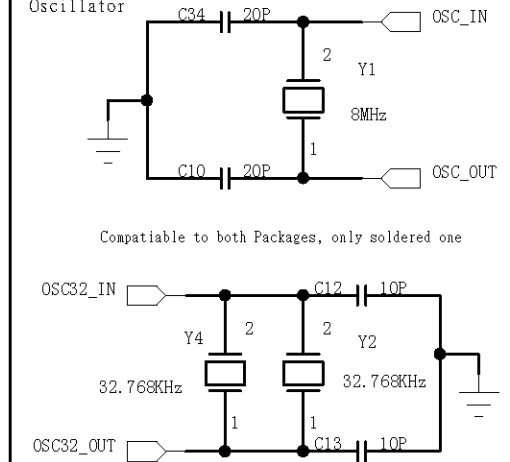
BOOT SETTING

BOOT0	BOOT1	BOOT MODE
0	X	MAIN FLASH MEMORY
1	0	SYSTEM MEMORY/ISP
1	1	EMBEDDED SRAM

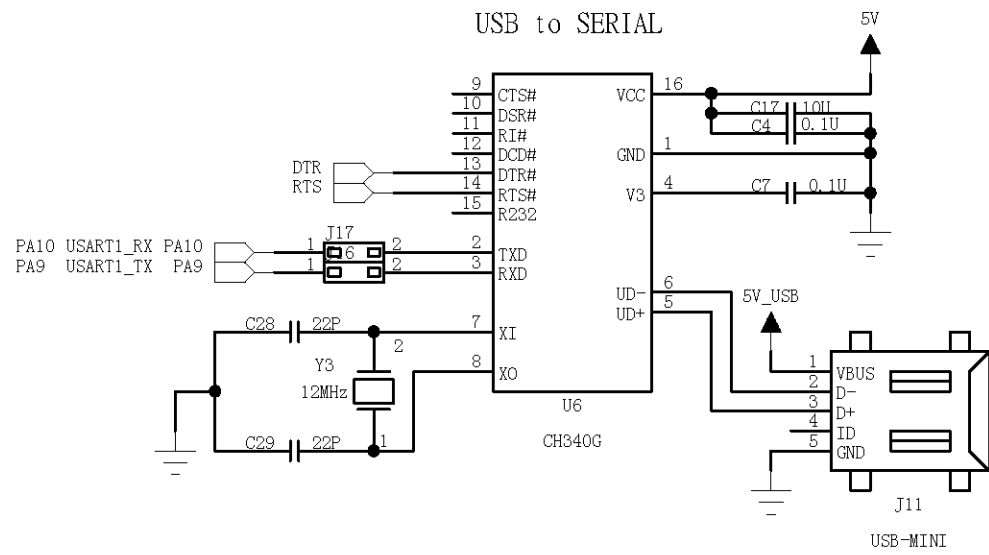
DEFAULT IS MAIN FLASH,
BOOT 0 & 1 CONNECT TO GND



Oscillator

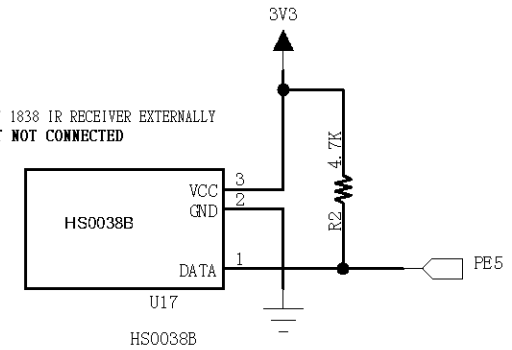


USB to SERIAL

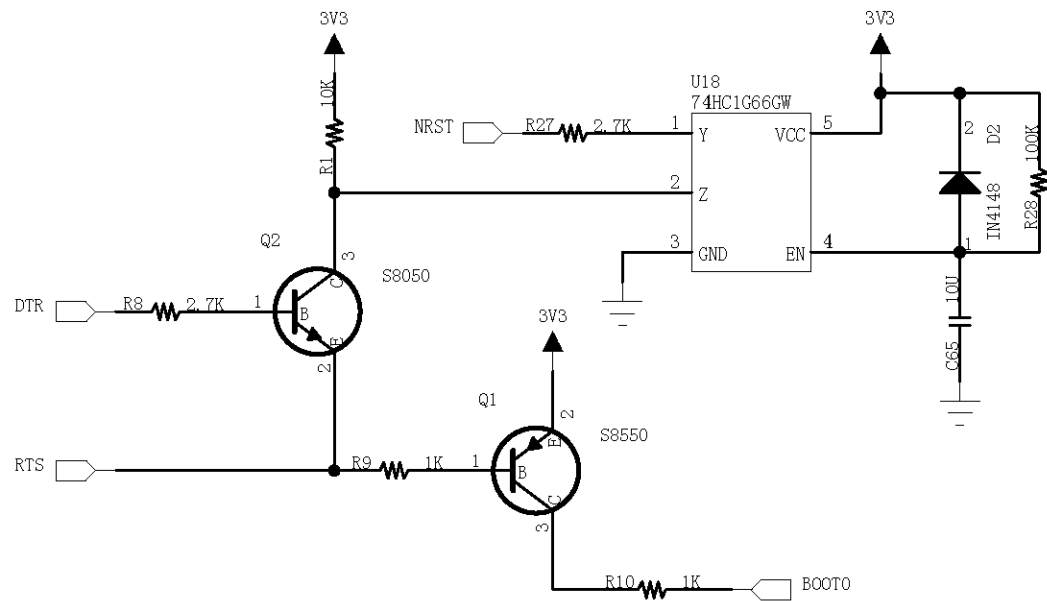


IR CONNECTOR

CAN CONNECT 1838 IR RECEIVER EXTERNALLY
BY DEFAULT NOT CONNECTED

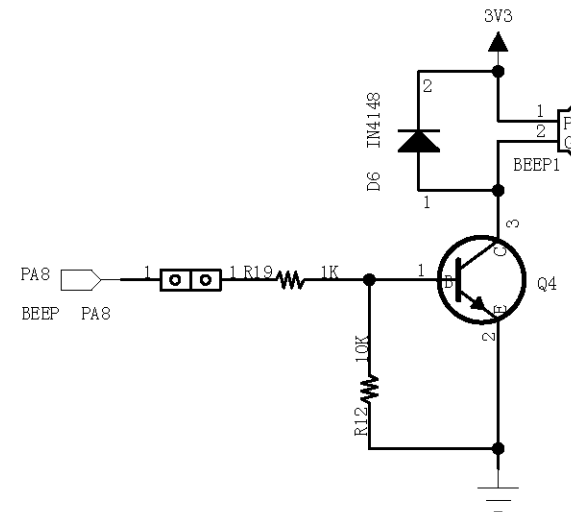
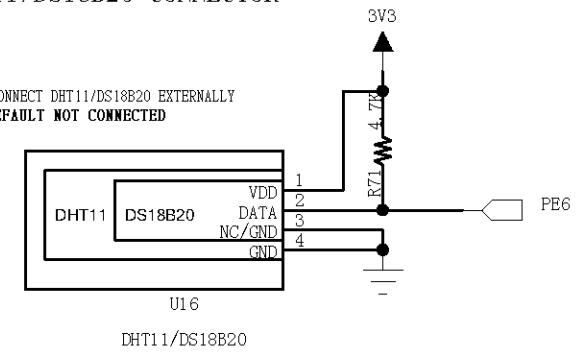


ISP ONE KEY DOWNLOAD CIRCUIT



DHT11/DS18B20 CONNECTOR

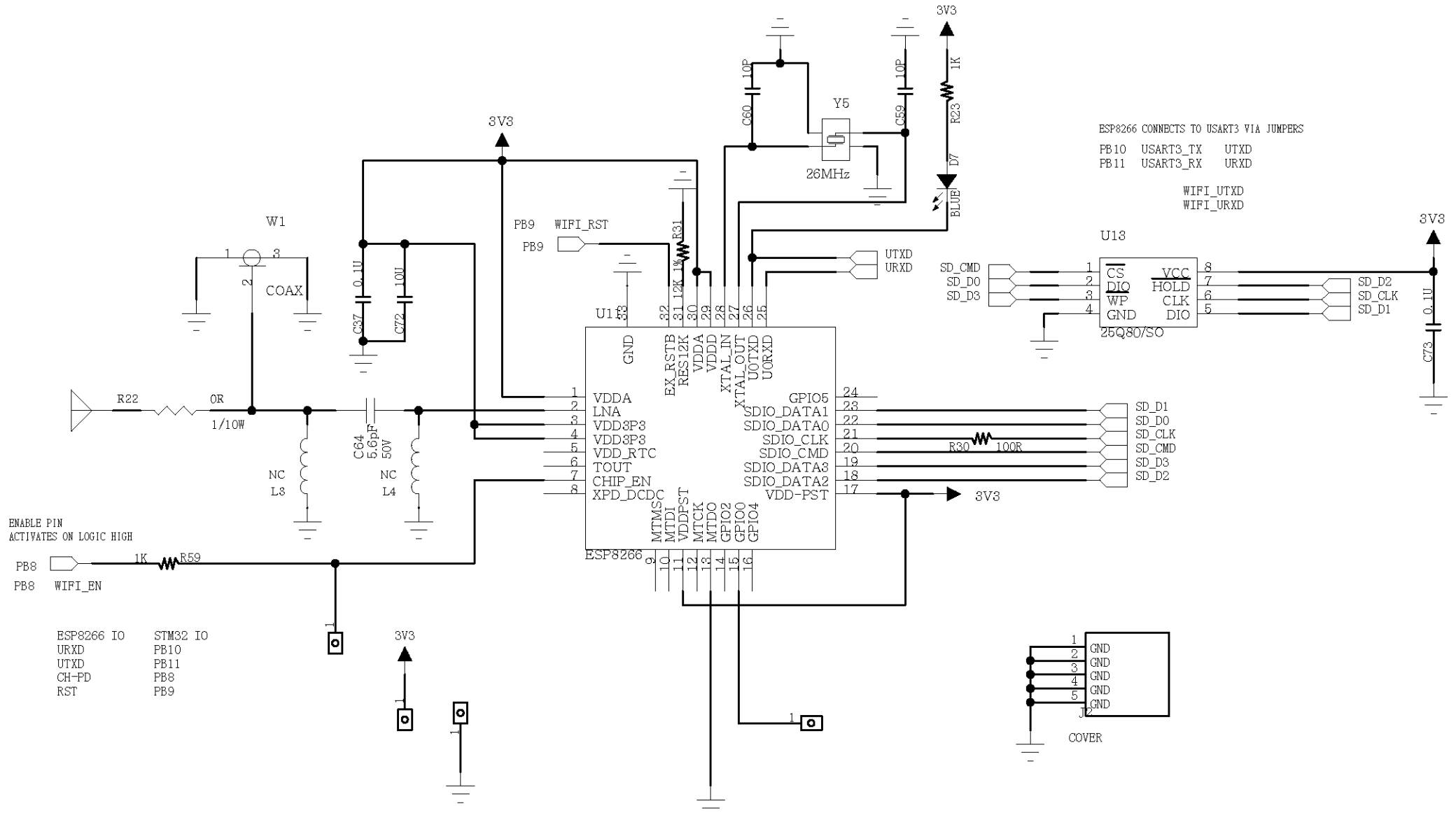
CAN CONNECT DHT11/DS18B20 EXTERNALLY
BY DEFAULT NOT CONNECTED



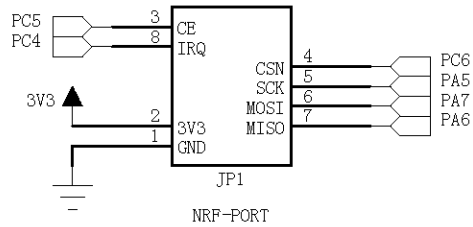
WIFI ESP8266

Note

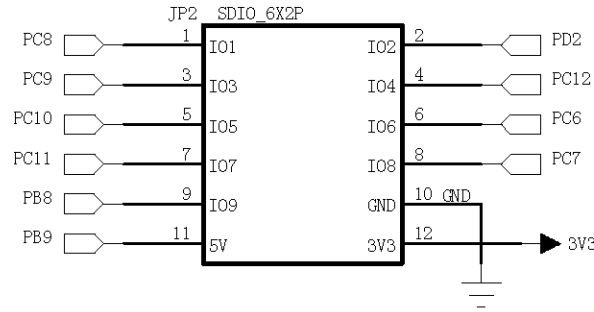
1. ESP8266 is designed for transferring small amount of data (e.g. less than 200 bytes)
2. The board is tested at a distance of 10-meter



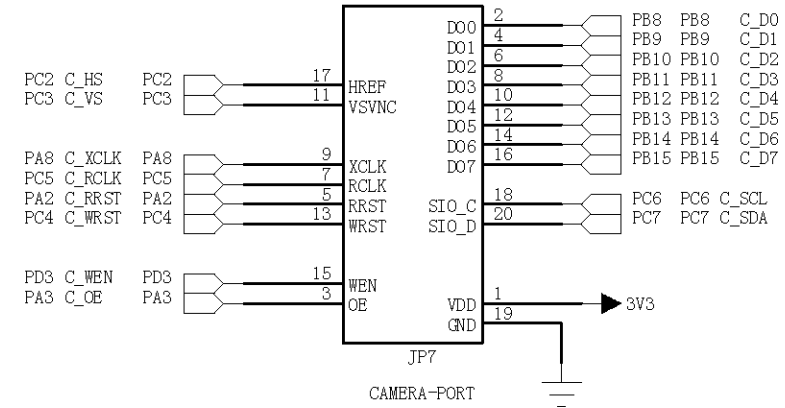
NRF24L01



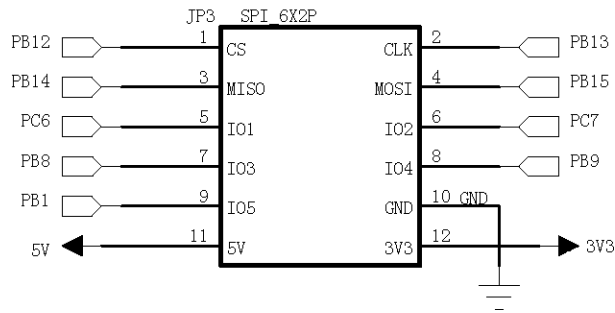
SDIO



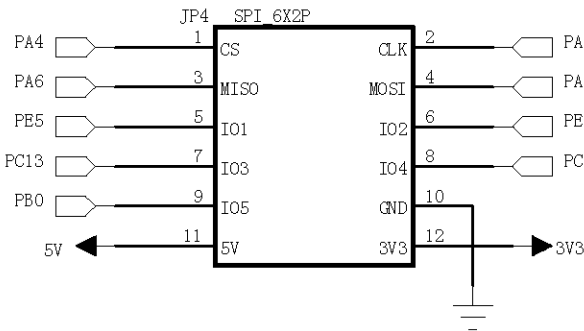
CAMERA



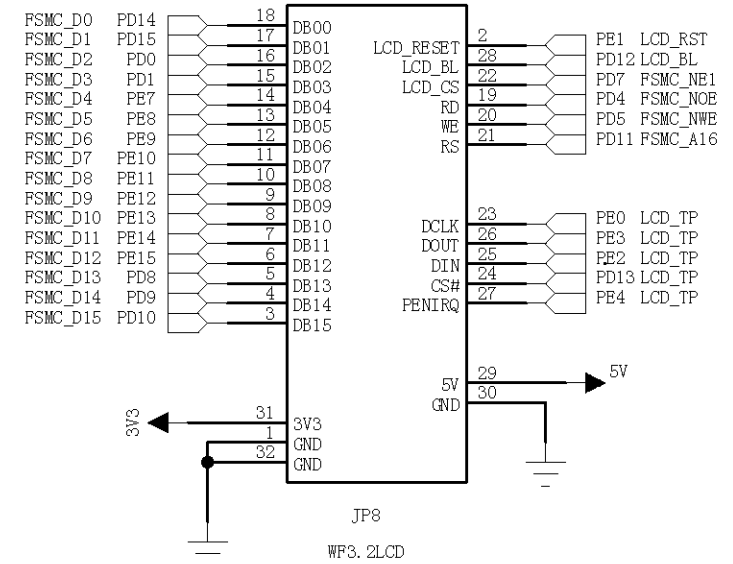
SPI2/I2S



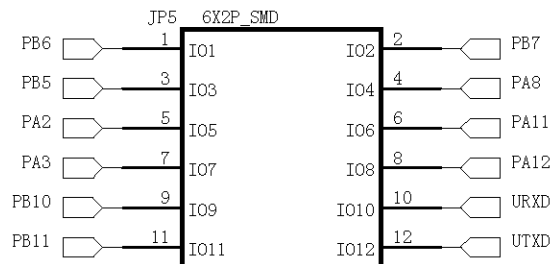
SPI1



LCD CONNECTOR

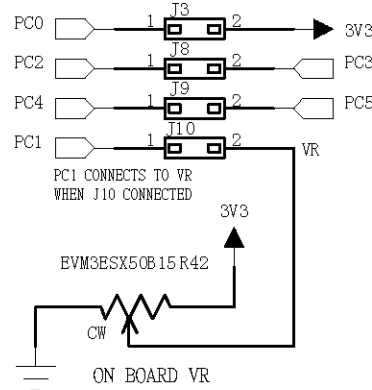


I2C1/2-USART2/3

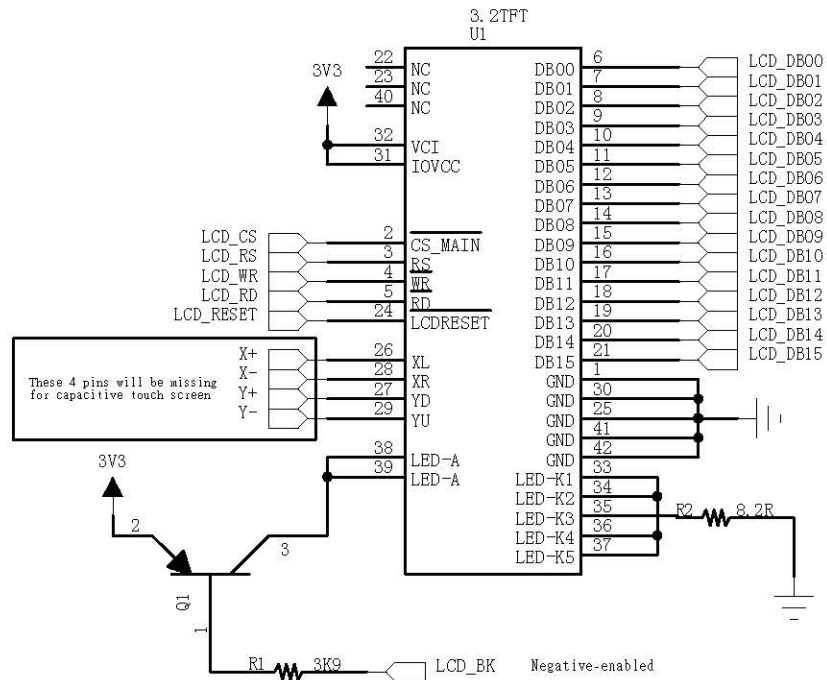


URXD UTXD for ESP8266
PB10: USART3_TXD
PB11: USART3_RXD
BY DEFAULT 9 10 11 12 CONNECTED BY JUMPERS

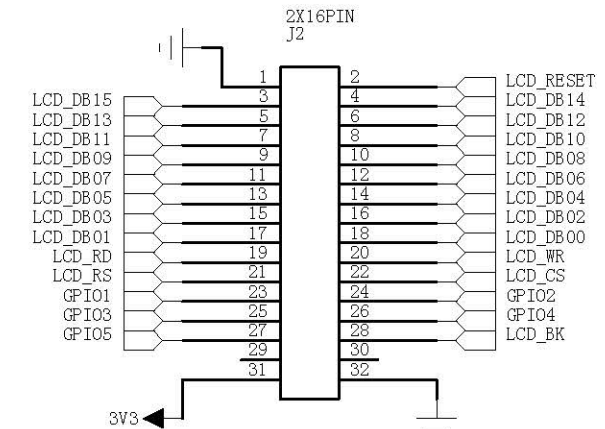
ADC



3.2 inch TFT

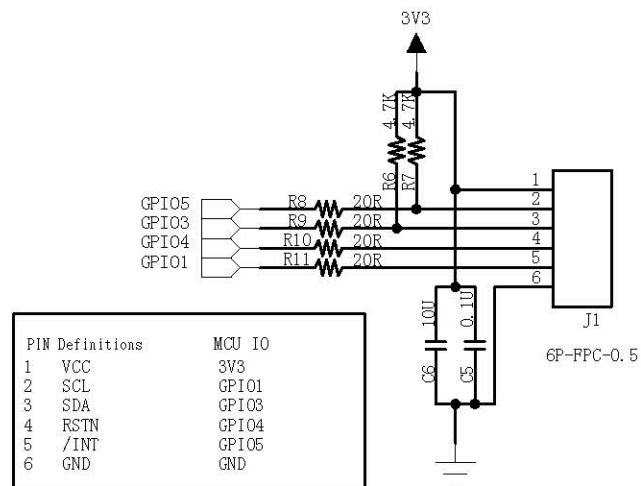


2X16PIN Connector



3.2 inch Capacitive Touch Screen

No need to solder this part if resistive touch screen is used



Resistive Touch Screen Controller

No need to solder this part if capacitive touch screen is used

