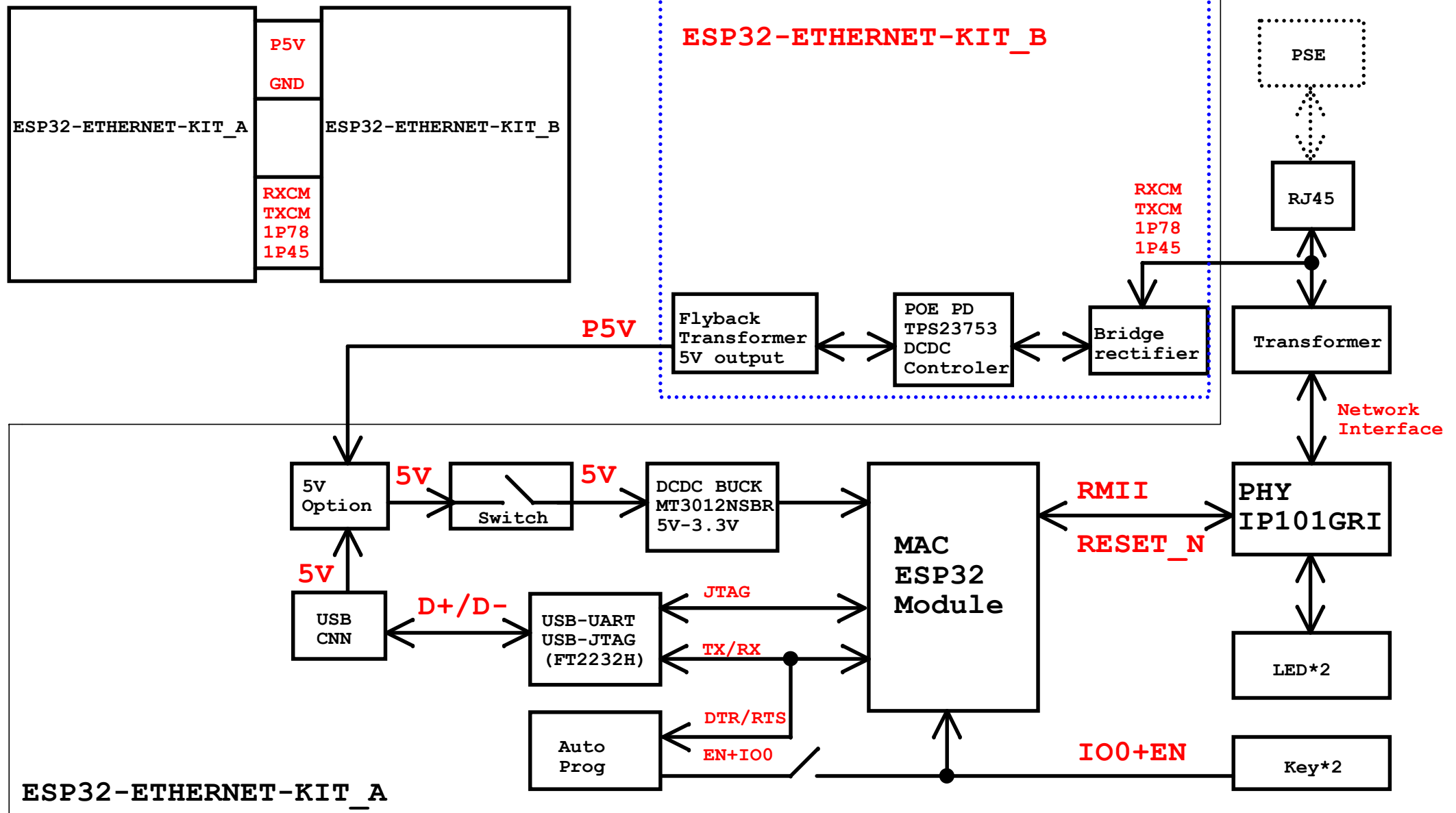
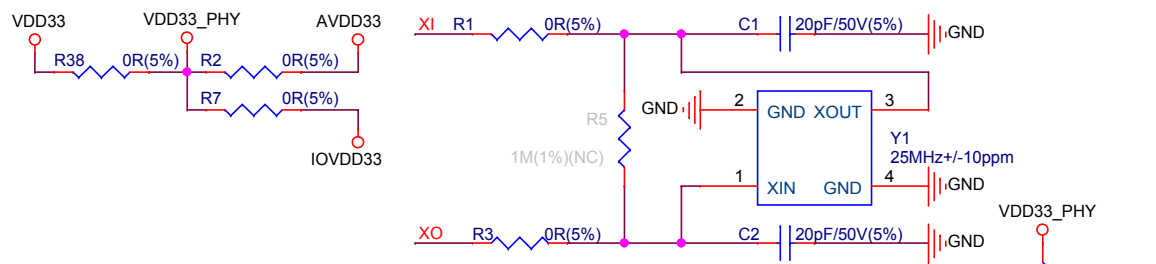
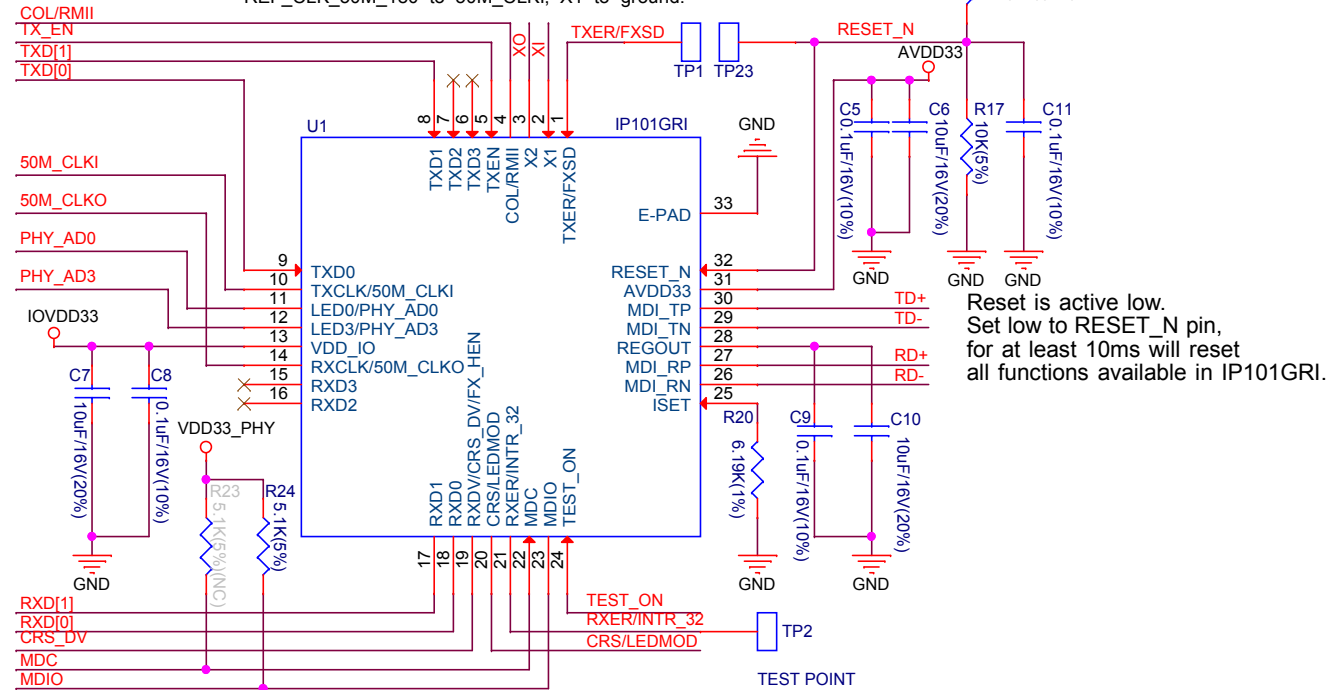


# System Block:

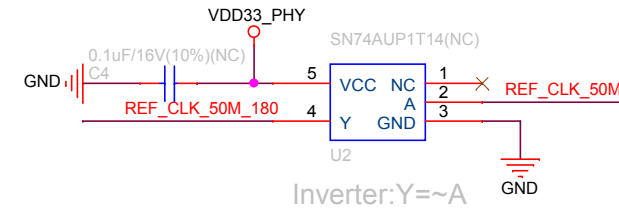
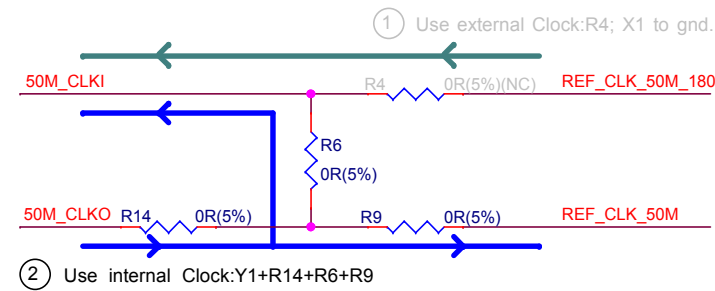




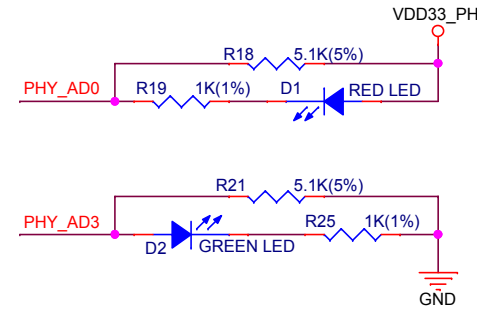
25MHz Crystal(Y1) for RMII.  
REF\_CLK\_50M\_180 to 50M\_CLKI, X1 to ground.



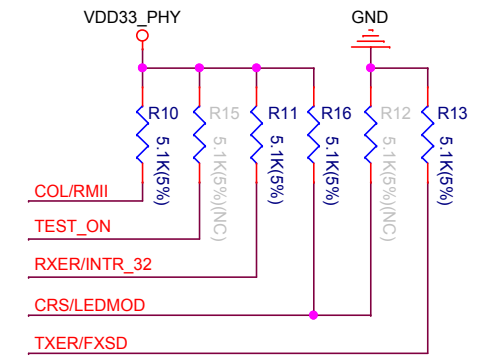
Reset is active low.  
Set low to RESET\_N pin,  
for at least 10ms will reset  
all functions available in IP101GRI.



DEFAULT : 0XX1



### Mode Configuration:



COL/RMII  
0: MII Mode  
1: RMII Mode  
Default: RMII Mode

TEST\_ON  
1: Enable Test mode.  
NC: Normal operation  
Default: Normal operation

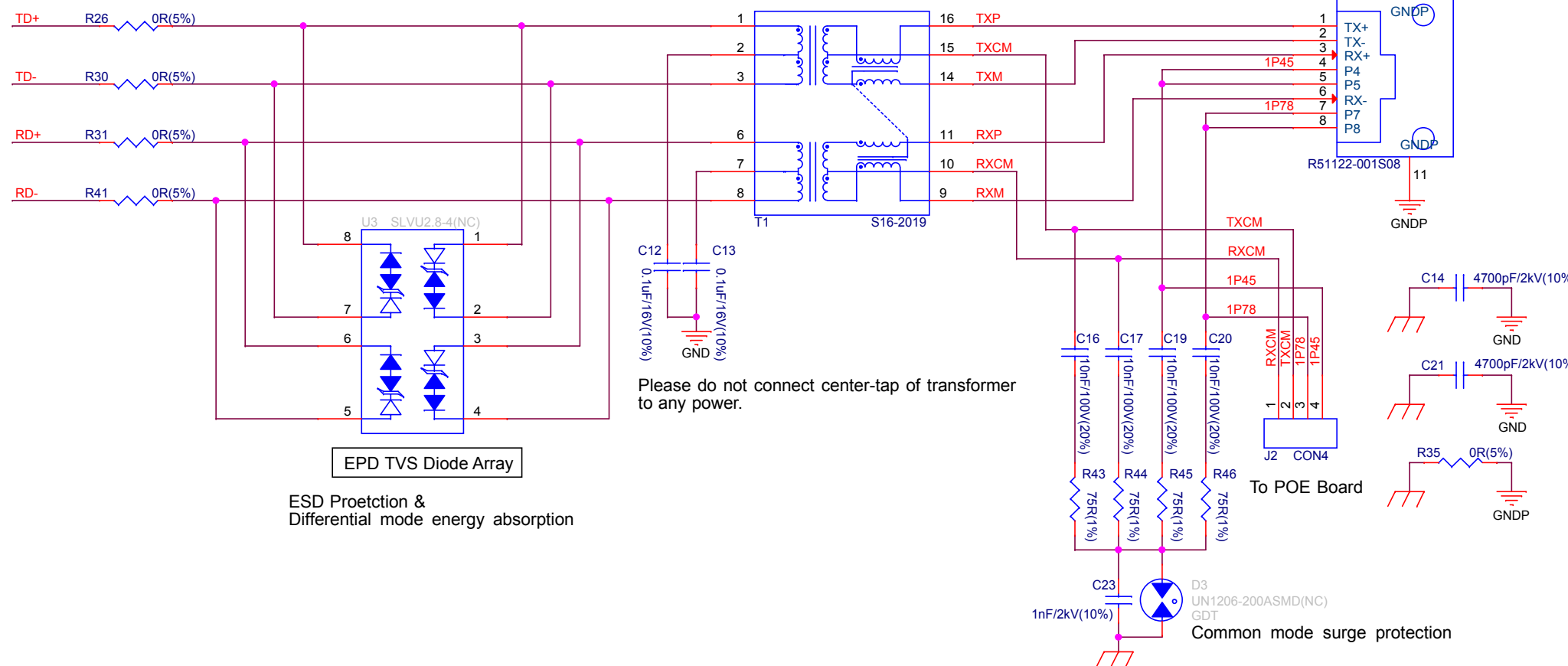
RXER/INTR32  
1: INTR funtion  
0: RXER funtion  
Default: INTR funtion

CRS/LEDMOD  
1: LED mode 2  
0: LED mode 1  
Default: LED mode 2

TXER/FXSD  
1: FXSD  
0: TXER  
Default: TXER

### PHY

Built-in 49.9ohm resistors



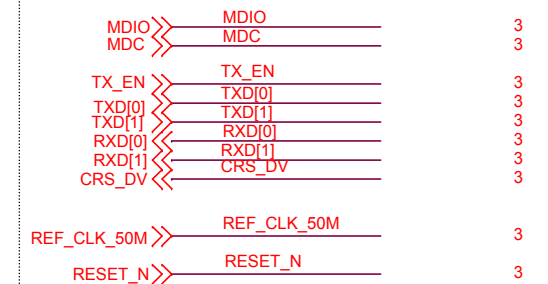
Please do not connect center-tap of transformer to any power.

ESD Protection & Differential mode energy absorption

Serial Management Interface:  
MDIO:GPIO18  
MDC:GPIO23

RMII:  
TX\_EN:GPIO21  
TXD[0]:GPIO19  
TXD[1]:GPIO22  
RXD[0]:GPIO25  
RXD[1]:GPIO26  
CRS\_DV:GPIO27

REF\_CLK\_50M:GPIO0  
RESET\_N:GPIO5



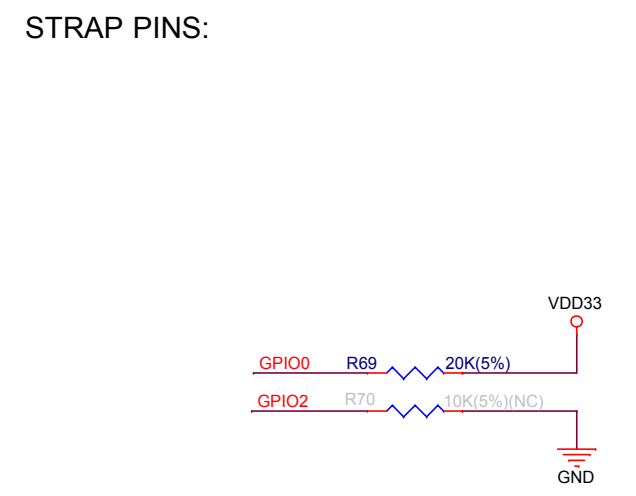
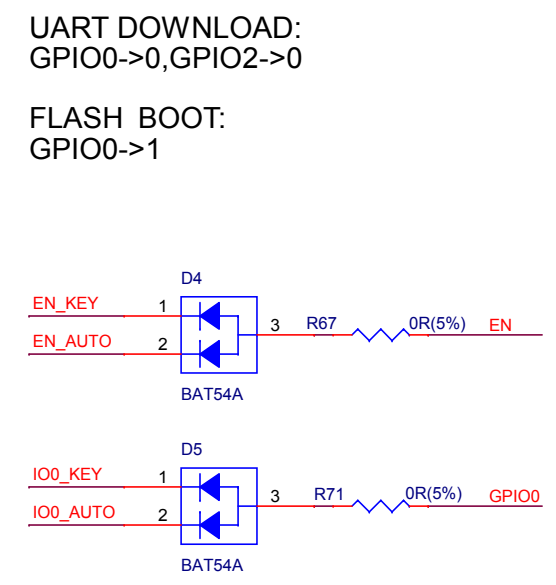
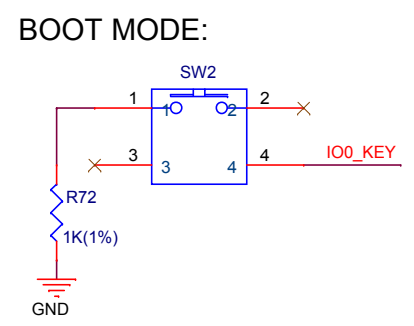
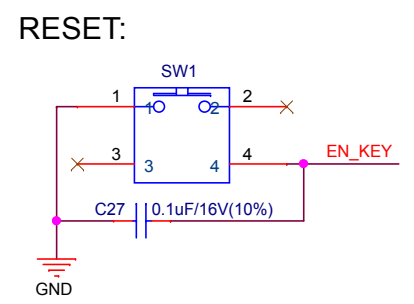
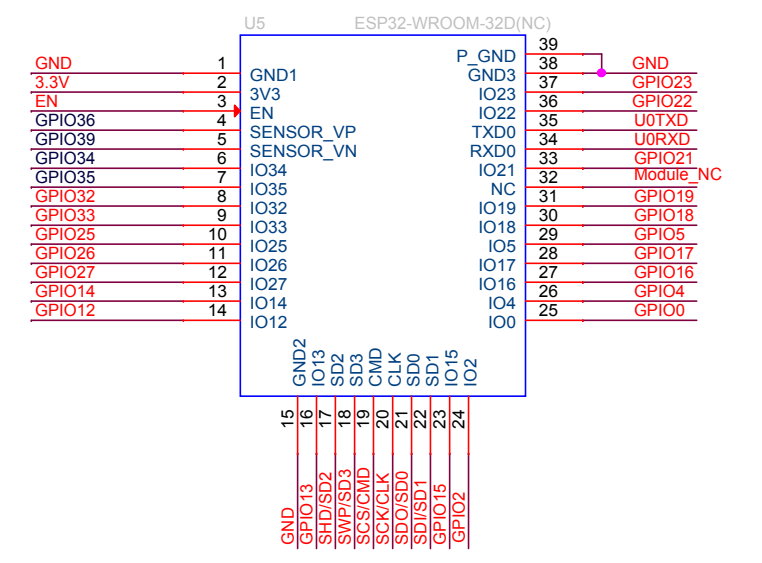
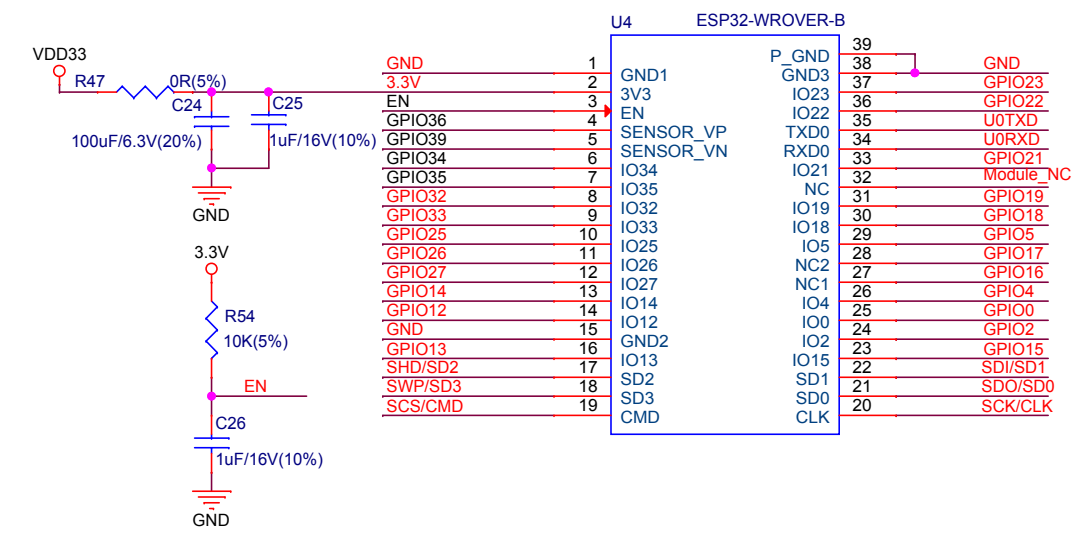
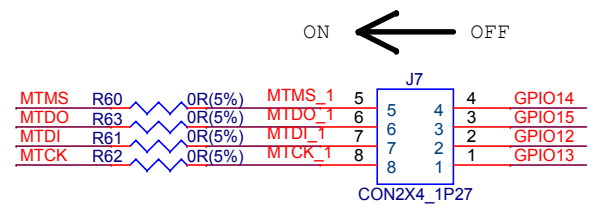
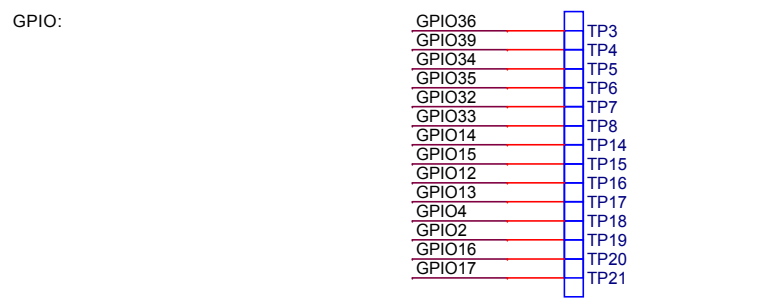
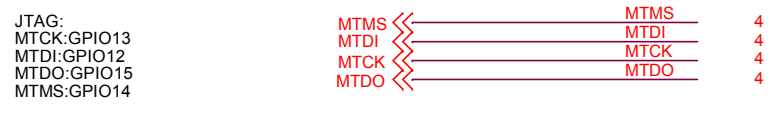
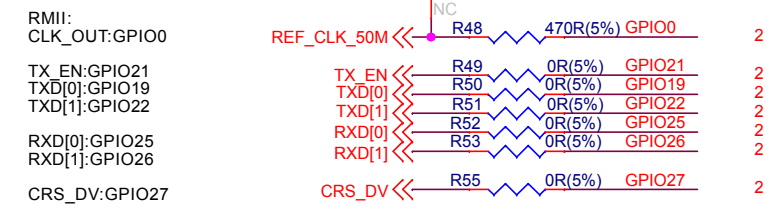
## ESPRESSIF

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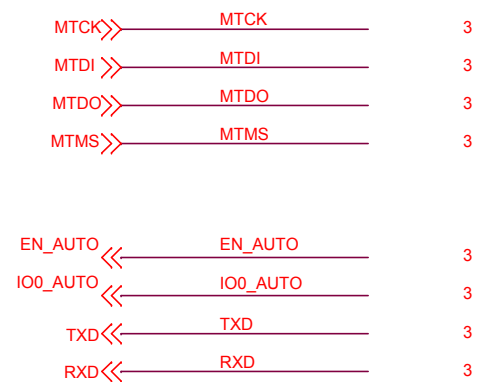
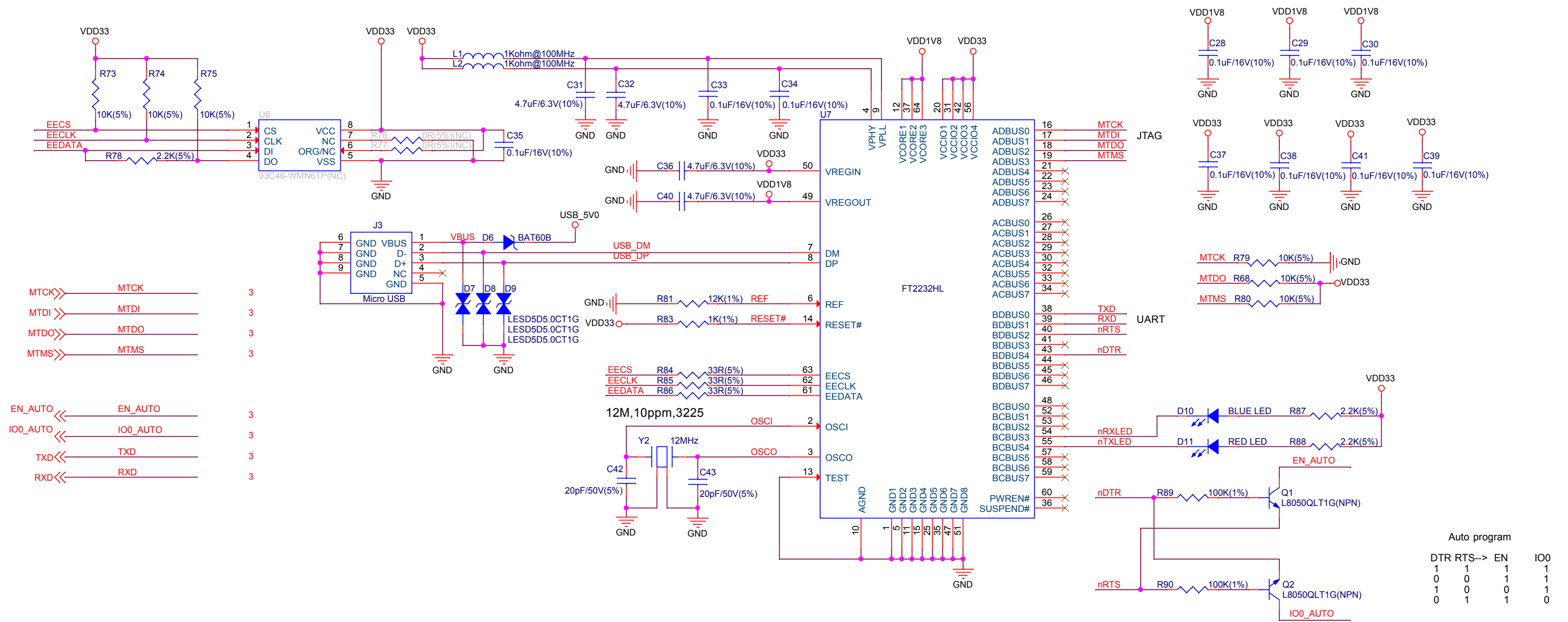
Title  
<ESP32-Ethernet-Kit\_A>

Size	Document Number	Rev
A3	<02: PHY_IP101GRI>	V1.1

Date: Thursday, July 11, 2019 Sheet 2 of 4

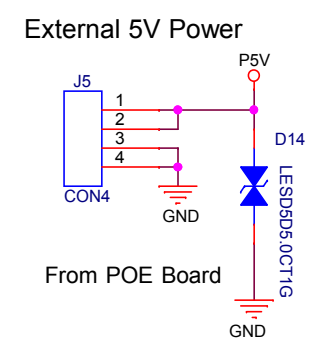


Please place these caps close to VCORE/VCCIO

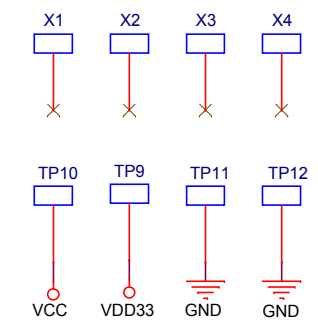
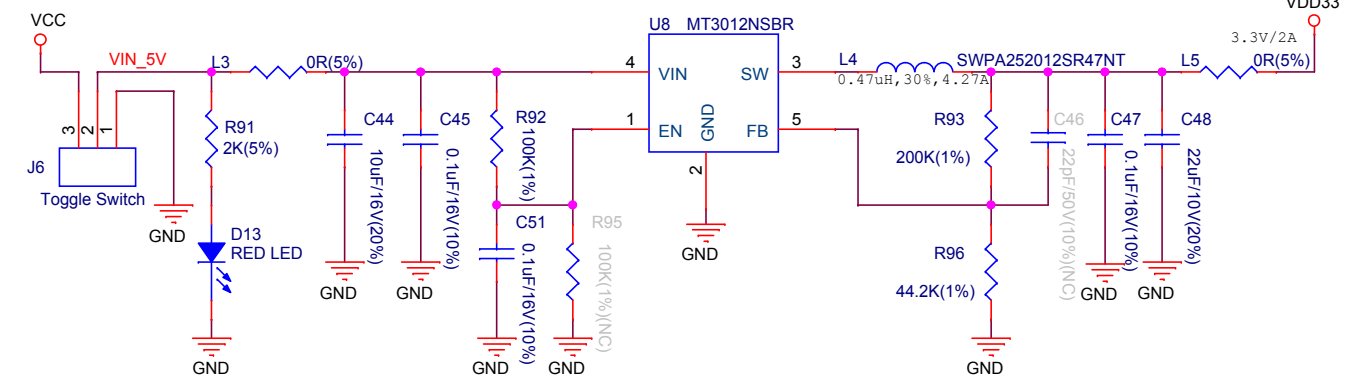
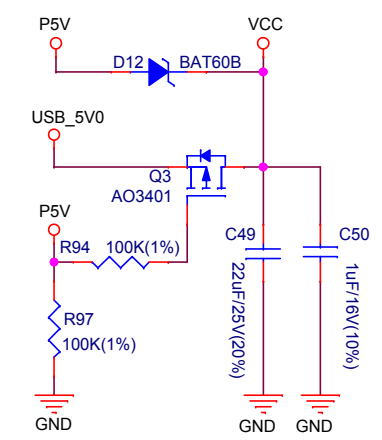


Auto program

DTR	RTS-->	EN	IO0
1	1	1	1
0	0	1	1
1	0	0	1
0	1	1	0



1. If POE board is plugged in, VCC will be only powered by POE.  
2. Otherwise, VCC is powered by USB.



**ESPRESSIF**  
 乐鑫信息科技(上海)股份有限公司  
 Title: <ESP32-Ethernet-Kit\_A>  
 Size: A3 | Document Number: <04 : UART&JTAG Debug> | Rev: V1.1  
 Date: Thursday, July 11, 2019 | Sheet: 4 of 4