

**PCB**

**Power Module**

12V-->3.3V  
 12V-->1.15V  
 3.3V-->2.5V

EEPROM IP211 SDRAM

MII

**IP1829A**  
**256-LQFP**

RGMII **AR8033**

RGMII **AR8033**

RGMII **AR8033**

RGMII **AR8033**

Transformer Transformer Transformer Transformer Transformer Transformer

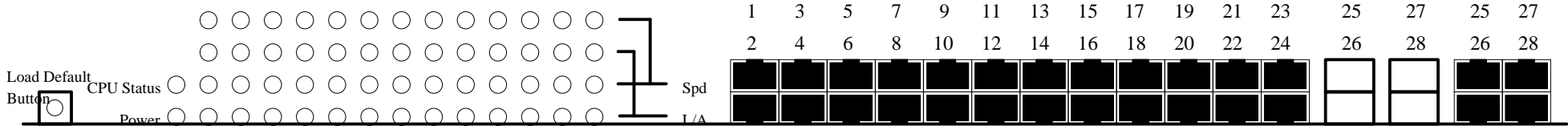
SFP x 2 SFP x 2 Transformer

4 Port RJ45

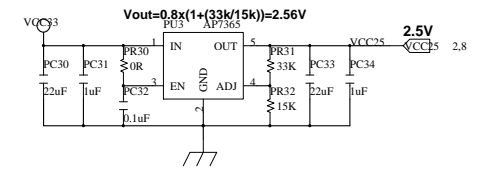
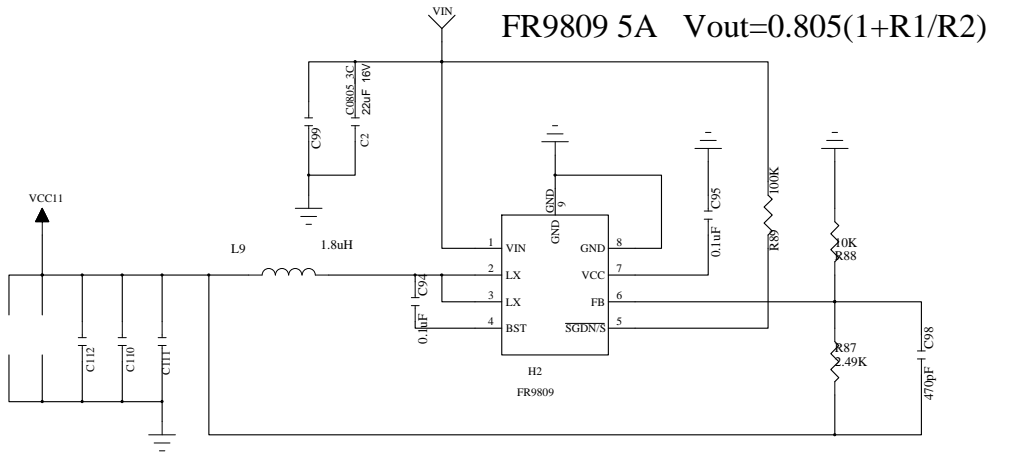
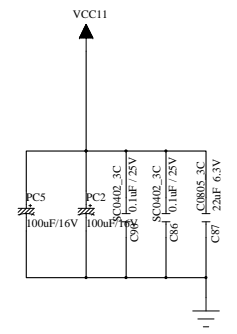
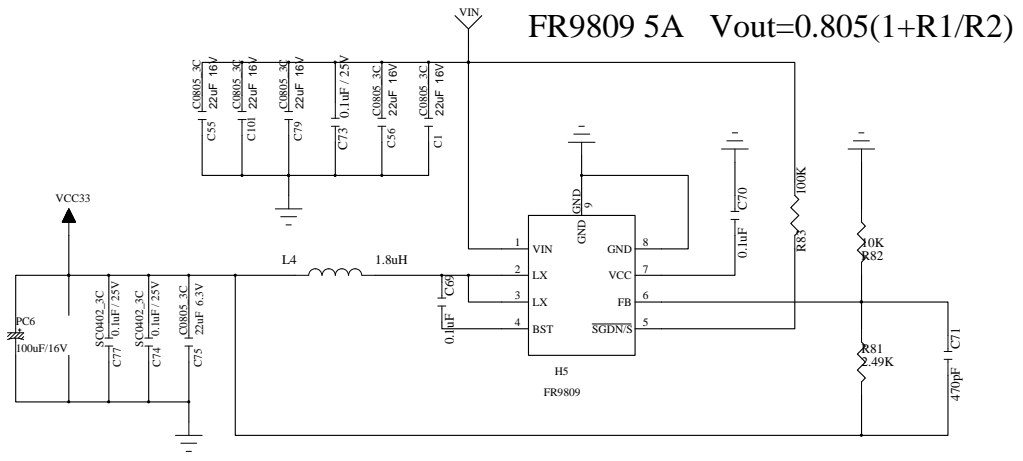
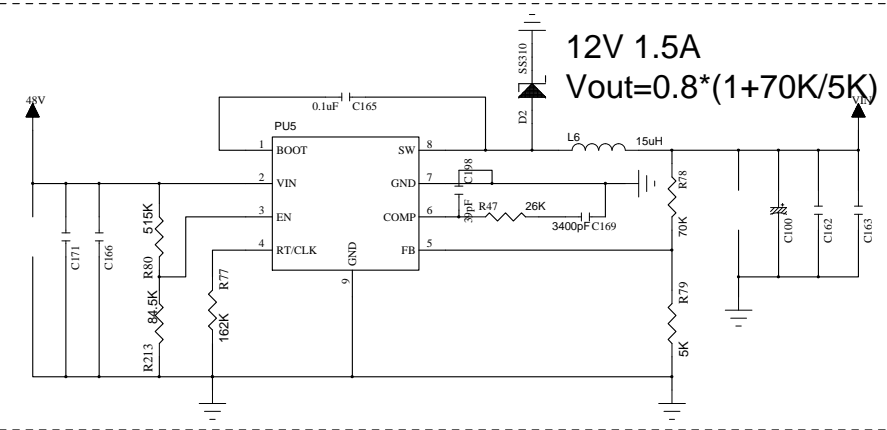
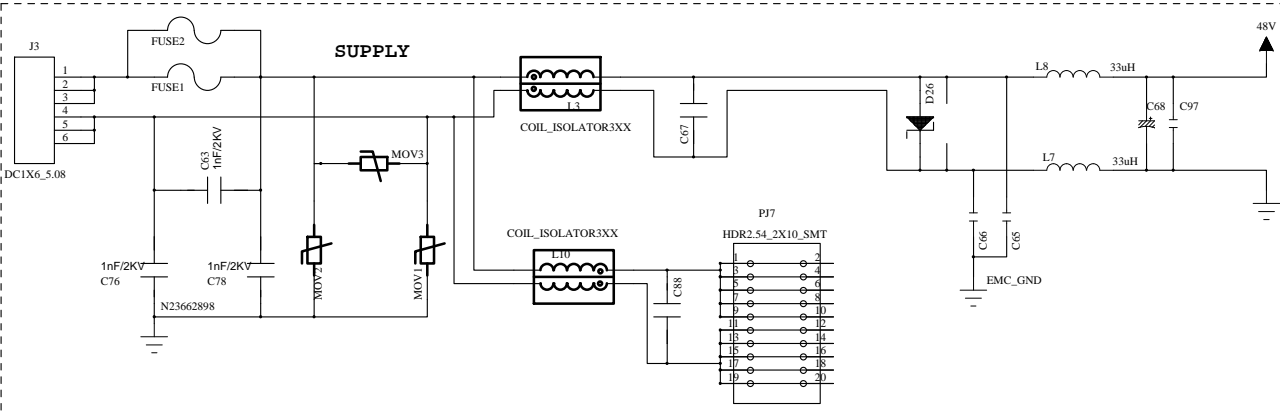
**24 x 10/100 TP Port RJ45**

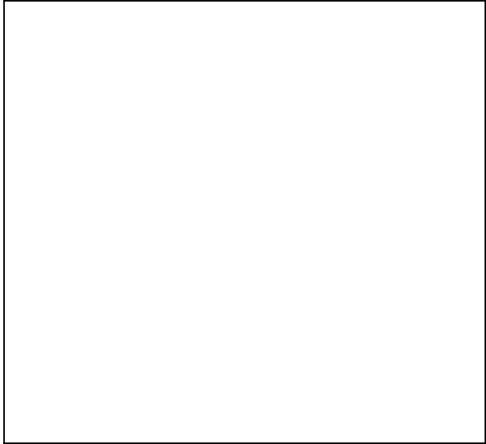
**LED Module**

IP403

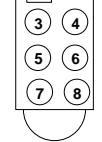


<b>IC plus corp.</b>		
Title <b>IP1829A Smart Board - 24FE(TP)+4GE(Combo) - Block Diagram</b>		
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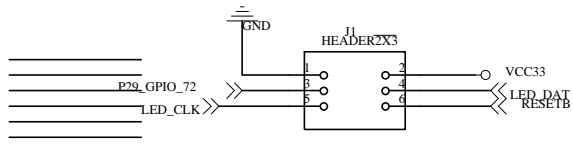




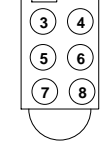
4 LED footprint  
(Top view)



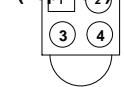
2 LED footprint  
(Top view)



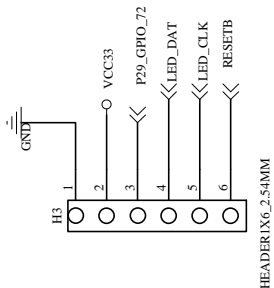
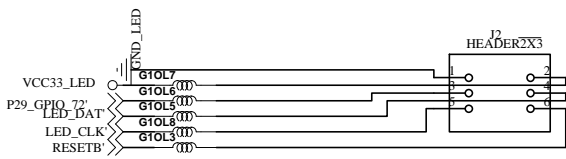
4 LED footprint  
(Top view)



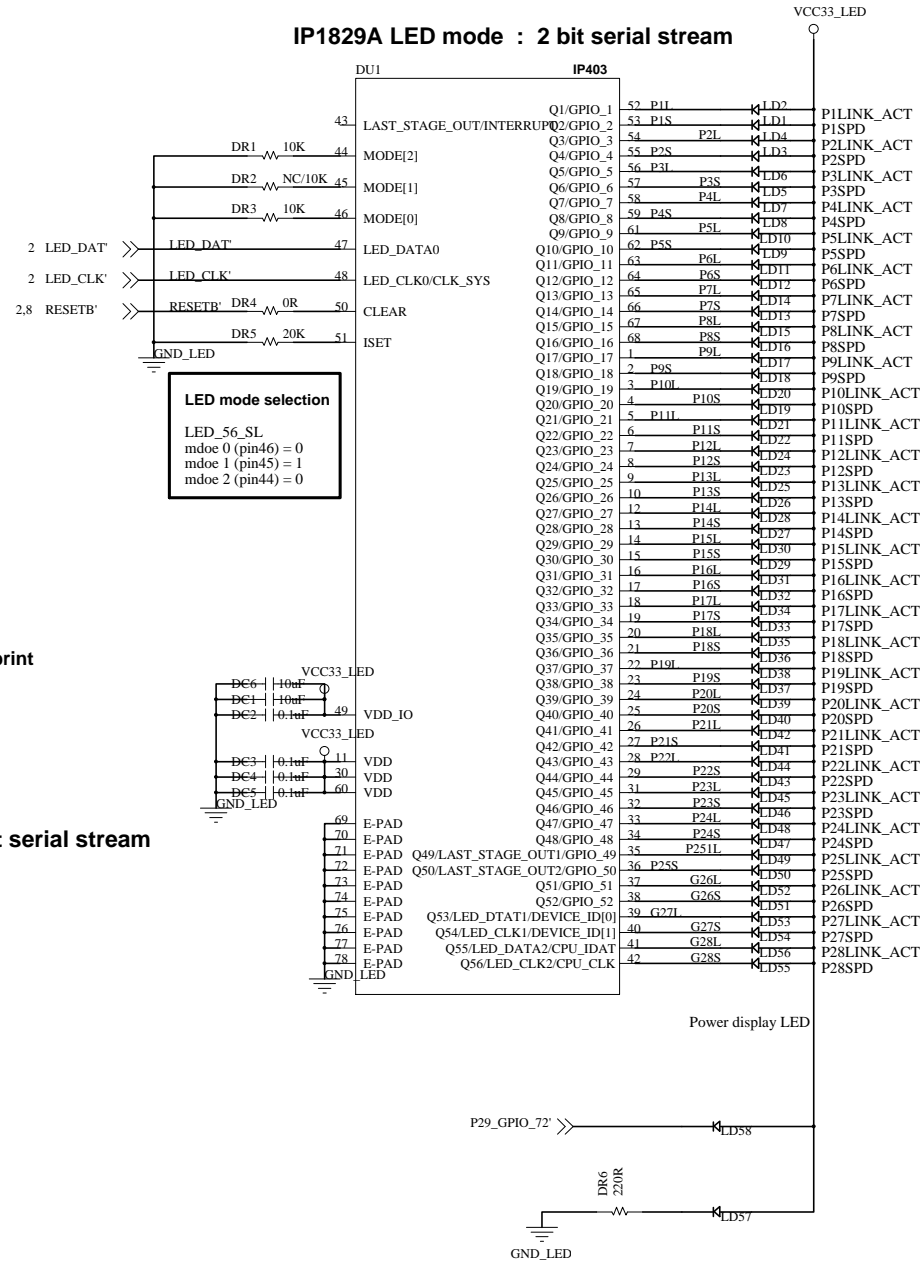
2 LED footprint  
(Top view)

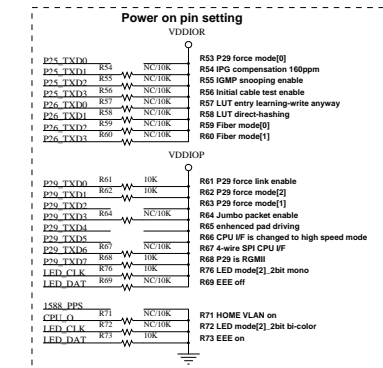
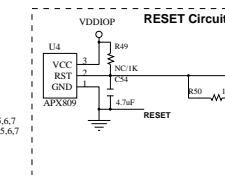
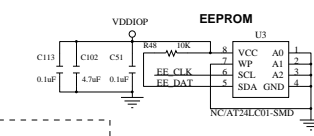
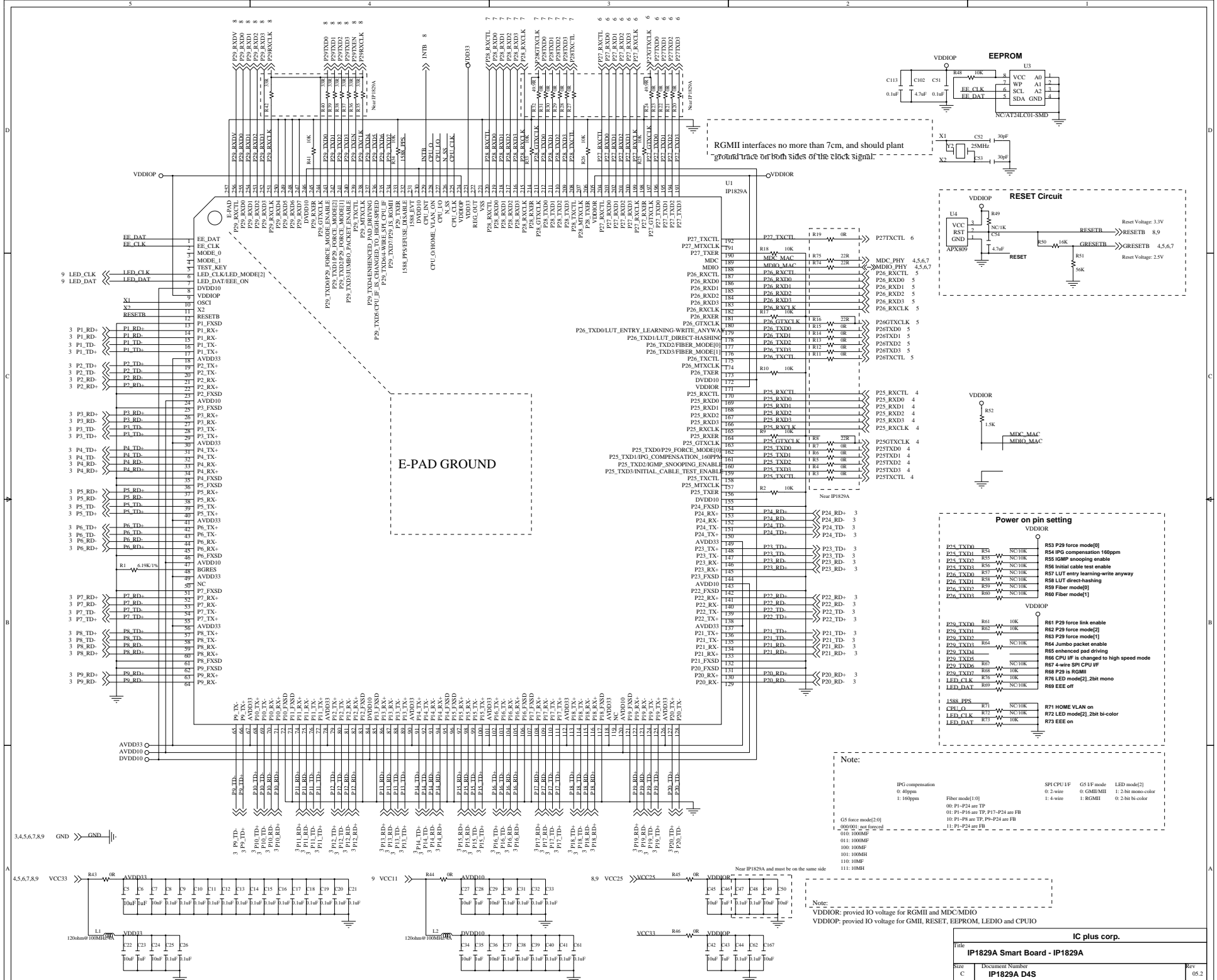


IP1829A LED mode : 2 bit serial stream



IP1829A LED mode : 2 bit serial stream

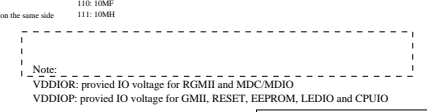


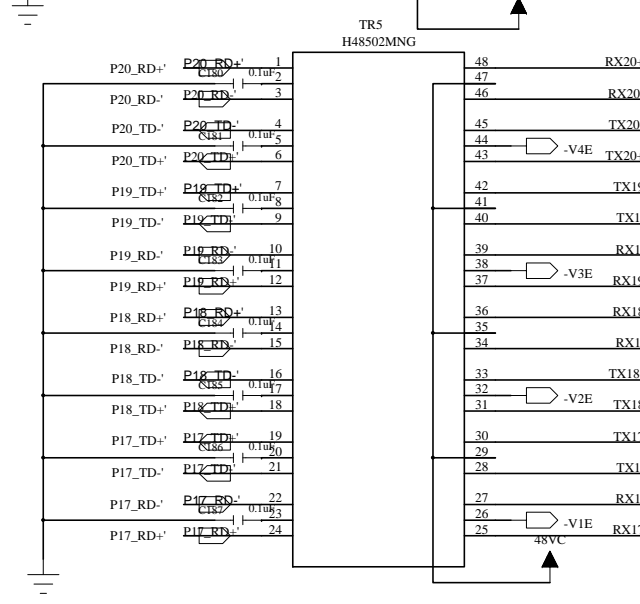
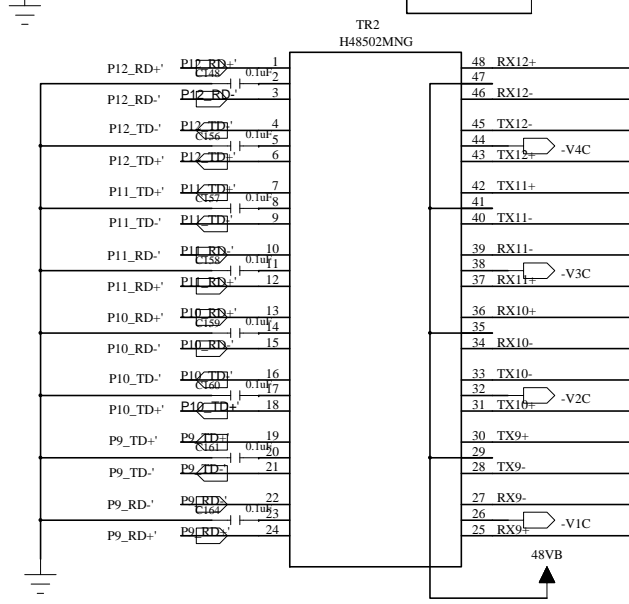
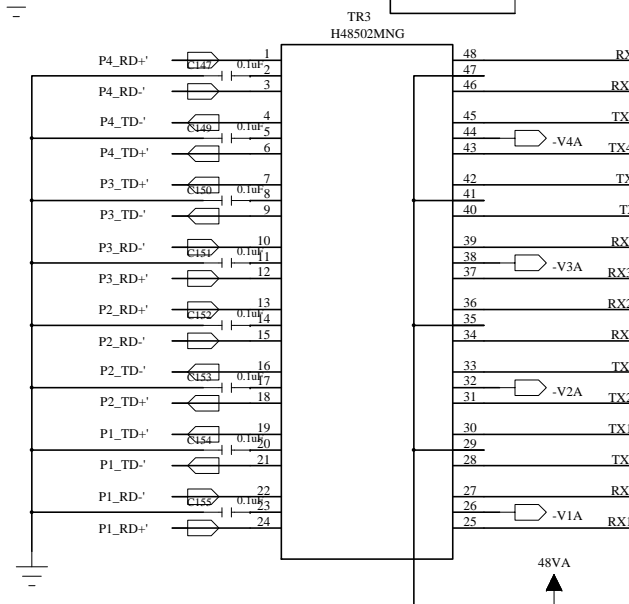
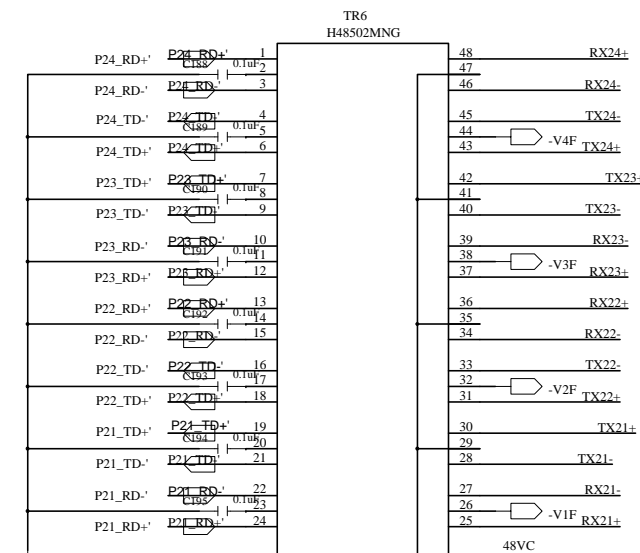
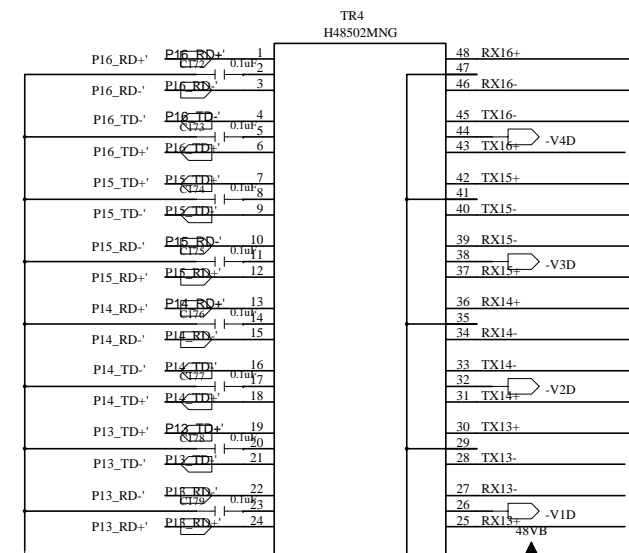
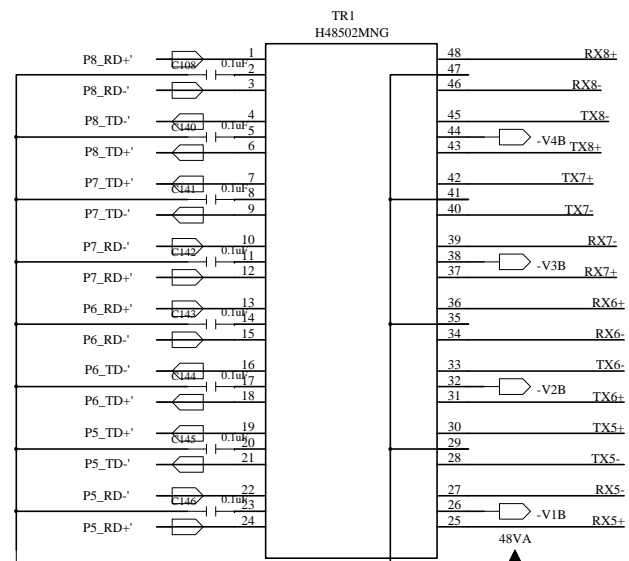


Note:

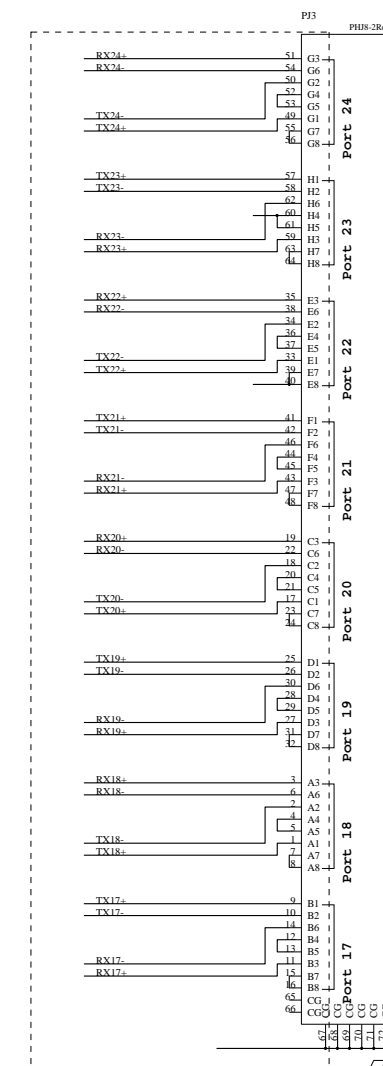
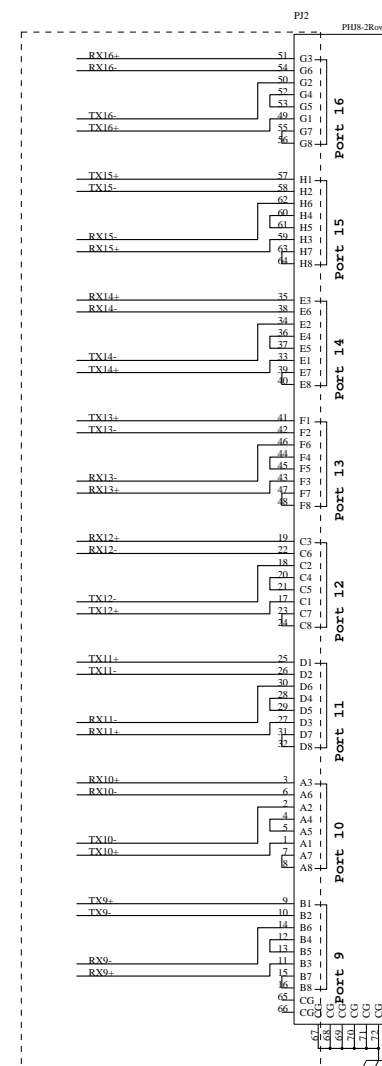
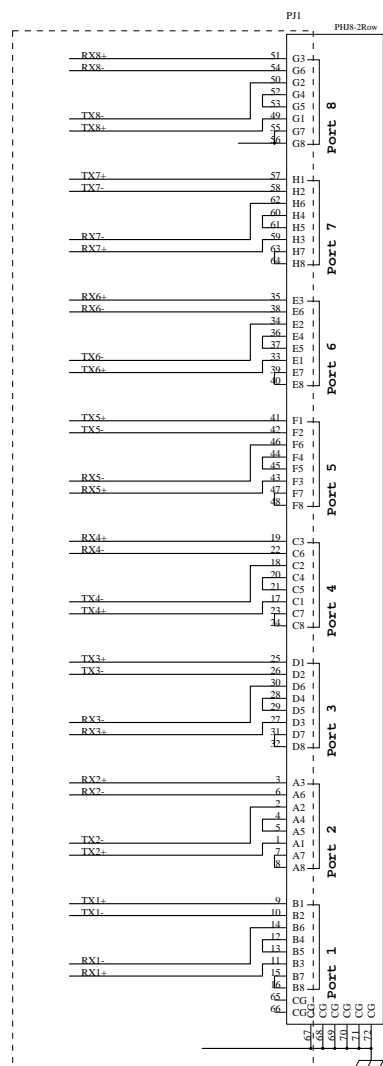
IPG compensation 0: 40ppm 1: 160ppm	Fiber mode[1:0] 00: P1-P24 are TP 01: P1-P16 are TP, P17-P24 are FB 10: P1-P8 are TP, P9-P24 are FB 11: P1-P24 are FB	SPI CPU I/F 0: 2-wire 1: 4-wire	G5 I/F mode 0: GMII/MII 1: RGMII	LED mode[2] 0: 2-bit mono-color 1: 2-bit bi-color
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G5 force mode[2:0]  
000: 0uA forced  
001: 1000uA  
011: 1000uA  
100: 100mF  
101: 100mH  
110: 10mF  
111: 10mH





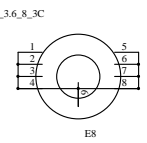
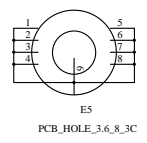
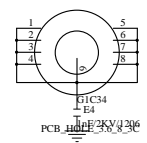
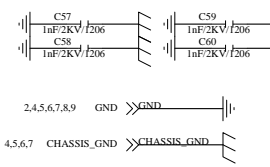




Keep over than 80 mils space with signals from chips, power and ground, preventing the ESD issue.

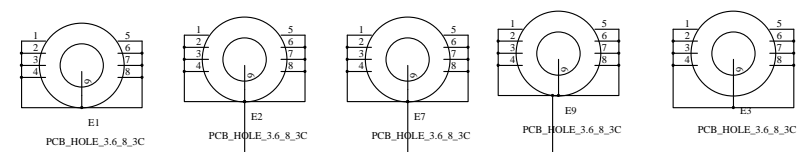
Keep over than 80 mils space with signals from chips, power and ground, preventing the ESD issue.

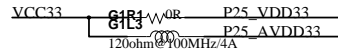
Keep over than 80 mils space with signals from chips, power and ground, preventing the ESD issue.



Recommended Transformer:  
40SS1041AX

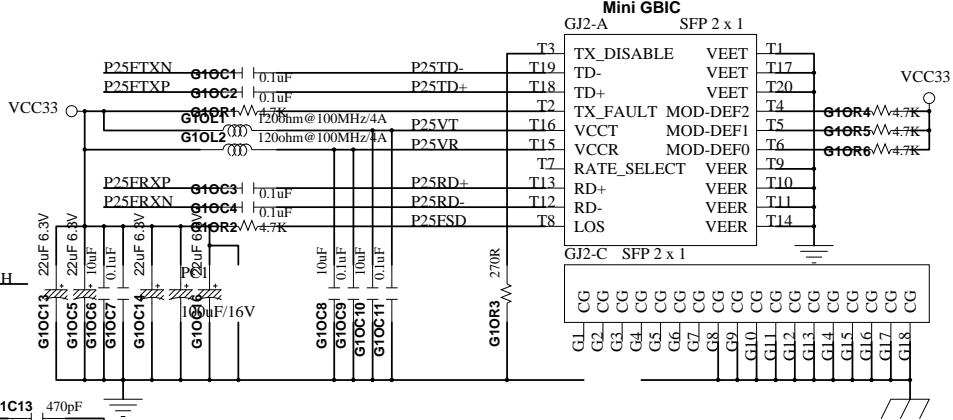
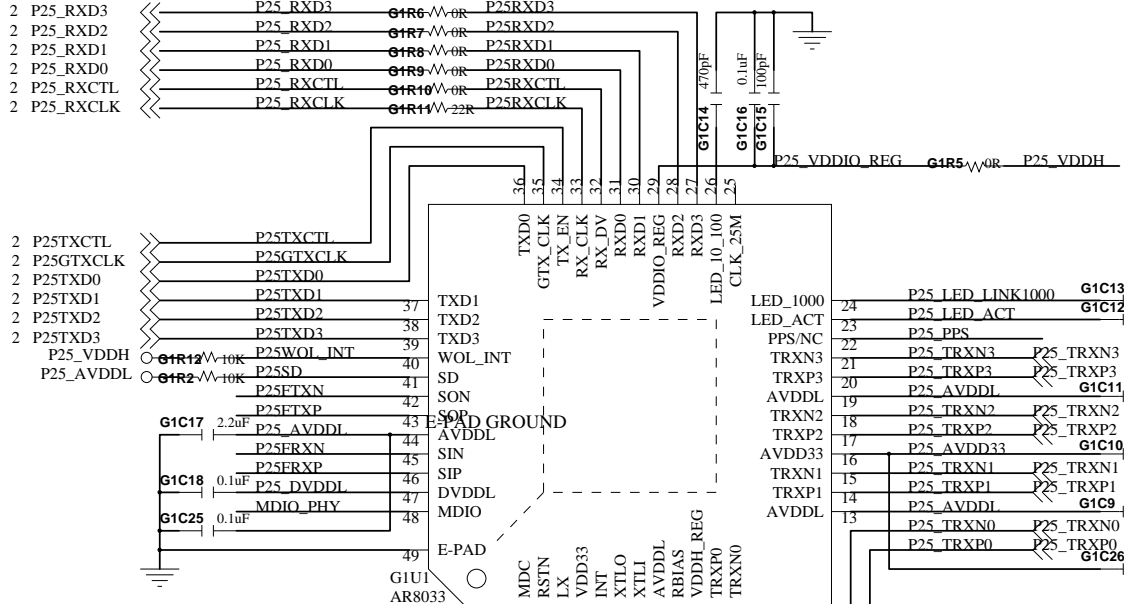
IC plus corp.	
File: IP1829A Smart Board - 24 FE MDI	
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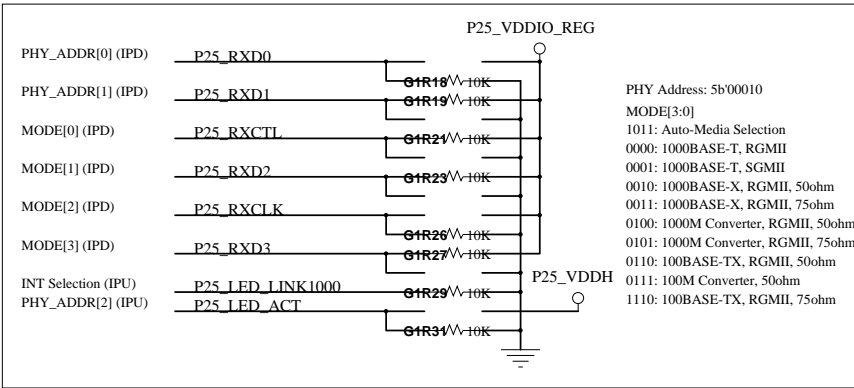
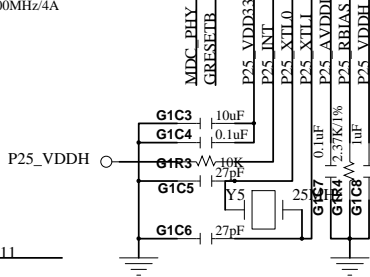
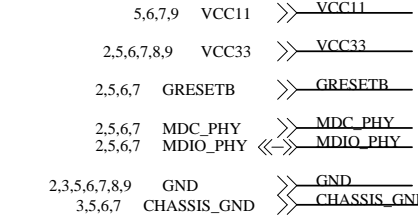
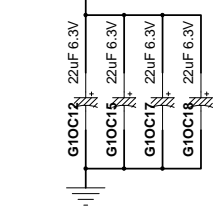
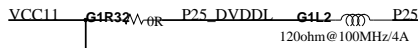
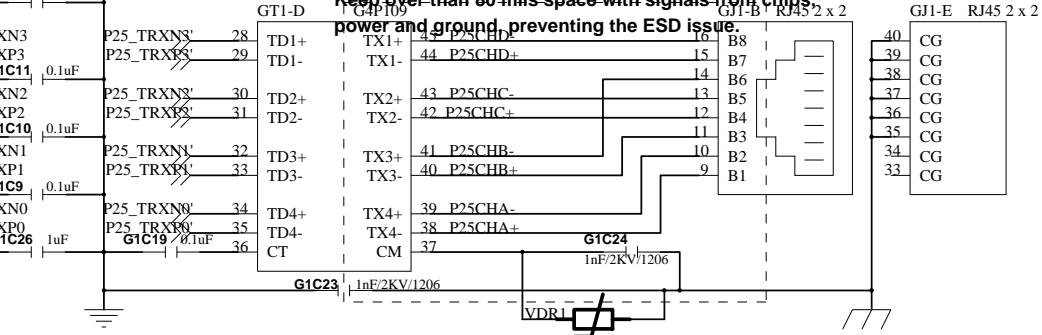


RGMII interfaces no more than 7cm, and should plant ground trace on both sides of the clock signal.

EMI Filter Reserved  
G1C12~14=470pF are for LED



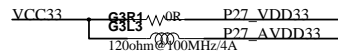
Keep over than 80 mils space with signals from chips power and ground, preventing the ESD issue.



<b>IC plus corp.</b>		
Title <b>IP1829A Smart Board - P25 AR8033 RGMII Combo</b>		
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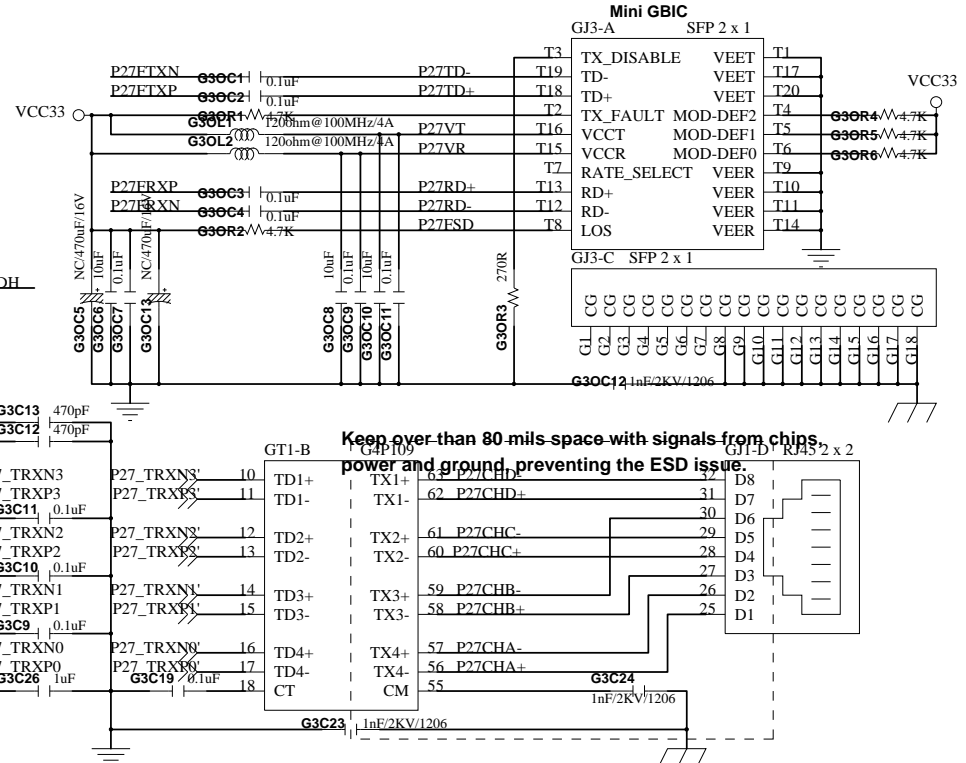
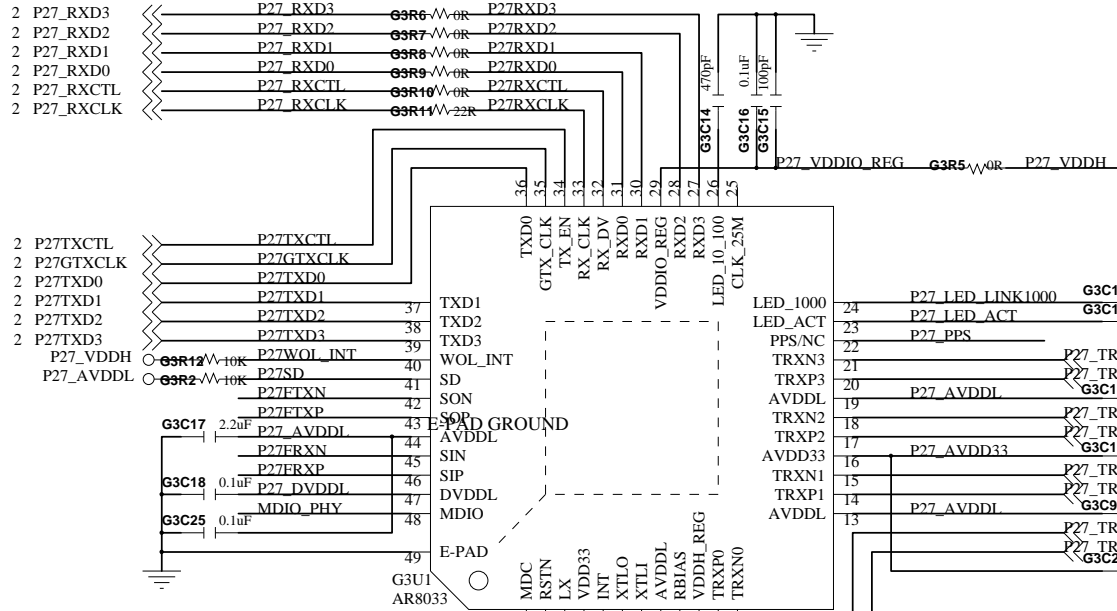




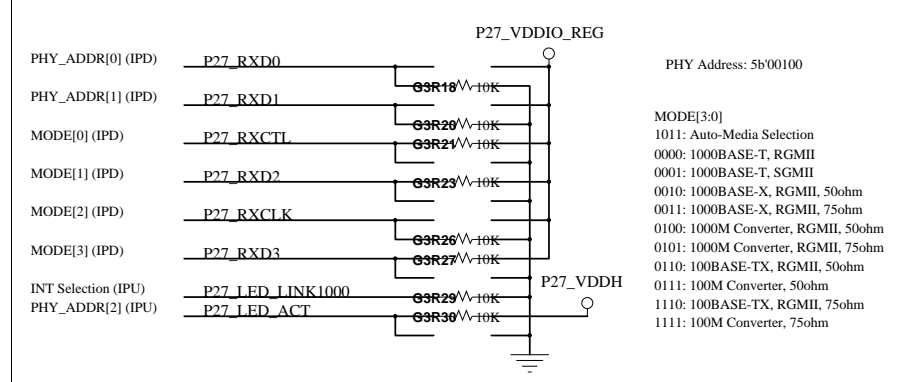
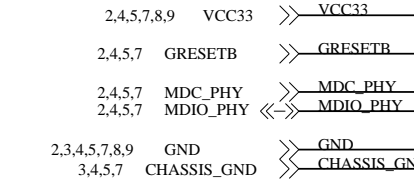
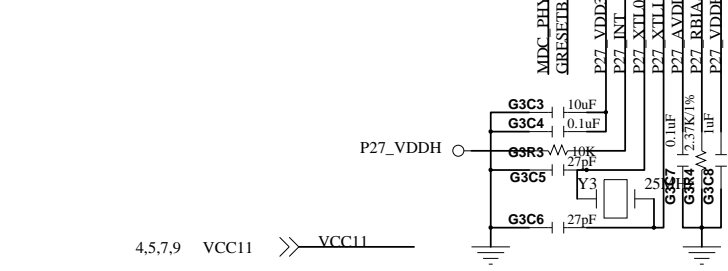
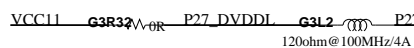


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G3C12~14=470pF are for LED



Keep over than 80-mils space with signals from chips power and ground, preventing the ESD issue.



<b>IC plus corp.</b>		
Title <b>IP1829A Smart Board - P27_AR8033_RGMII Combo</b>		
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