RTL8211D-VB/8211E-VB/8211E-VL Schematic

REV.1.6

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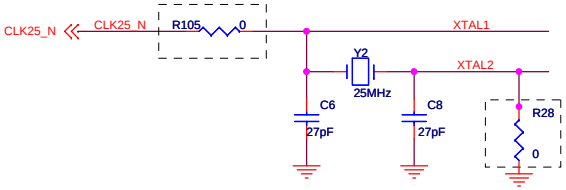
External clock and Crystal

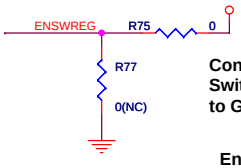
External clock source from OSC or Chipset.



If use external clock then the XTAL2 need connect to GND for RTL8211E.
R28 NC for RTL8211D

Enable/Disable SWREG

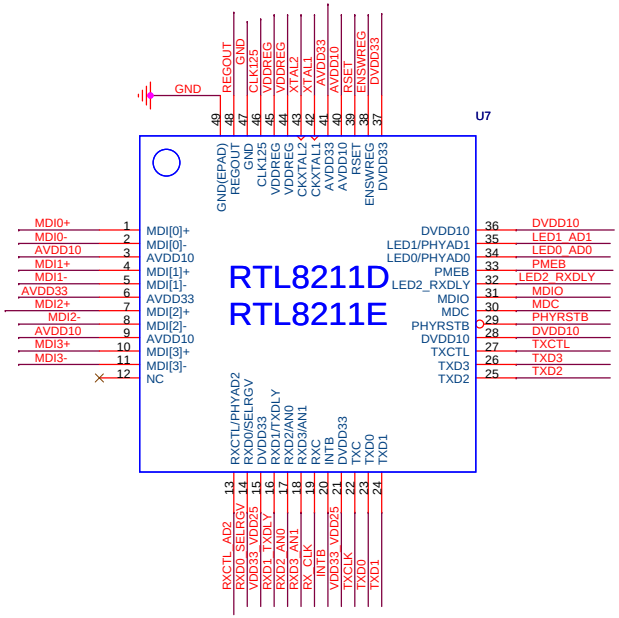
AVDD33



Connect ENSWREG to AVDD33 to enable Switching regulator or connect ENSWREG to GND to disable Switching regulator.

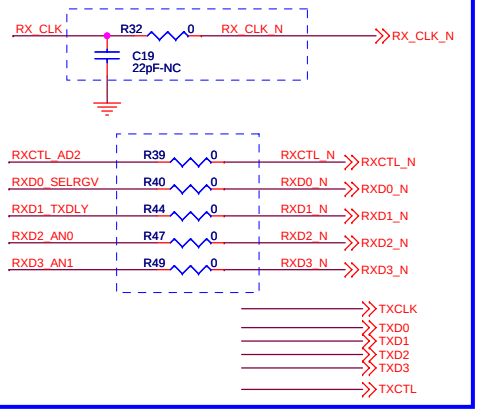
Enable SWREG: R75
Disable SWREG: R77

RTL8211D/8211E

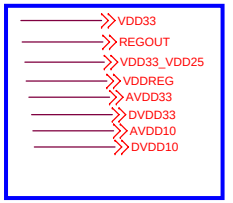


RGMII Interface

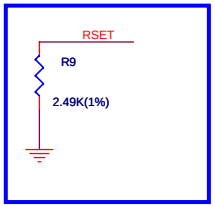
Place filter network close to RX_CLK.
Reserved for EMI



Power

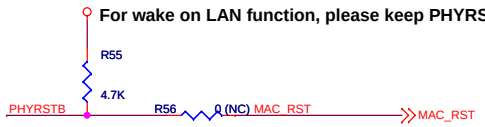


RSET

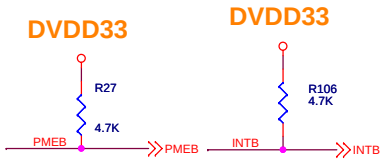


PHY Reset

DVDD33

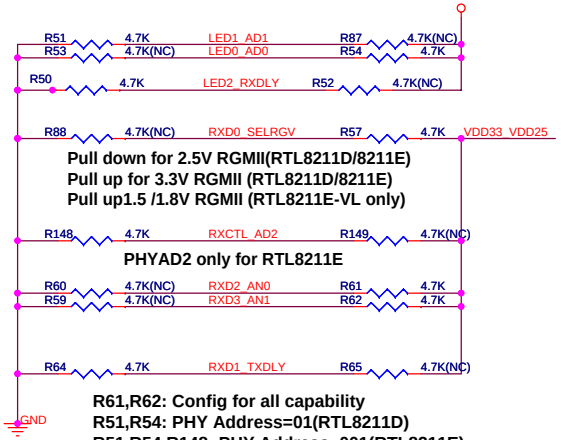


WOL & Interrupt



Configuration Setting

DVDD33



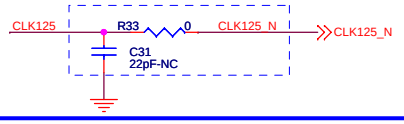
Pull down for 2.5V RGMII(RTL8211D/8211E)
Pull up for 3.3V RGMII (RTL8211D/8211E)
Pull up1.5 /1.8V RGMII (RTL8211E-VL only)

PHYAD2 only for RTL8211E

R61,R62: Config for all capability
R51,R54: PHY Address=01(RTL8211D)
R51,R54,R148: PHY Address=001(RTL8211E)
R64,R50: Without TX/RX Delay

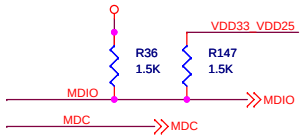
Output Clock

Place filter network close to CLK125.
Reserved for EMI



MDC/MDIO

DVDD33



R36 for RTL8211D
R147 for RTL8211E

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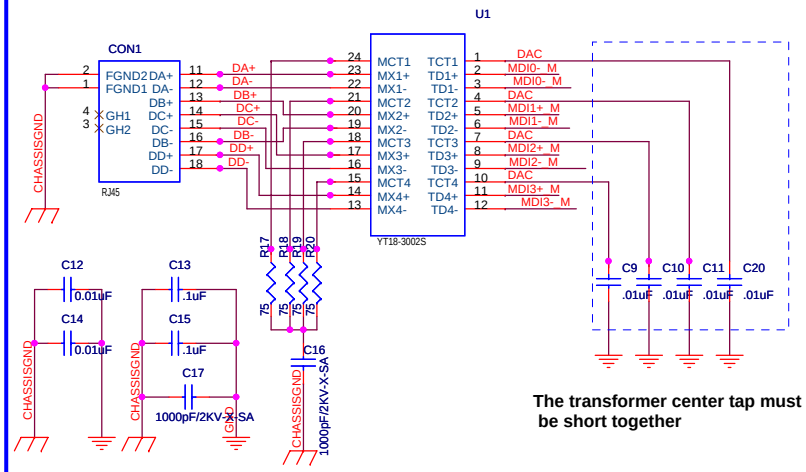
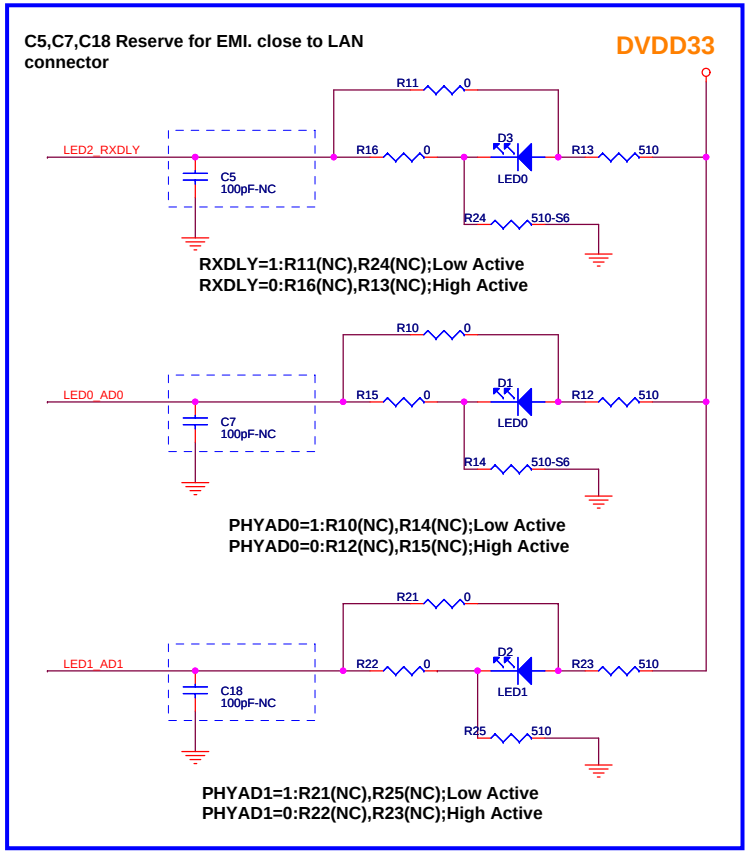
RJ45 & Transformer

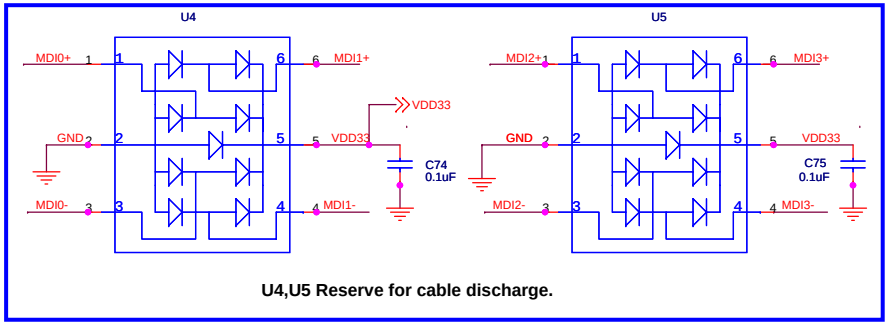


The transformer center tap must be short together

LED



TVS



U4,U5 Reserve for cable discharge.

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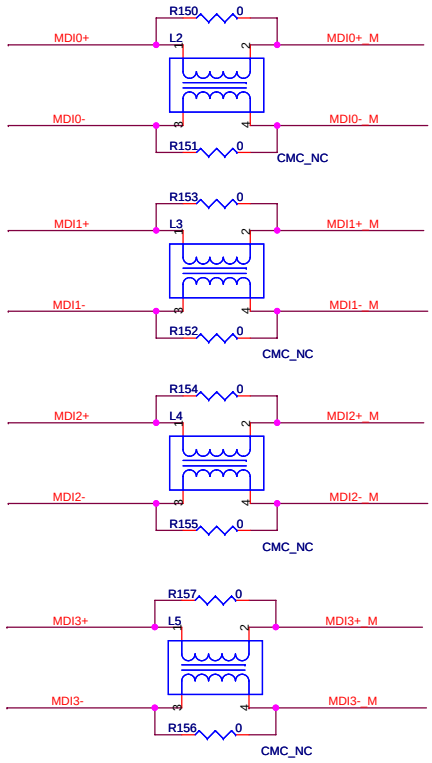
Common mode choke (Option)



L2,L3,L4,L5 Reserve for EMI, close to transformer.

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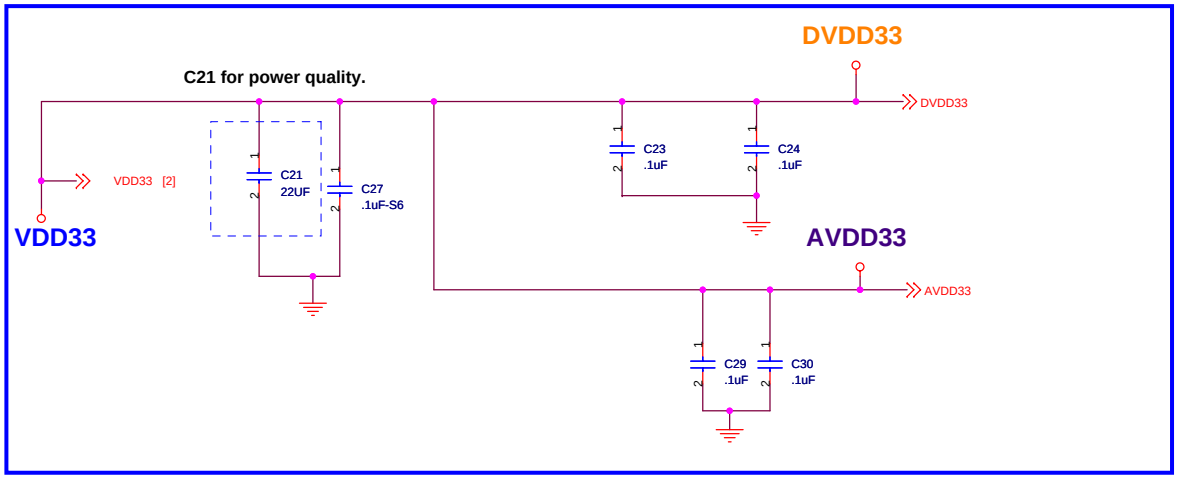
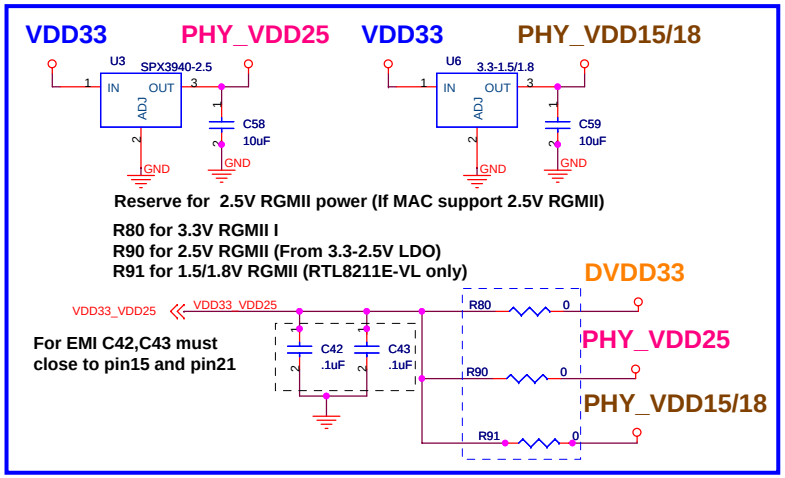
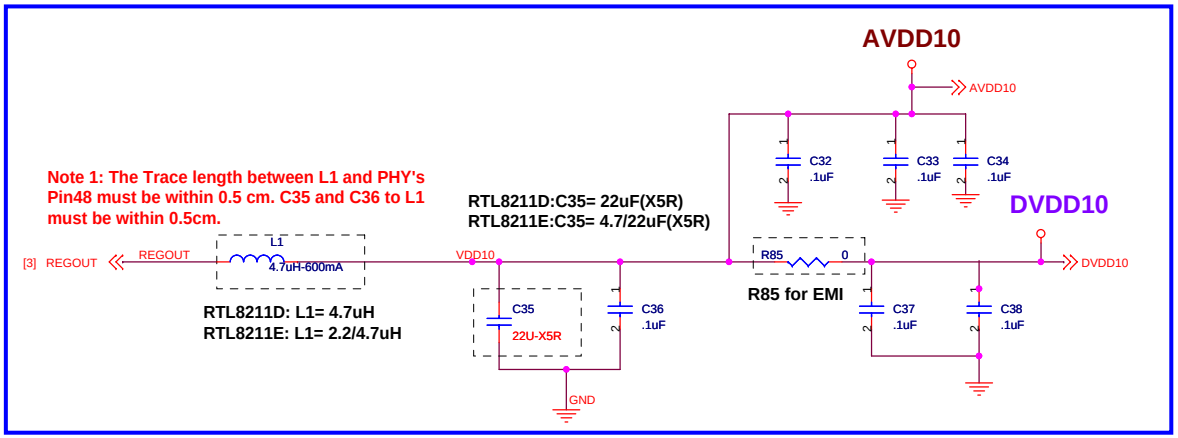
3.3V Power



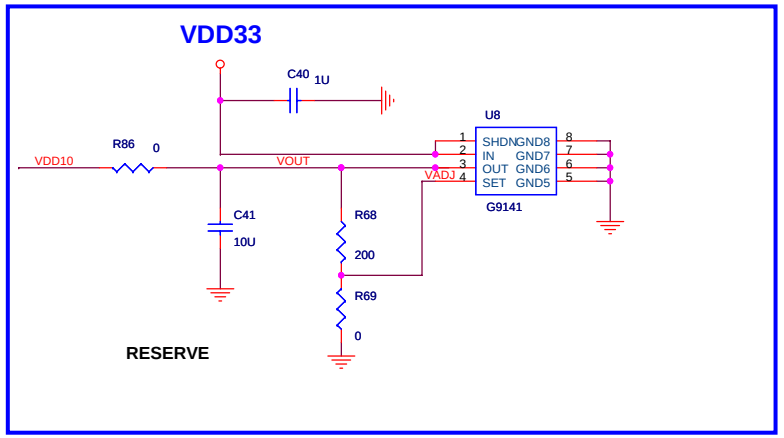
3.3/2.5V/1.8/1.5V RGMII Power



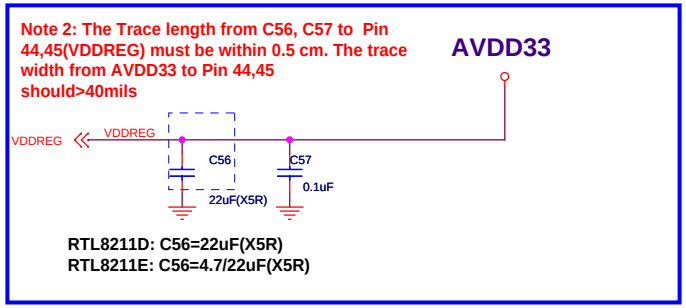
1.05V Power



External Power Source (1.05V)



VDDREG



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History

Version	Date	
V1.0	2010.8.10	First release
V1.1	2010.12.3	Modify LED2 and MDIO pull up circuit
V1.2	2011.1.30	Remove ACR page
V1.3	2011.3.22	Add common mode choke for EMI Modify XTAL2 for RTL8211D
V1.4	2011.4.22	Modify transformer pin name
V1.5	2011.5.2	Add RTL8211E-VL 1.5V RGMII application
V1.6	2011.6.27	Add RTL8211E-VL 1.8V RGMII application

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