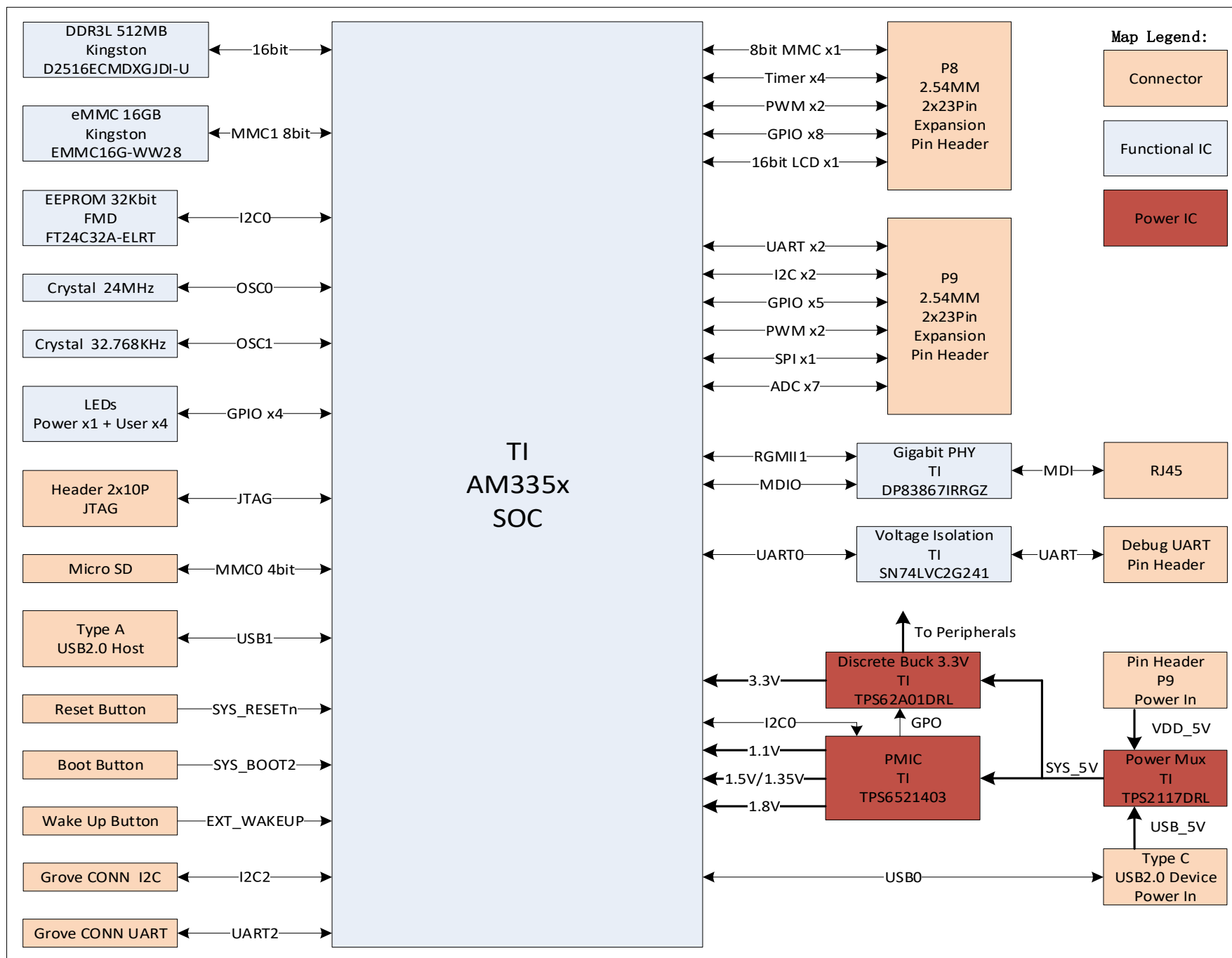


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REVISION HISTORY

VER #	DATE	REVISION	DESCRIPTION OF CHANGES	AUTHOR
V1.0	10 Jun 2025	BeagleBone Green Eco_V1.0_SCH_250610	Initial Release.	Junqing.Xin
V1.0	14 Aug 2025	BeagleBone Green Eco_V1.0_SCH_250814	Page 5: Removed the Wake-Up button (Changed S3 to DNP, R211 from 0R to DNP).	Junqing.Xin



Map Legend:

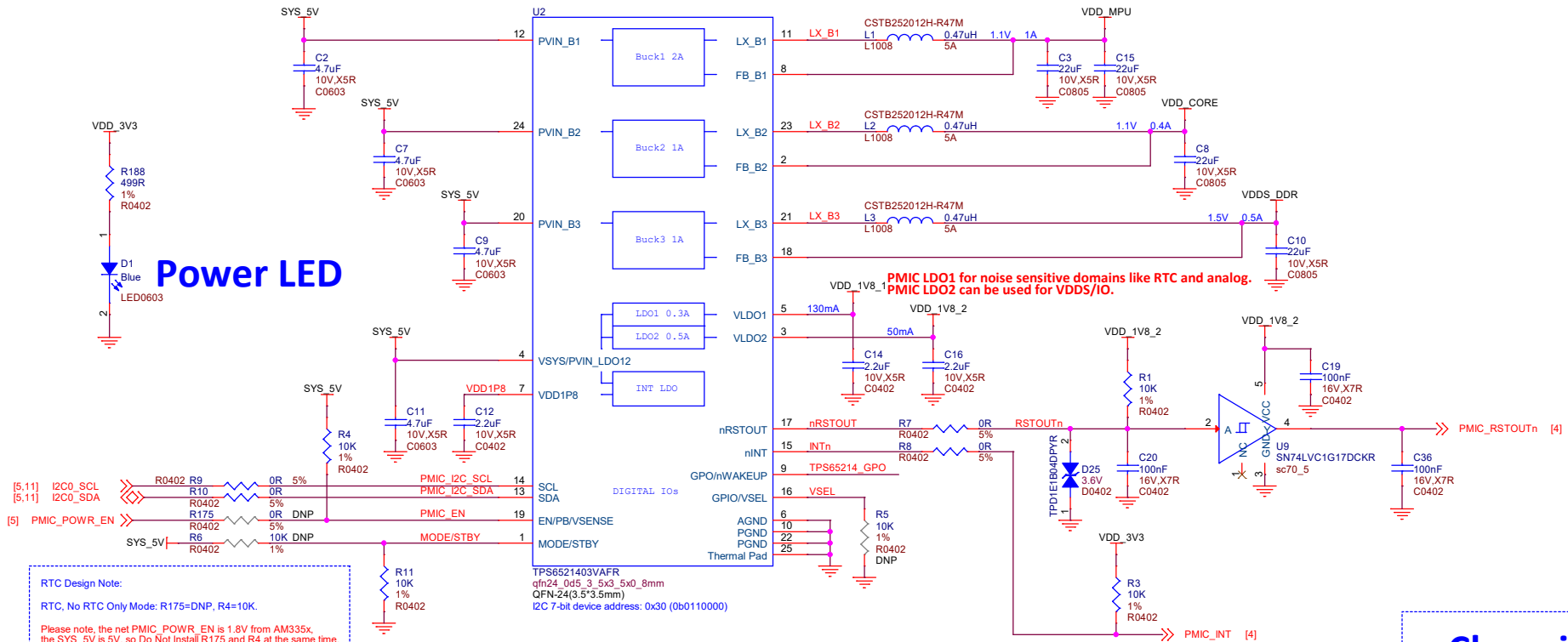
Connector

Functional IC

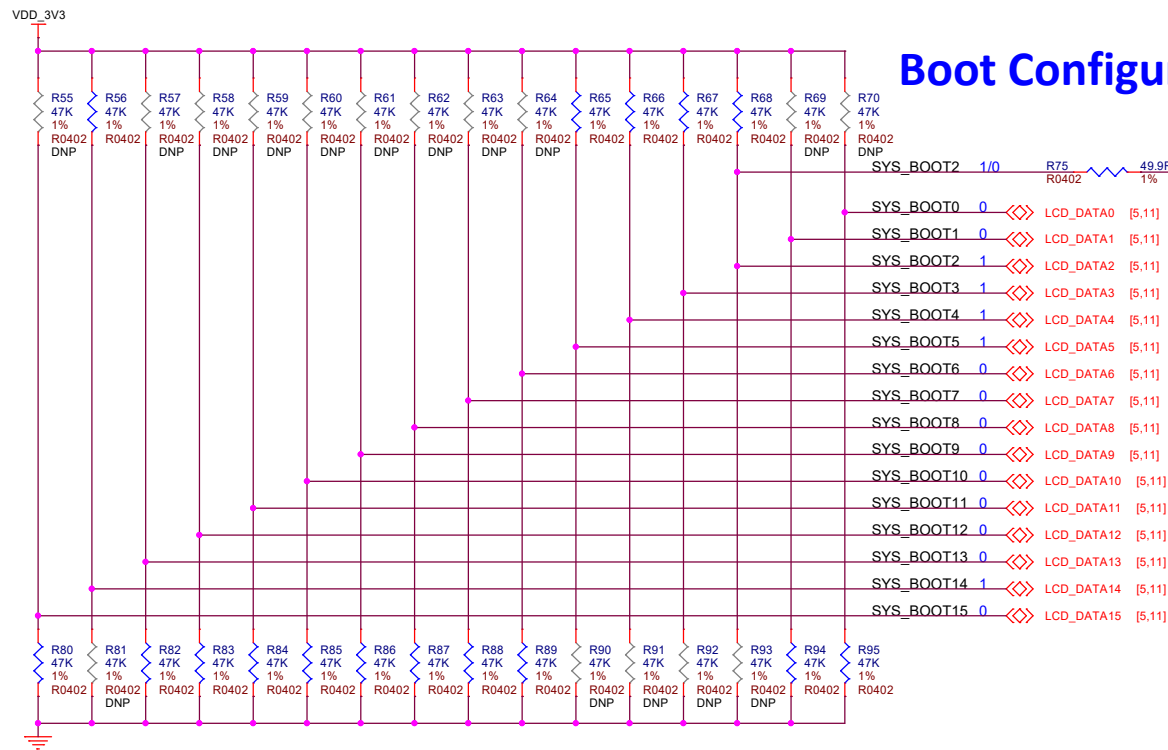
Power IC

Block Diagram

PMIC



PCB1
 BeagleBone Green Eco
 Label1
 SN Label

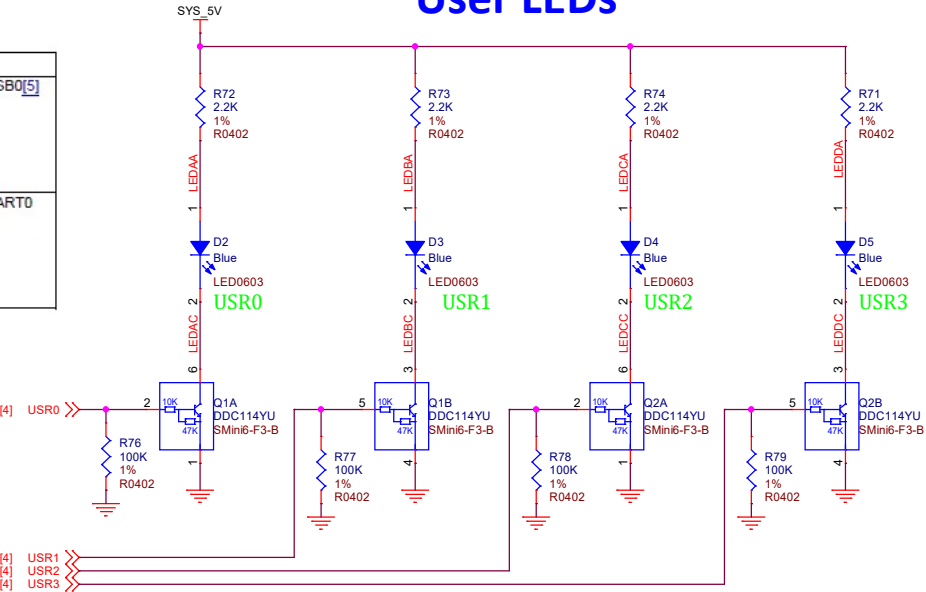


Boot Configuration

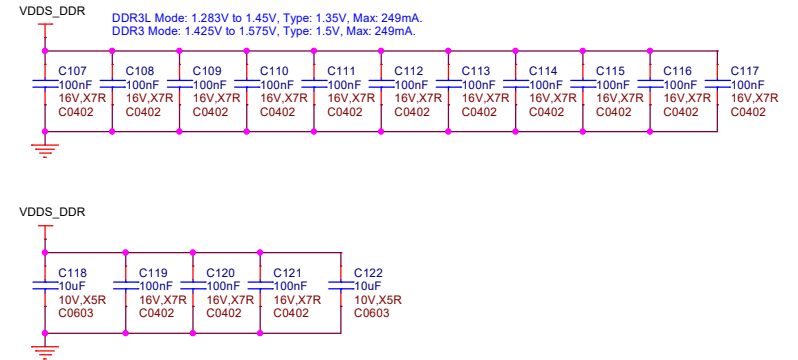
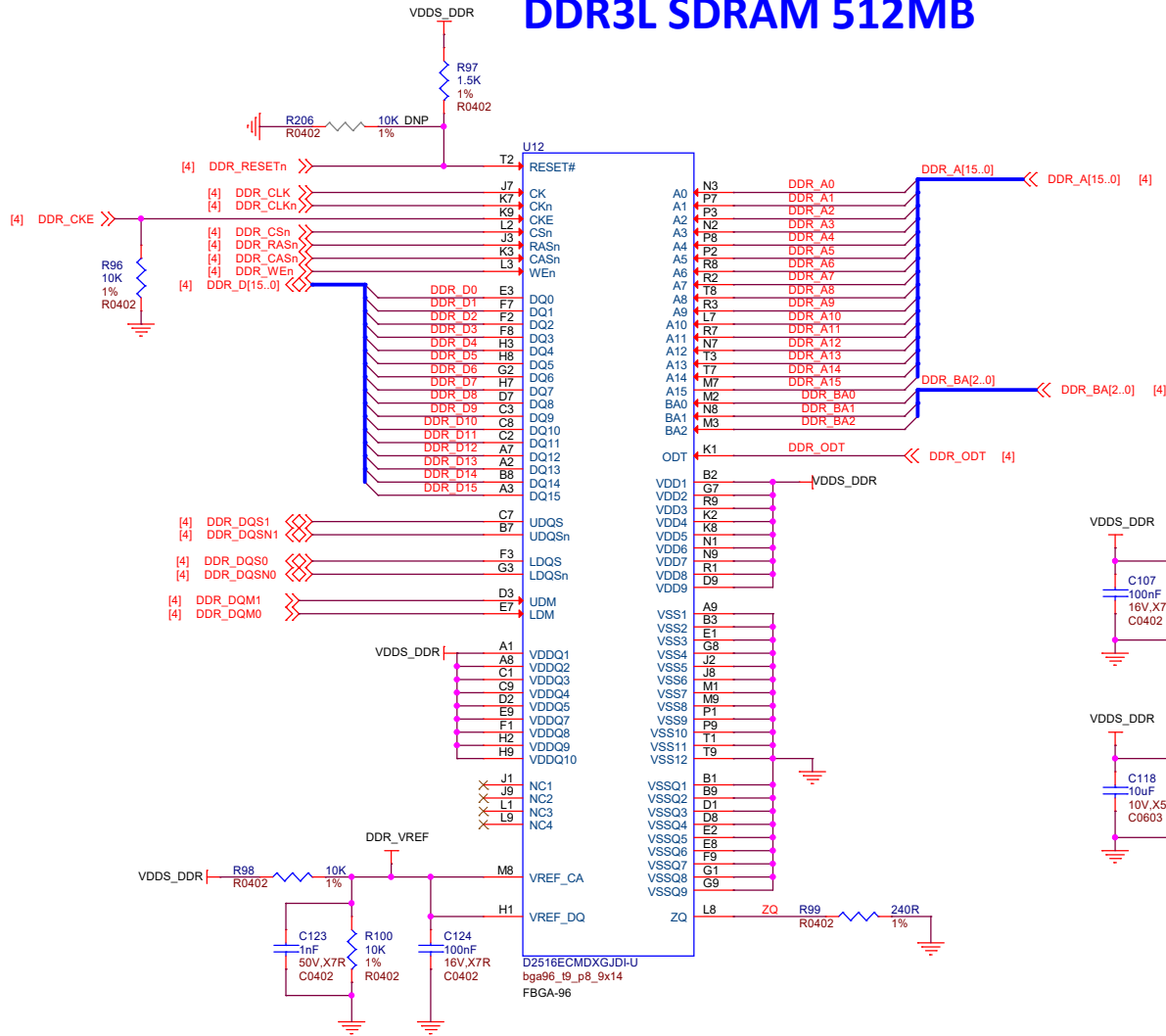
uSD BOOT Button

SYSBOOT[15:14]	SYSBOOT[13:12]	SYSBOOT[11:10]	SYSBOOT[9]	SYSBOOT[8]	SYSBOOT[7:6]	SYSBOOT[5]	SYSBOOT[4:0]	Boot Sequence			
00b = 19.2MHz 01b = 24MHz 10b = 25MHz 11b = 26MHz	00b (all other values reserved)	Don't care for ROM code	Don't care for ROM code	Don't care for ROM code	Don't care for ROM code	0 = CLKOUT1 disabled 1 = CLKOUT1 enabled	11100b	MMC1	MMC0	UART0	USB0[5]
00b = 19.2MHz 01b = 24MHz 10b = 25MHz 11b = 26MHz	00b (all other values reserved)	Don't care for ROM code	Don't care for ROM code	Don't care for ROM code	Don't care for ROM code	0 = CLKOUT1 disabled 1 = CLKOUT1 enabled	11000b	SPI0	MMC0	USB0[5]	UART0
0 1	0 0	0 0	0	0	0 0	1	1 1 1 0 0				

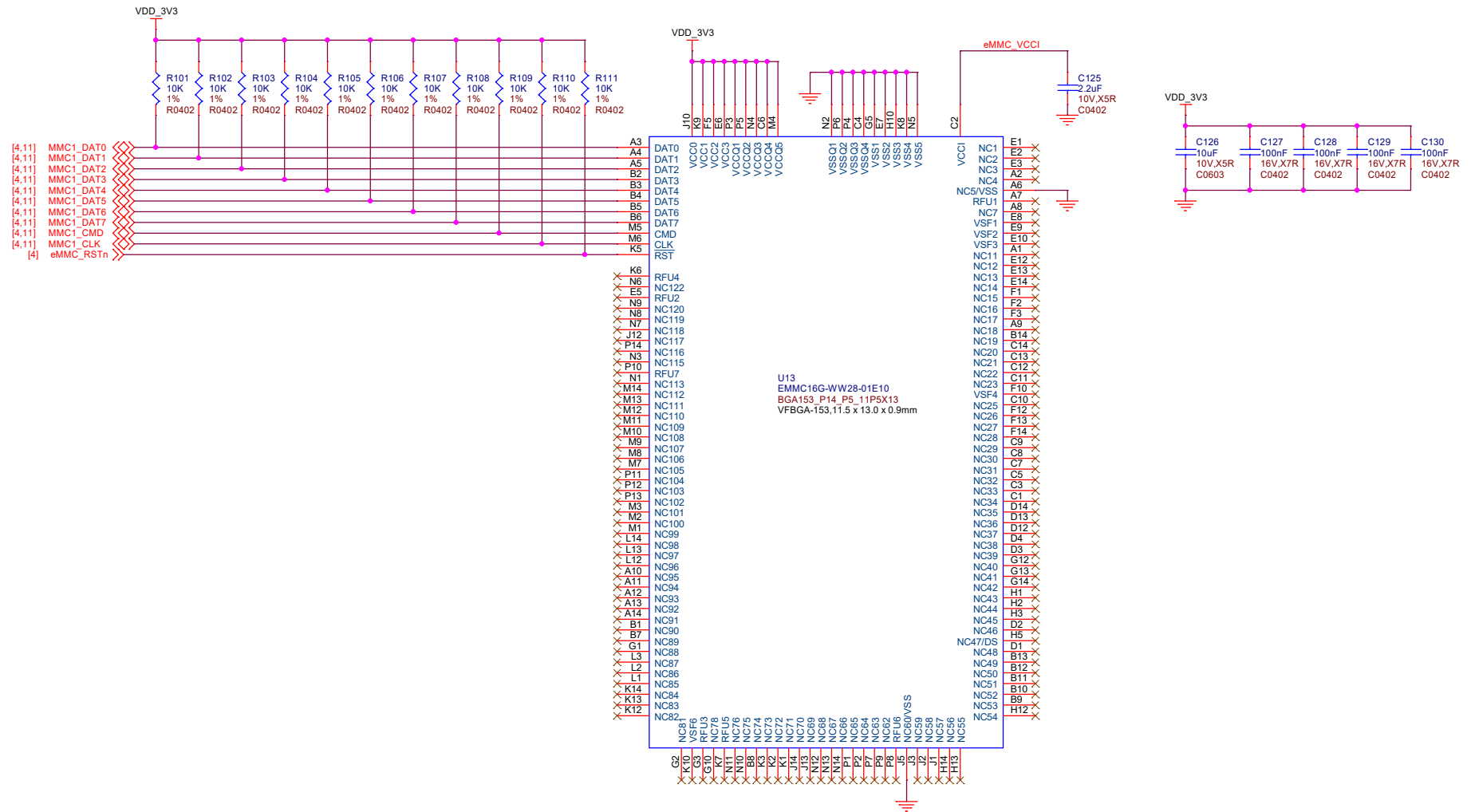
User LEDs



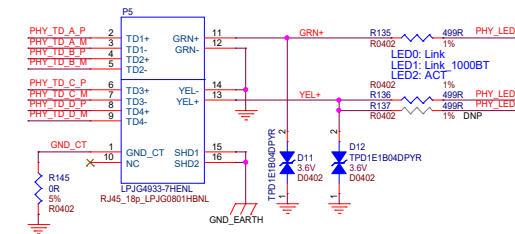
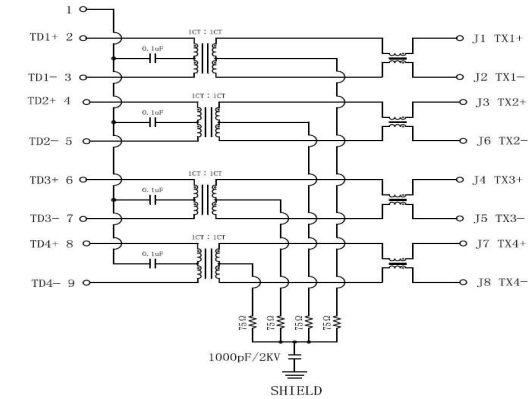
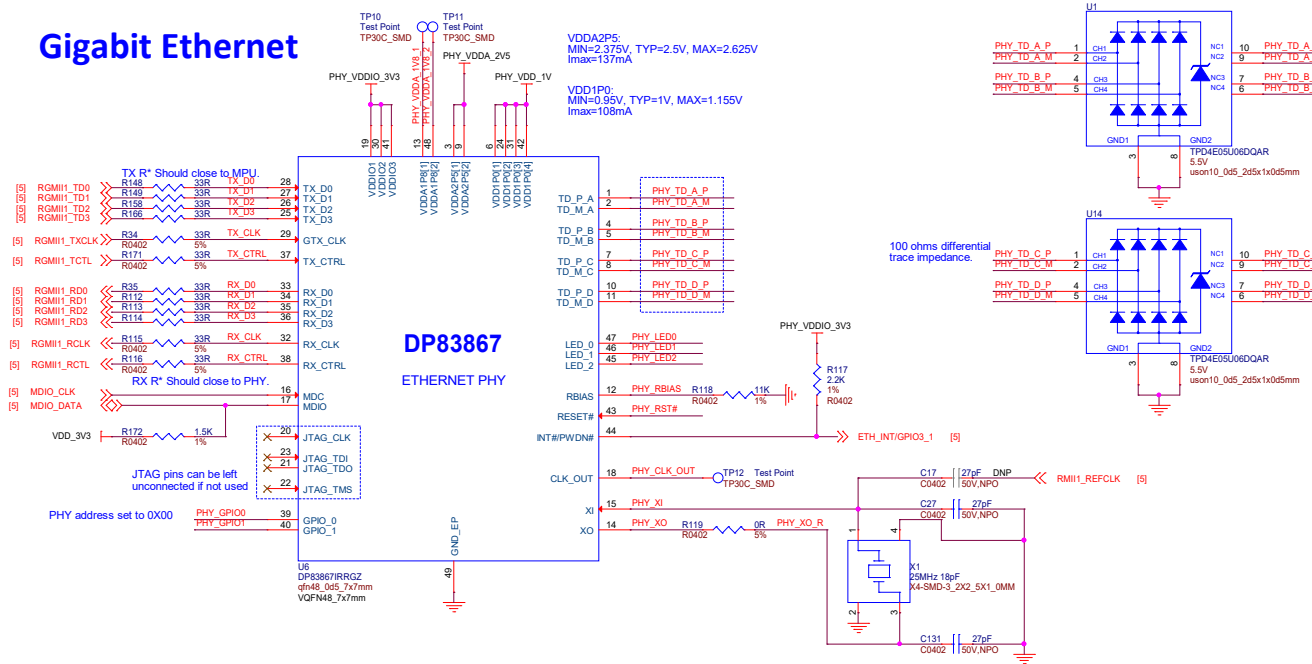
DDR3L SDRAM 512MB



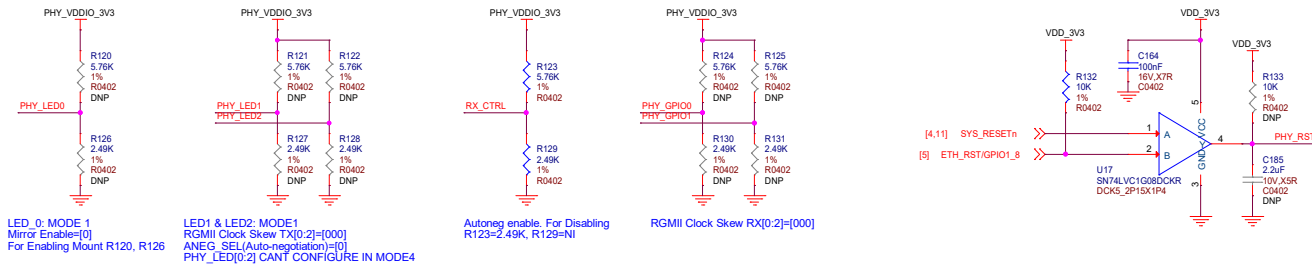
eMMC Flash 16GB



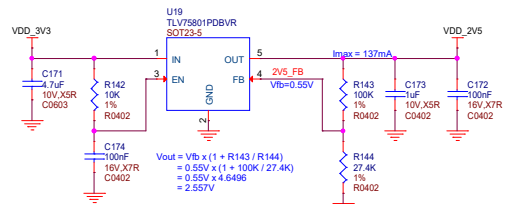
Gigabit Ethernet



ETH Reset



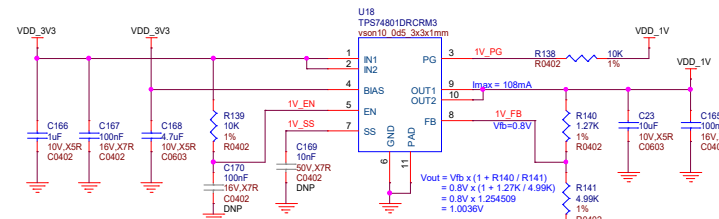
3.3V to 2.5V LDO



Ethernet PHY: VDDA2P5=2.5V, Imax=137mA
Power Consumption: (3.3V-2.5V) * 0.137A = 0.1096W
Thermal Junction-to-ambient: 0.1096W * 176.9°C/W=19.39°C

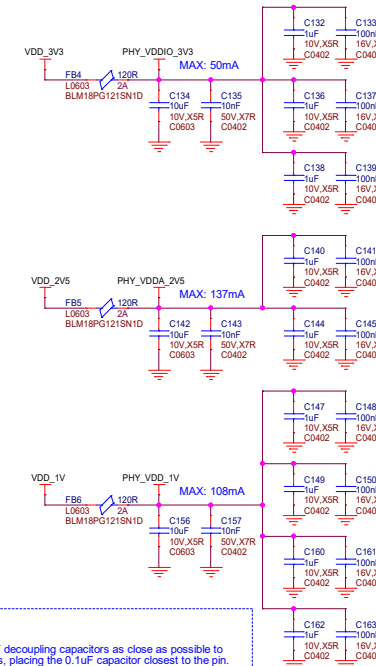
There is no requirement for the sequence of the supplies when operating in two-supply mode.

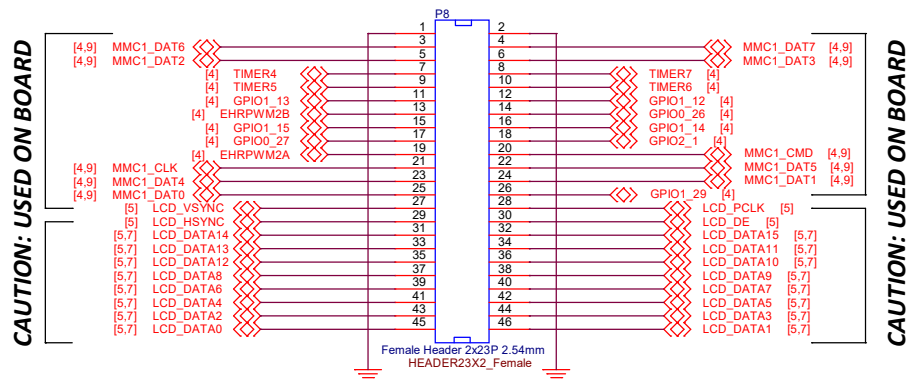
3.3V to 1V LDO



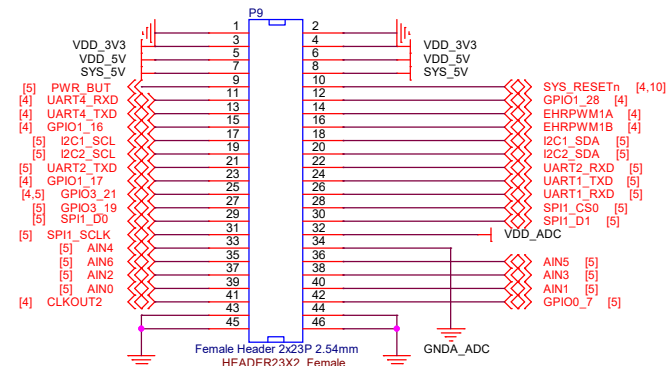
Ethernet PHY: VDD1P0=1V, Imax=108mA
Power Consumption: (3.3V-1V) * 0.108A = 0.2484W
Thermal Junction-to-ambient: 0.2484W * 44.2°C/W=10.98°C

Layout Note:
Place 1uF and 0.1uF decoupling capacitors as close as possible to component VDD pins, placing the 0.1uF capacitor closest to the pin.

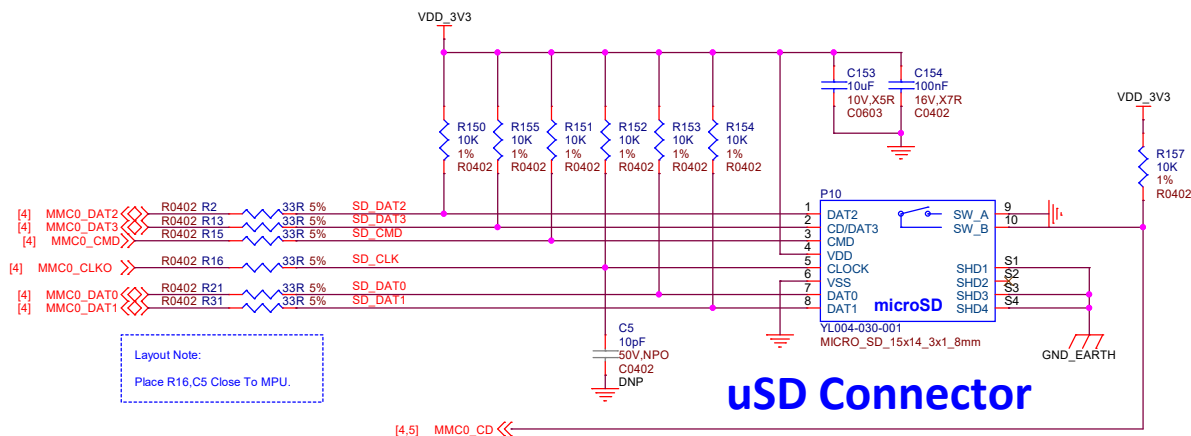




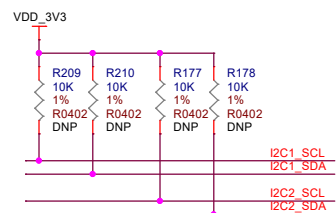
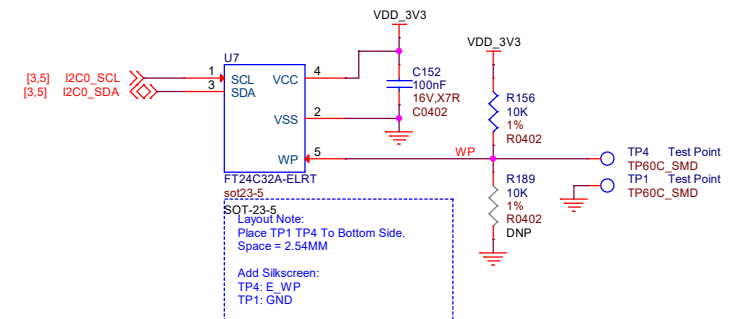
Expansion Header P8



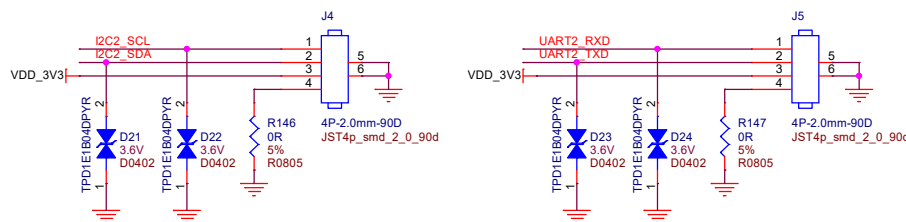
Expansion Header P9



Board ID EEPROM 32Kbit



Grove Connector



Priority Power MUX

