

INDEX

Schematics Index:

01 Index
02 CPU1
03 CPU2
04 DDR3 8bit x 4pcs
05 BESIDE CPU
06 POWER
07 NAND+eMMC
08 EMAC
09 INTERFACE

REVISION HISTORY

Rev	Description	Date	Drawn	Checked	Approved
CM-A10/A20 V1.0	Used to replace the old MarsBoard	2013-12-28	Thomas	Thomas	
CM-A10/A20 V1.1	Modified PHY LED2 output high valid	2014-03-30	Thomas	Thomas	
CM-A10/A20 V2.0	Use 4 x 8bit DDR3,support Max 2G memory	2014-04-28	Thomas	Thomas	



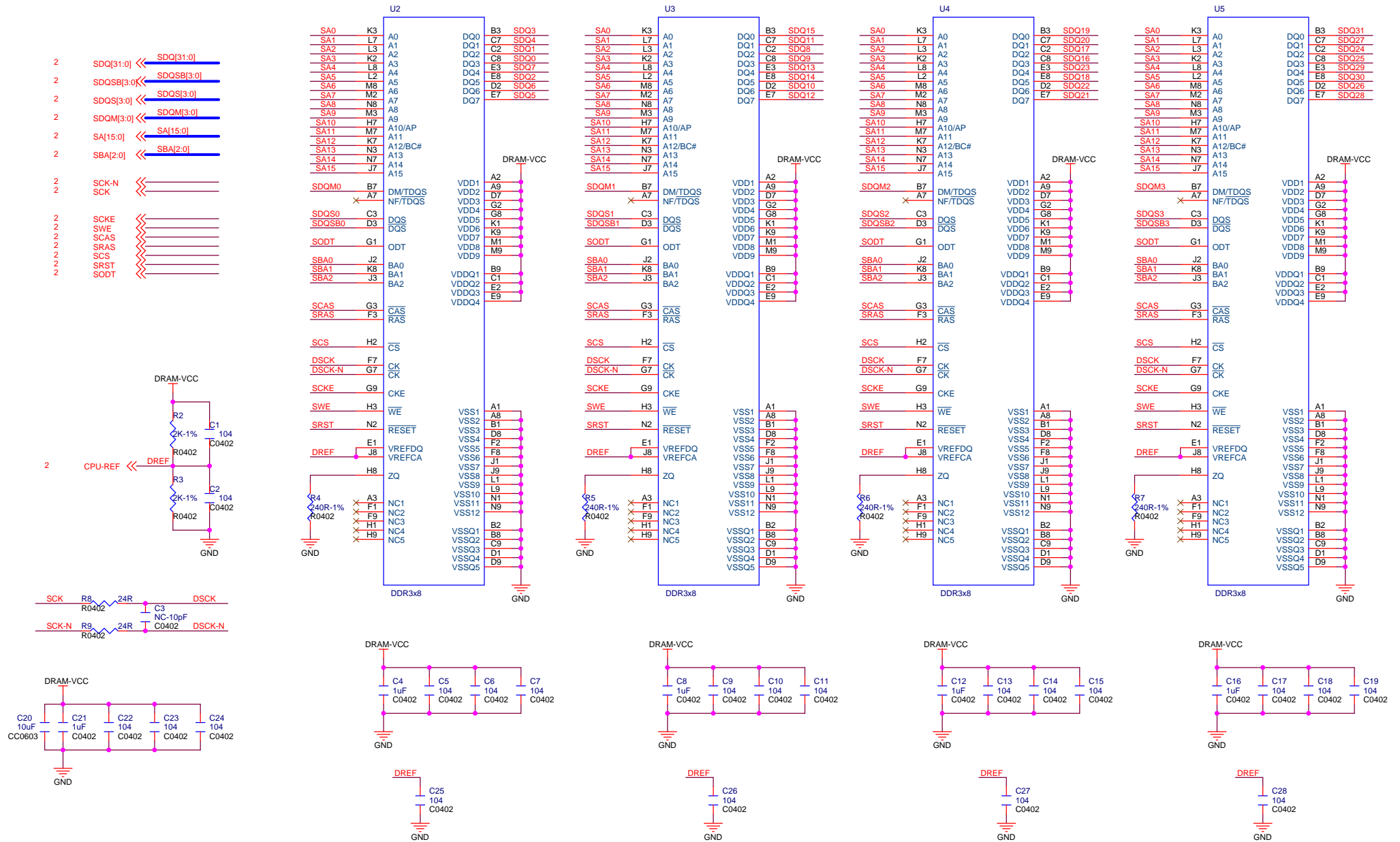
CM-A10/A20

Designed by HAOYU Electronics

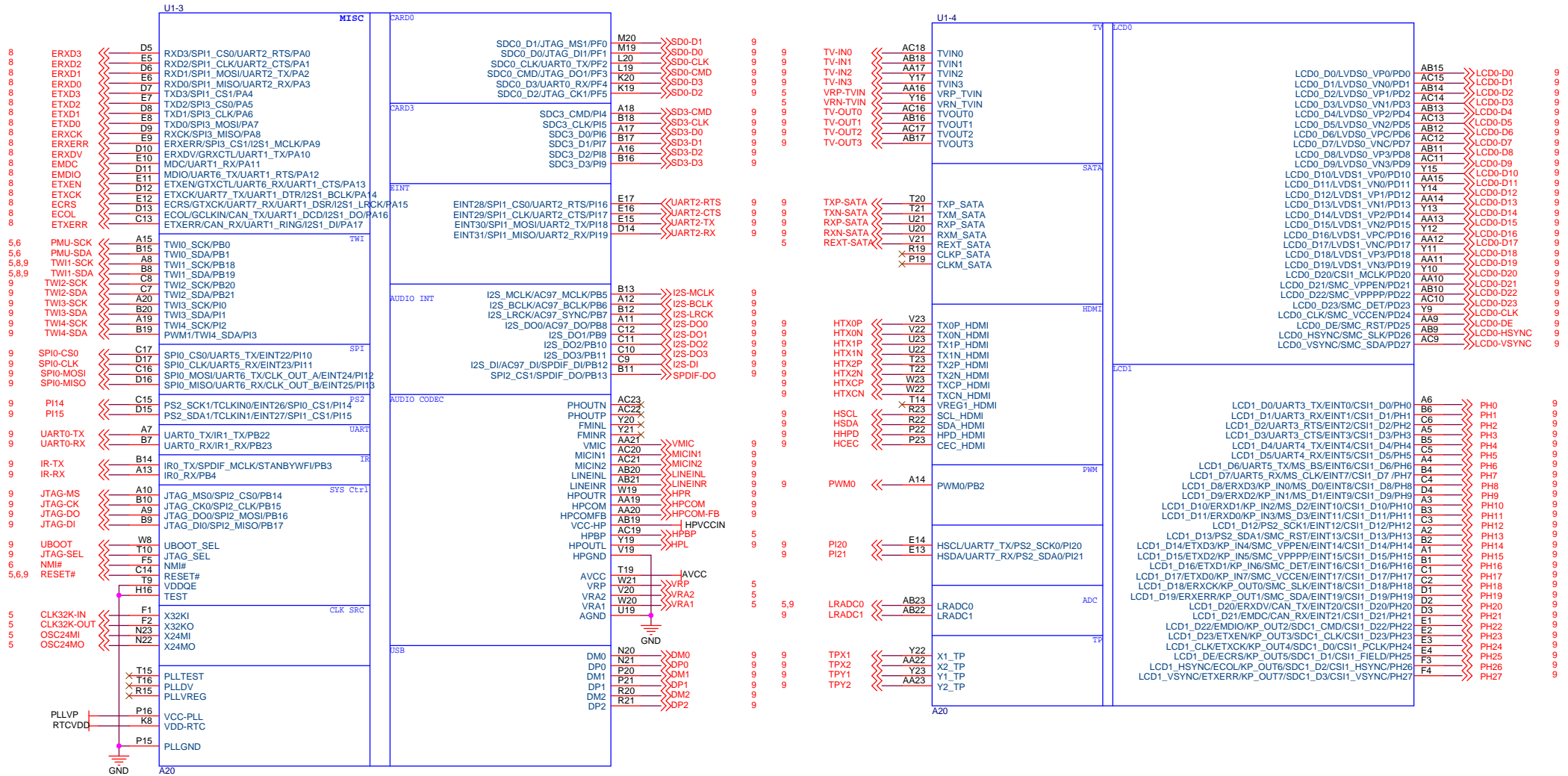
www.PowerMCU.com
www.MarsBoard.com

HAOYU Electronics	
Title: CM-A10/A20	
File: INDEX	REV: 2.0
Create Date: Wednesday, December 25, 2013	Page Num: 1
Modify Date: Monday, April 28, 2014	Page Total: 9

DDR3-8BITX4

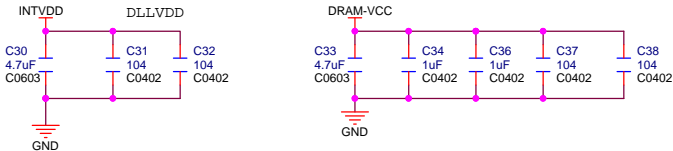


CPU2



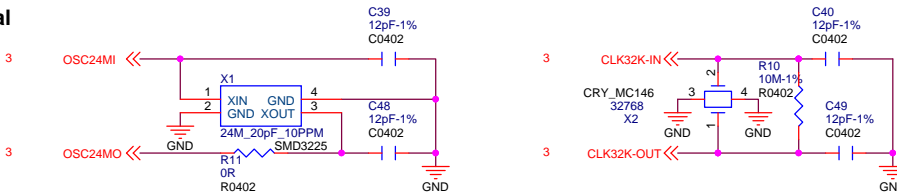
BESIDE CPU

DRAM Near the DLLVDD pin foot placement.

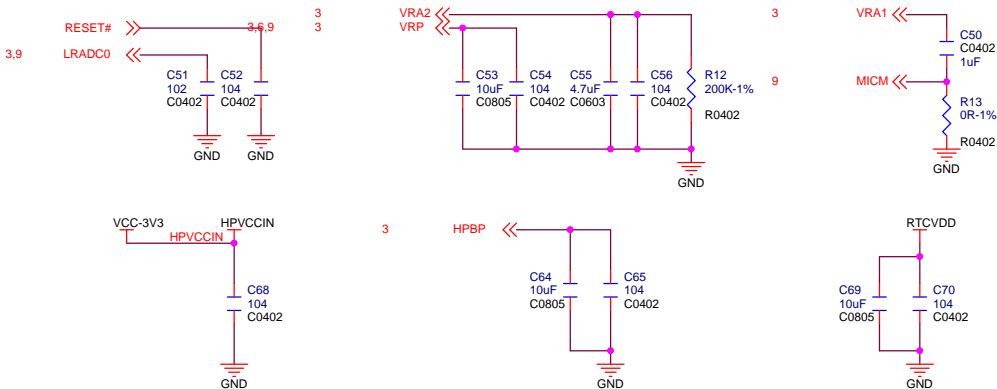


The device cannot be modified or deleted, otherwise cause system instability!

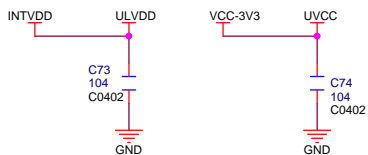
Crystal



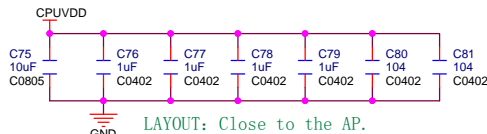
AUDIO&SYS



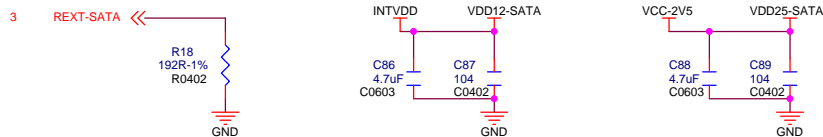
USB



CPU

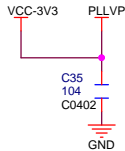


SATA

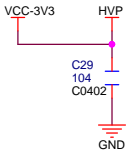


Note layout : Capacitor close to the SOC.

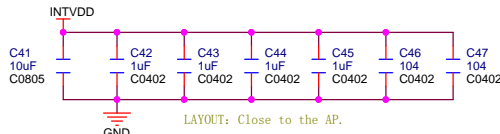
PLL



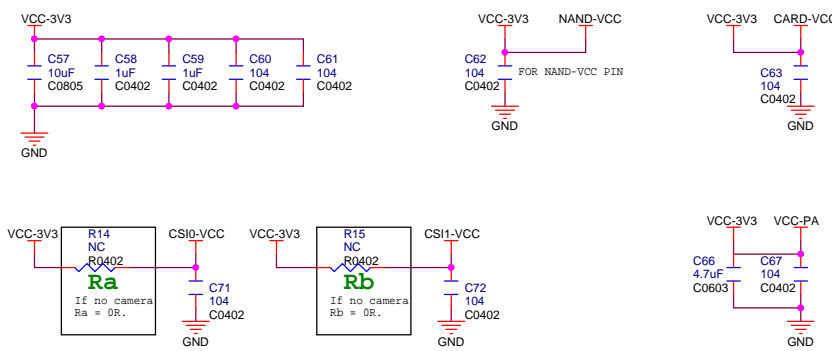
HDMI



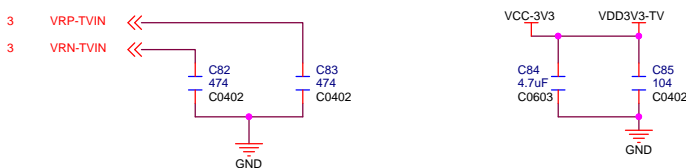
CORE



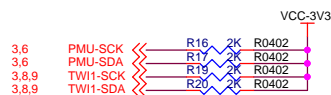
PIO-INTERFACE



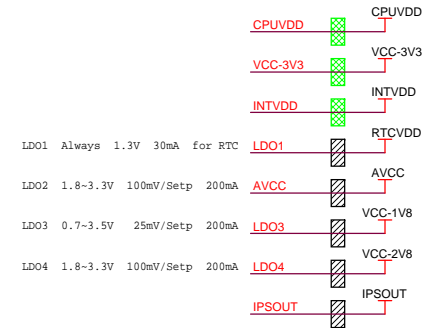
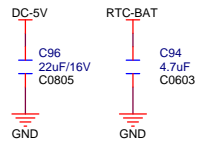
TV



TWI-PULLUP



<u>RESET#</u>	➤➤➤	RESET#	3,5,9
<u>NMI#</u>	➤➤➤	NMI#	3
<u>TWI0-SCK</u>	➤➤➤	PMU-SCK	3,5
<u>TWI0-SDA</u>	➤➤➤	PMU-SDA	3,5
<u>PWR-ON#</u>	➤➤➤	PWR-ON#	9



Layout注意：要求在平面层做电源切割。
优先级：CPUVDD>DRAM-VCC>INTVDD>VCC-3V3

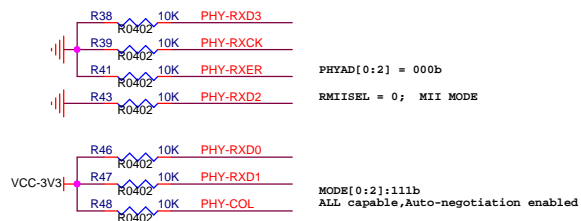
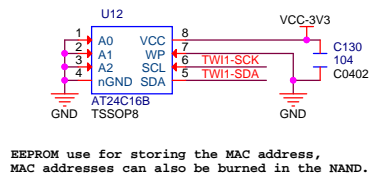
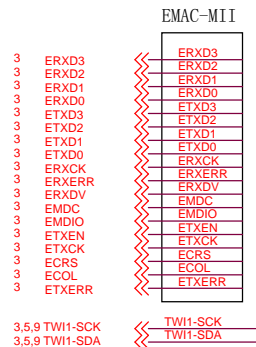


Name	Vout	I _{max}	Use
AXP209 DCDC2	1.25V	1600mA	CPU
AXP209 DCDC3	1.2V	1200mA	CORE
AXP209 LDO1	1.3V	30mA	RTC
AXP209 LDO2	3V	200mA	AVCC
AXP209 LDO3	1.8V	200mA	CSI0-IO
AXP209 LDO4	2.8V	200mA	CSI1-IO
SY8008 DCDC	1.5V	1200mA	DRAM
SY8008 DCDC	3.3V	1200mA	IO/NAND/EMAC
XC6209 LDO	2.5V	200mA	SATA/TVIN/TVOUT
XC6209 LDO	1.8V	200mA	EMMC

The diagram shows a DC-DC converter circuit. The input is a 3V3 supply (VCC-3V3) connected to the EN pin (pin 1) of the SY8088 SOT23-5 module (U9). The input filter consists of a 4.7uH inductor (L4) and a 10uF capacitor (C117). The output filter consists of a 10uF capacitor (C119). The module is configured with a feedback resistor (R2) and a reference resistor (R1). The module is labeled U9 and has pins 1 (EN), 2 (GND), 3 (GND), 4 (IN), and 5 (FB). The module is a SY8088 SOT23-5.

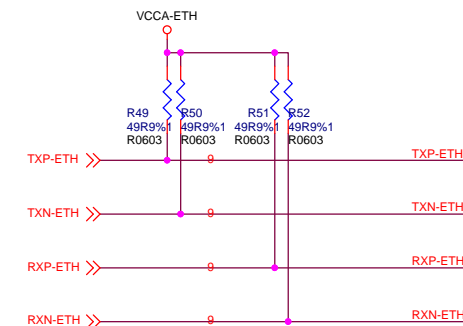
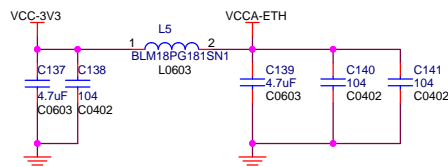
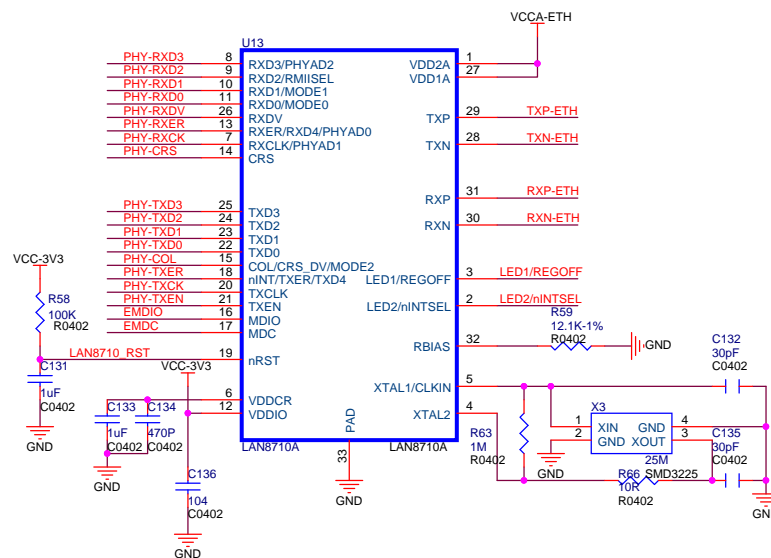
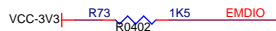
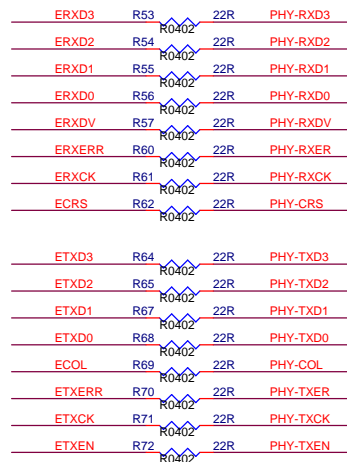
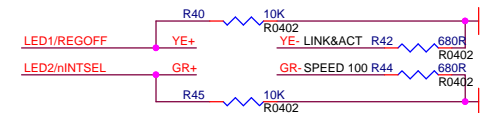
EMAC

10/100 MII Ethernet PHY



REGOFF=0: Internal +1.2V regulator ON

nINTSEL=0: TXER/TXD4 is selected for operation on the nINT/TXER/TXD4 pin.

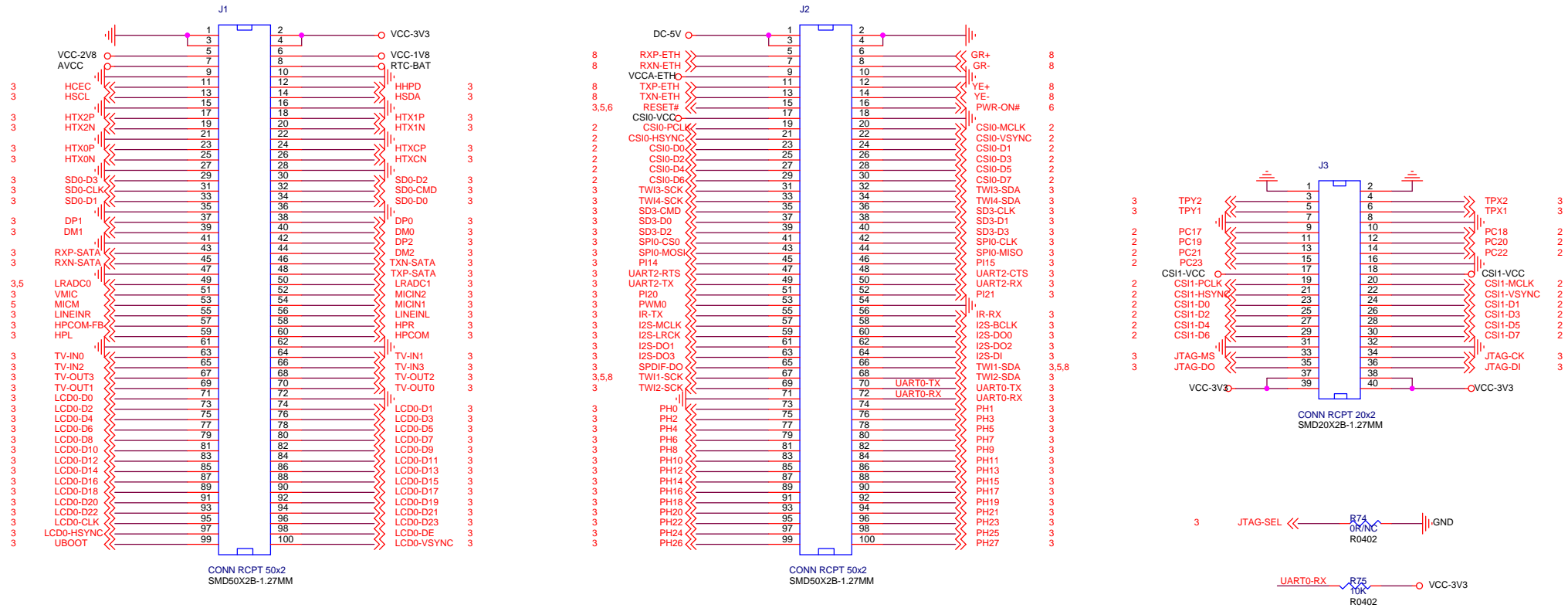


NOTE:

Place 49.9 ohm
resistors(0603)
near LAN8710A.

LAN8710A POWER

INTERFACE



Indicator

