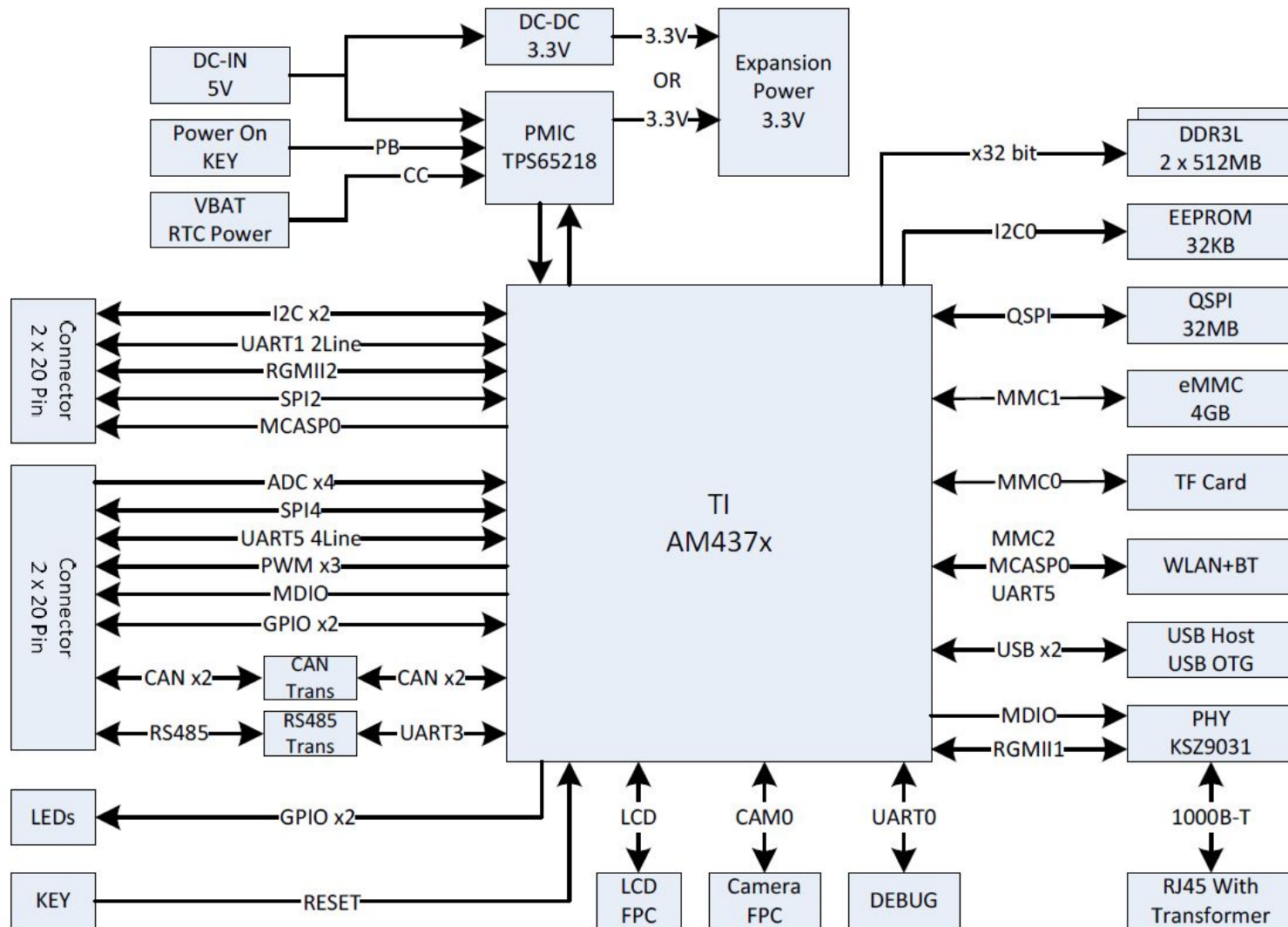


Schematic: SBC-EC8800

SHEET	SHEET NAME
01	Title/Revision History
02	Block Diagram
03	Power/Button
04	AM437X Power
05	AM437X System/USB
06	AM437X Bus Interface/ADC
07	DDR3 Memory
08	eMMC/MicroSD/QSPI/EEPROM
09	Ethernet 1/2
10	LCD/Camera/Boot
11	WLAN/Bluetooth
12	RS485/CAN/LED/UART/Expansion

Revision History

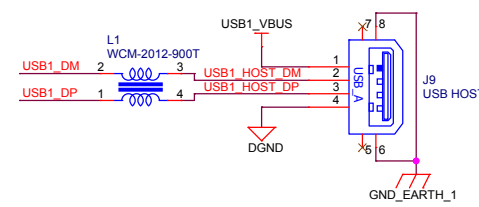
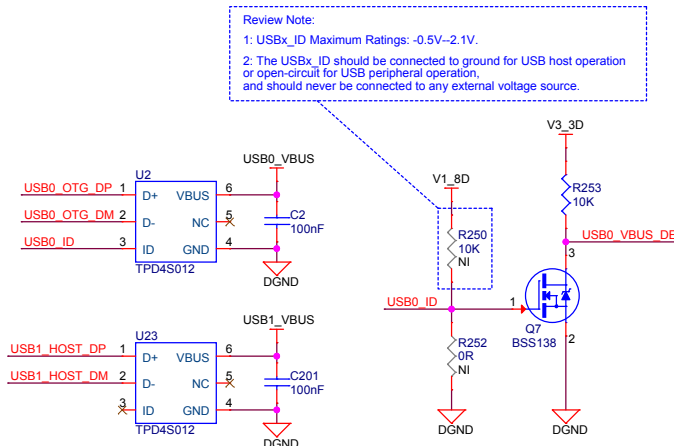
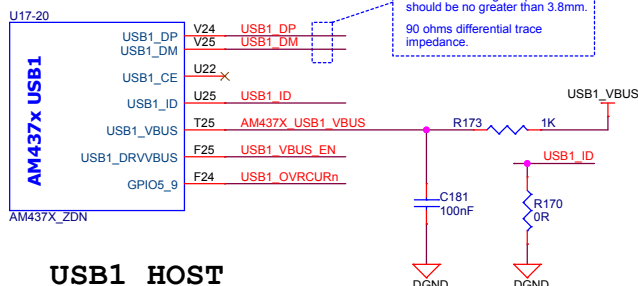
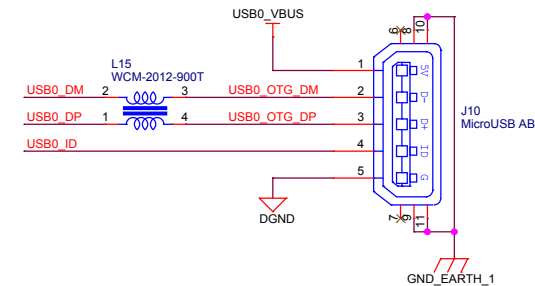
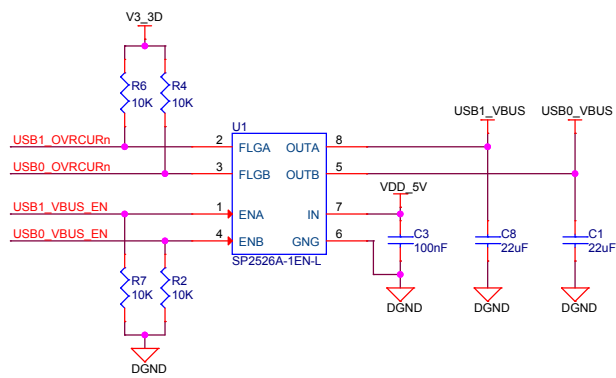
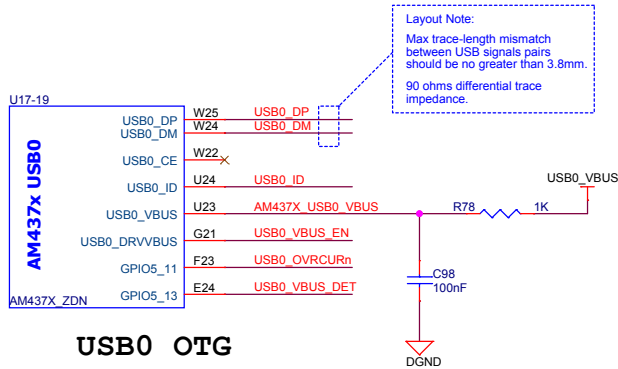
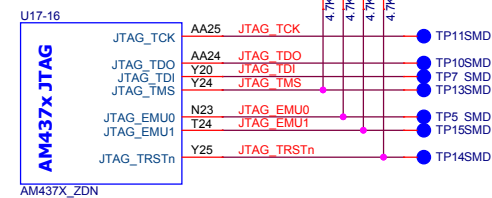
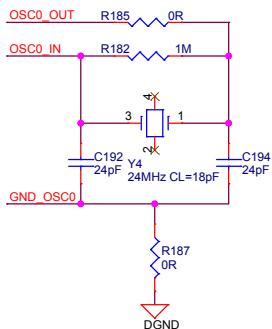
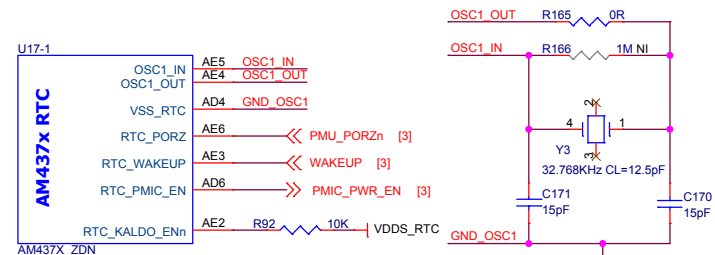
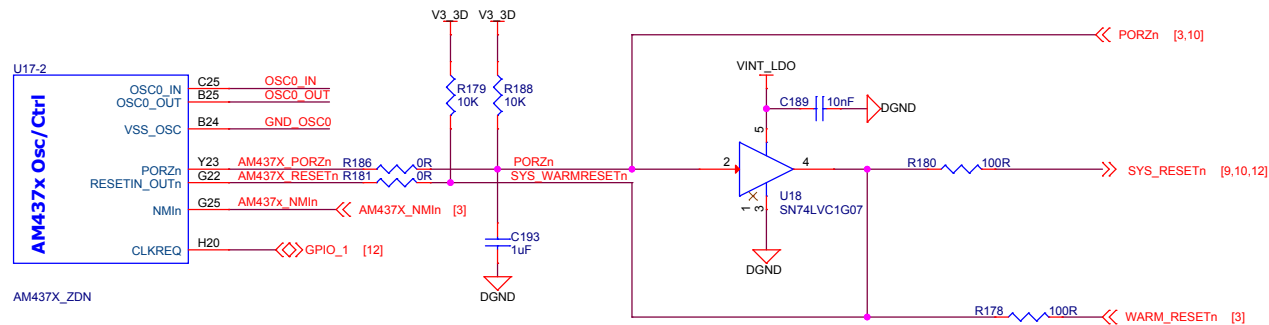
DATE	REVISION	DESCRIPTION
14 Jul 2016	1001001000503_SBC-EC8800 SCH Rev01A_160714	Initial Release

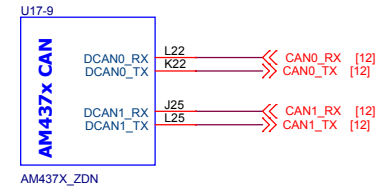
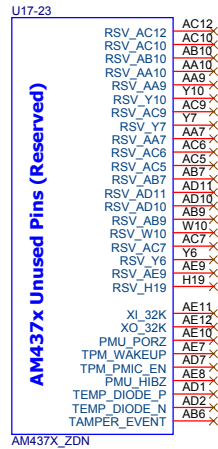
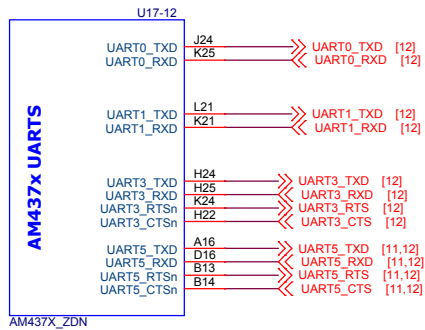
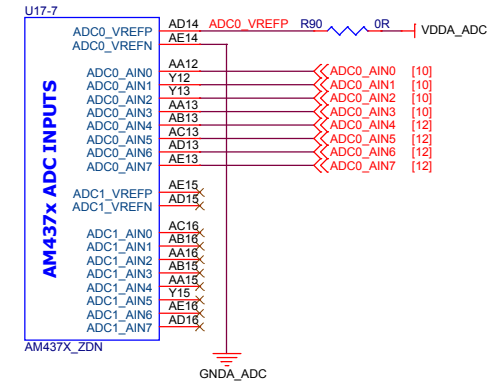
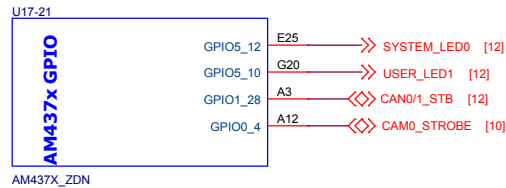
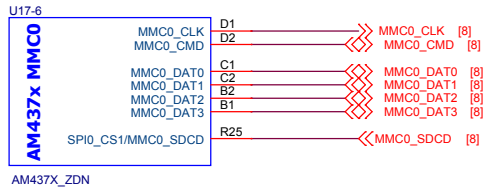
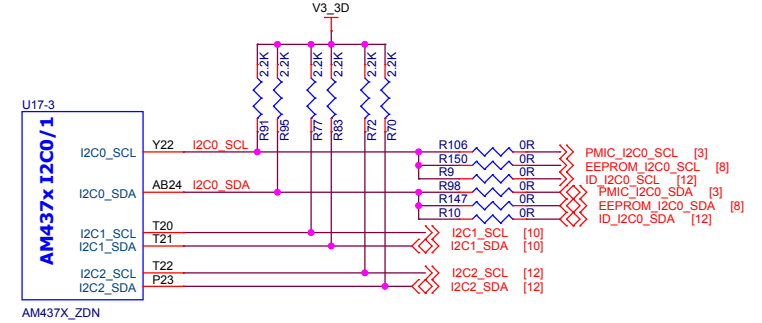
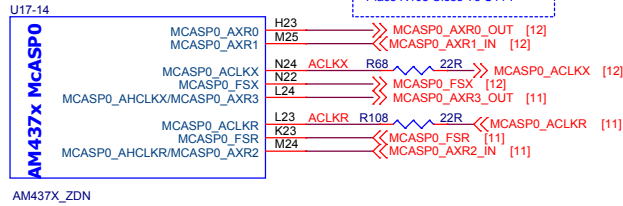
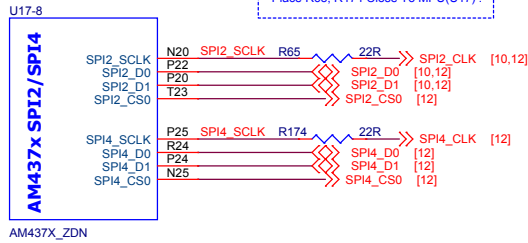


SBC-EC8800 Block Diagram



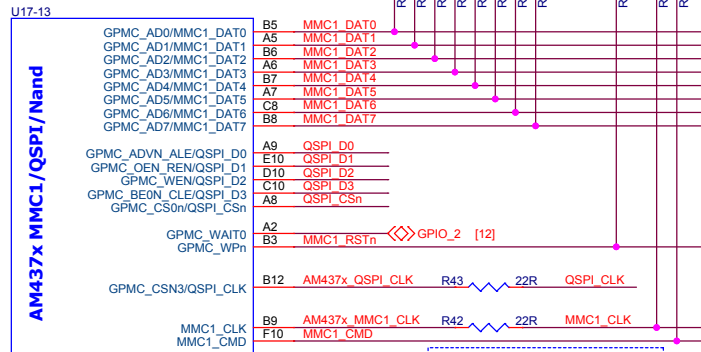










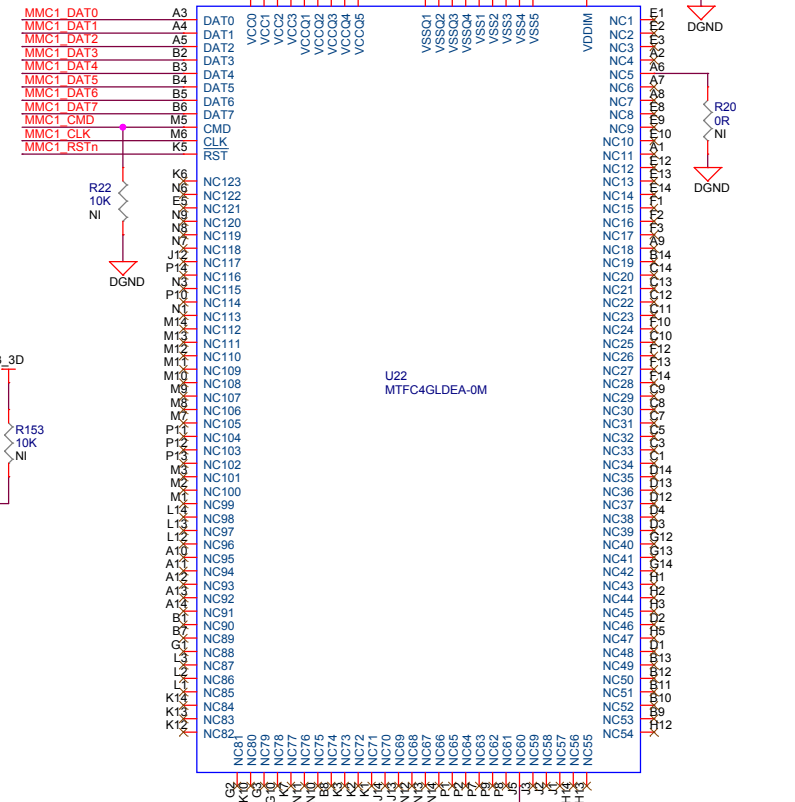
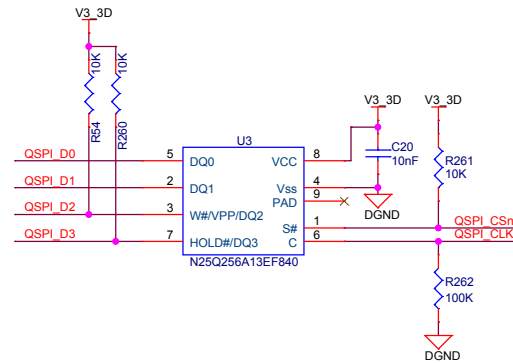
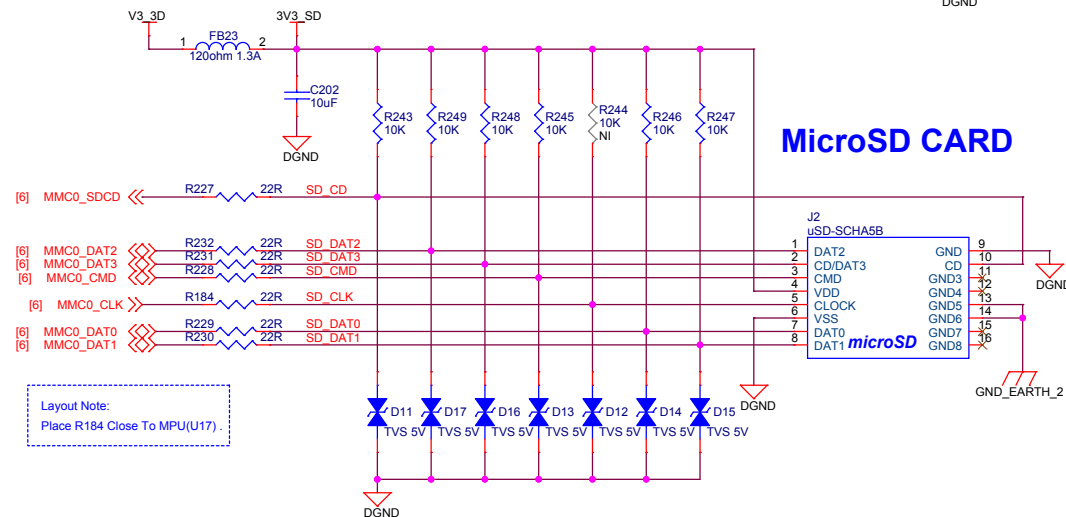


AM437X\_ZDN

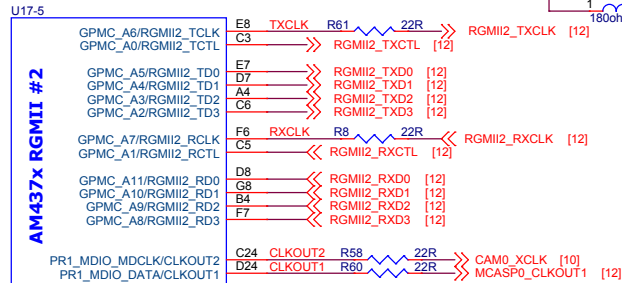
Layout Note:  
Place R43, R42 Close To MPU(U17).

Layout Note:

The MMC1, MMC0, QSPI signals must be length-matched :  
That is:  
The MMC1\_\* group should be matched within 300 Mil (7.62 mm).  
The MMC0\_\* group should be matched within 300 Mil (7.62 mm).  
The QSPI\_\* group (Included the net to J11 of Page 12) should be matched within 200 Mil (5.08 mm).

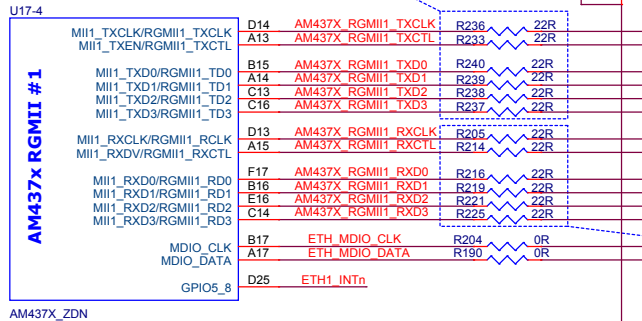




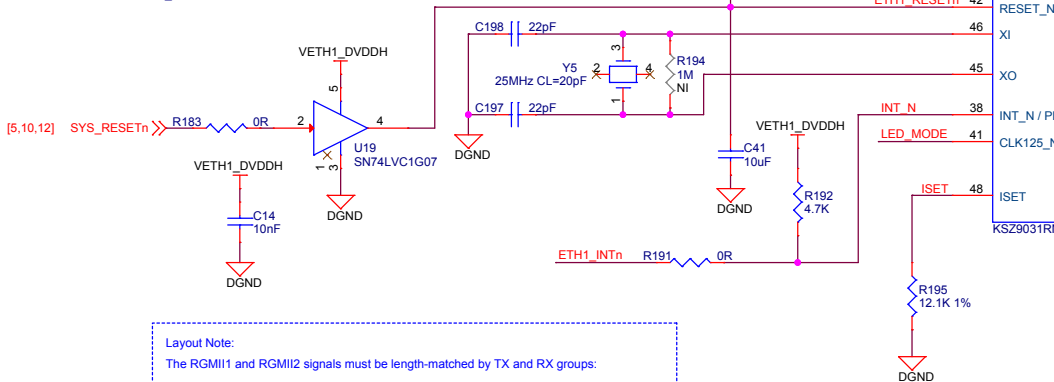


Layout Note:  
Place R61 Close To MPU(U17) .  
Place R8 Close To J11 .  
Place R58, R60 Close To MPU(U17) .

Layout Note:  
Place R\* Close To MPU(U17) .

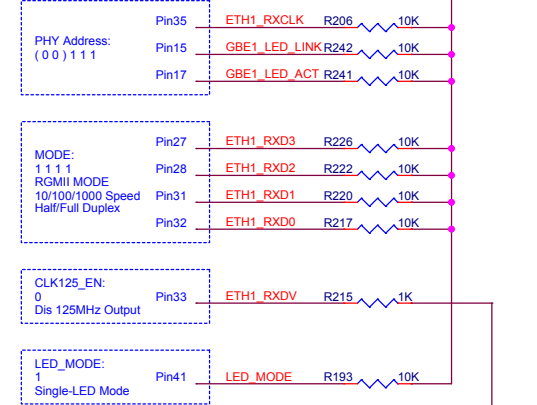


Layout Note:  
Place R\* Close To PHY(U21) .



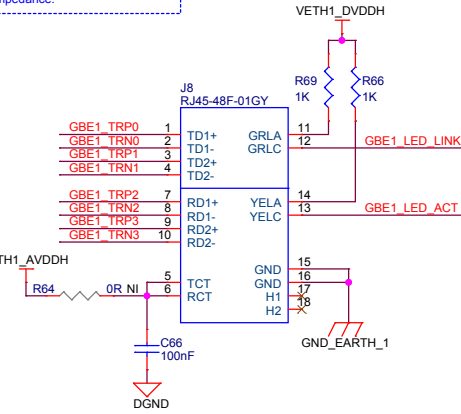
Layout Note:  
The RGMII1 and RGMII2 signals must be length-matched by TX and RX groups:  
That is, the TX group should be matched within 300 Mil (7.62 mm),  
and the RX group should be matched within 300 Mil (7.62 mm).  
Total length should not exceed 1750 Mil (44.5 mm).  
There is no requirement to match the TX and RX groups because their clocks are not related.

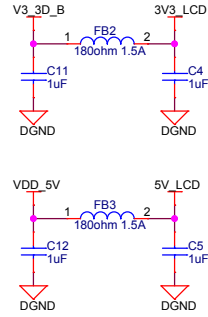
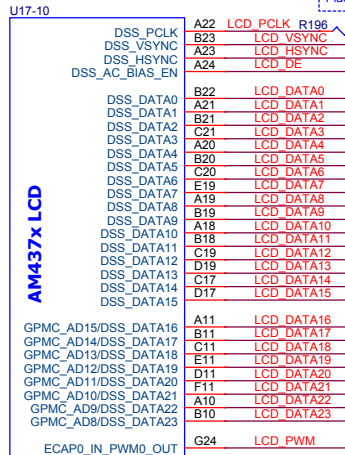
## Strapping Options:



Review Note:  
The KSZ9031RNX reduces board cost and simplifies board layout by using on-chip termination resistors for the four differential pairs, so no other resistors are needed.

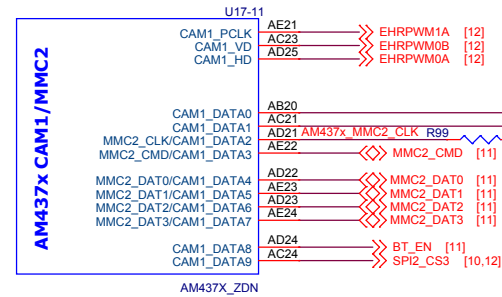
Layout Note:  
Max trace-length mismatch between GBE signals pairs should be no greater than 7 mm.  
100 ohms differential trace impedance.





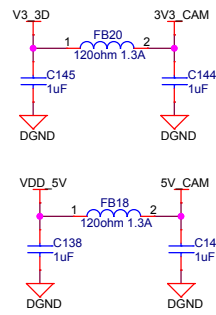
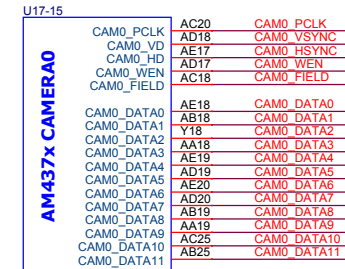
Layout Note:

The LCD, MMC2, Camera signals must be length-matched :  
That is:  
The LCD\_\* except LCD\_PWM group should be matched within 200 Mil (5.08 mm).  
The MMC2\_\* group should be matched within 300 Mil (7.62 mm).  
The CAM0\_\* group should be matched within 200 Mil (5.08 mm).



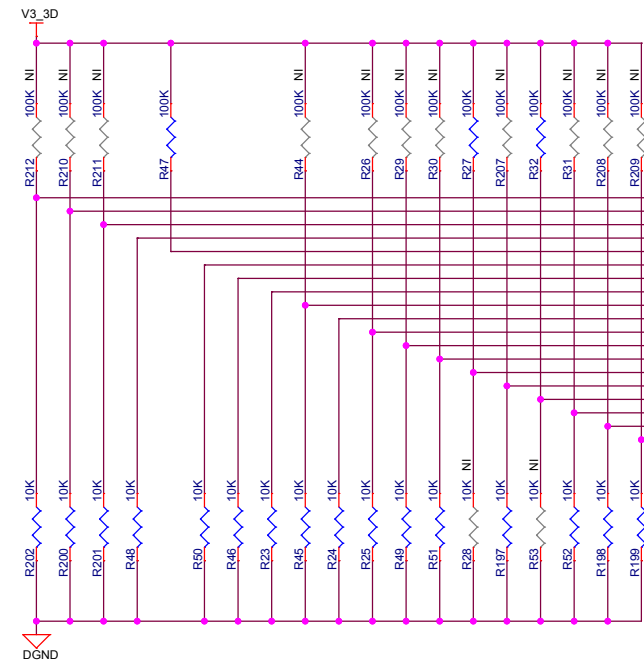
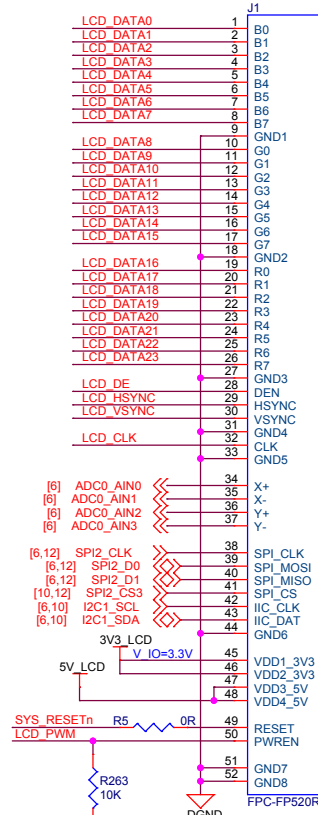
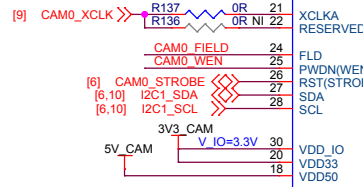
Layout Note:

Place R99 Close To MPU(U17) .

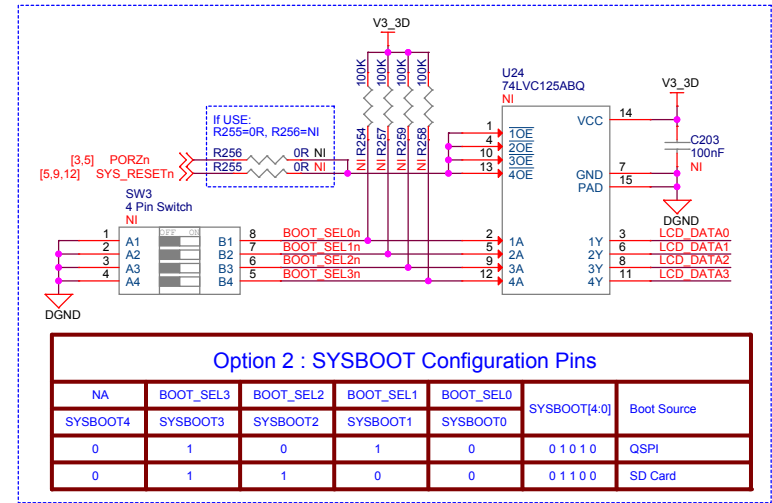
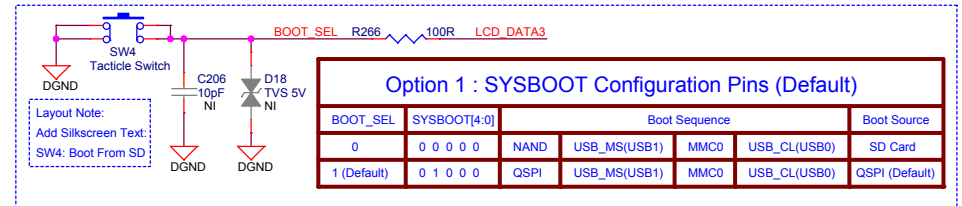


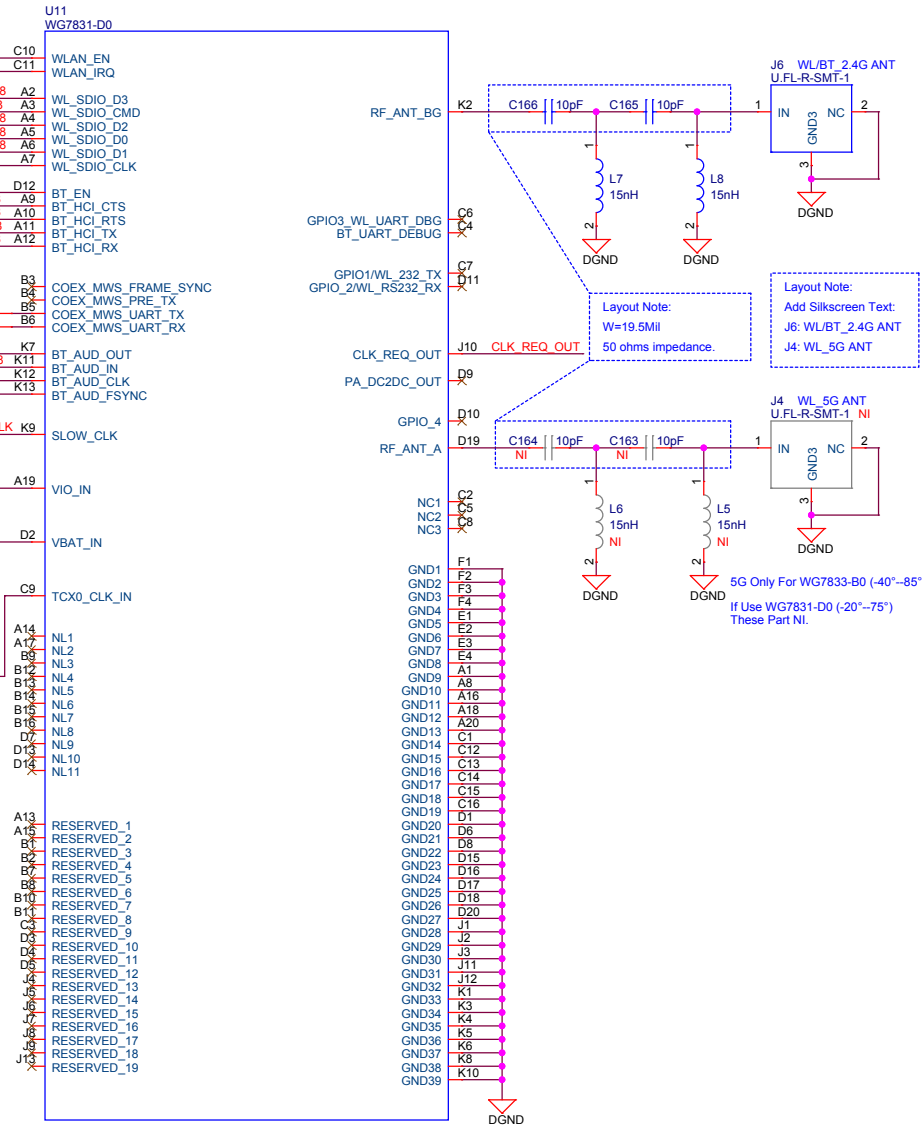
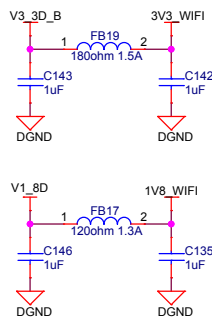
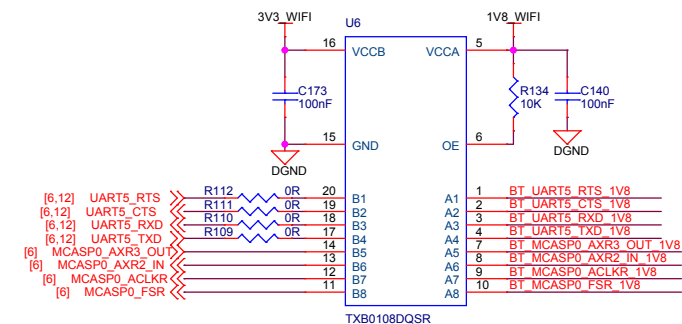
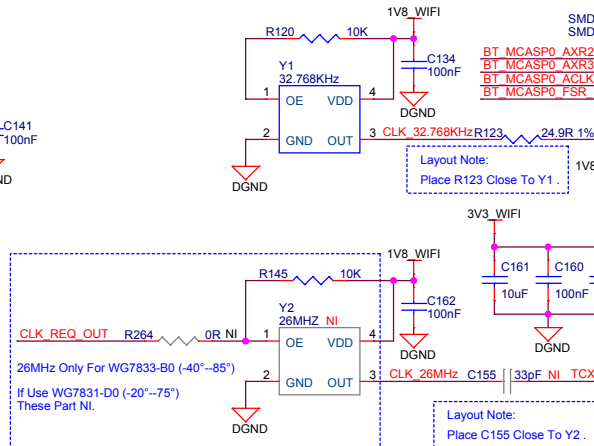
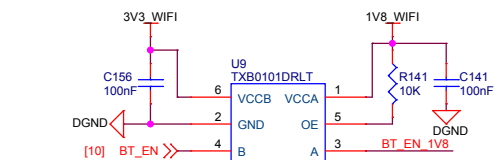
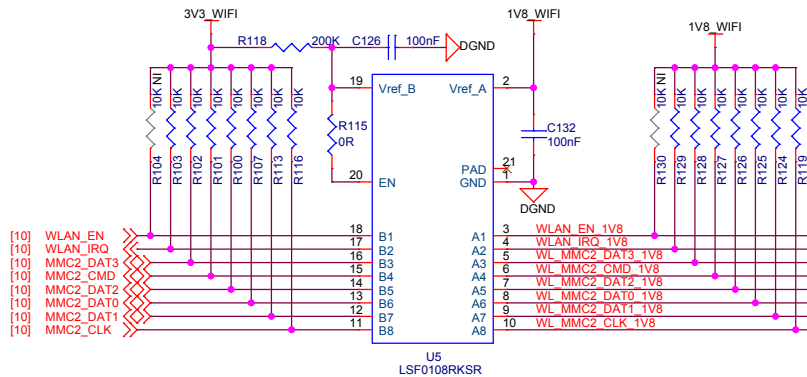
Layout Note:

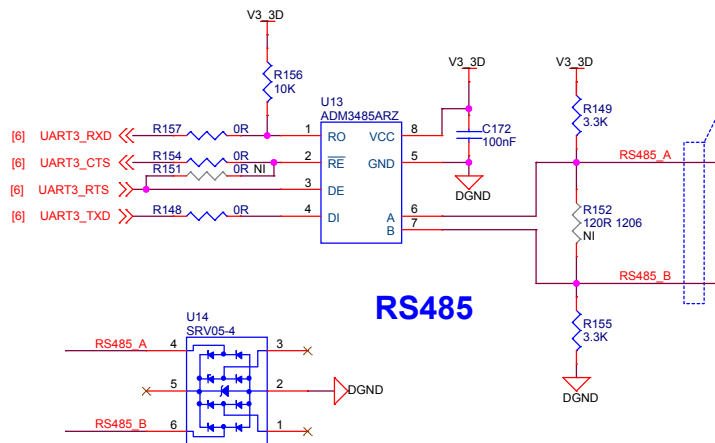
Place R135 Close To J3.



SYSBOOT18 = 0 LCD\_DE  
SYSBOOT17 = 0 LCD\_HSYNC  
SYSBOOT16 = 0 LCD\_VSYNC  
SYSBOOT15 = 0 LCD\_DATA15  
SYSBOOT14 = 1 LCD\_DATA14  
SYSBOOT13 = 0 LCD\_DATA13  
SYSBOOT12 = 0 LCD\_DATA12  
SYSBOOT11 = 0 LCD\_DATA11  
SYSBOOT10 = 0 LCD\_DATA10  
SYSBOOT9 = 0 LCD\_DATA9  
SYSBOOT8 = 0 LCD\_DATA8  
SYSBOOT7 = 0 LCD\_DATA7  
SYSBOOT6 = 0 LCD\_DATA6  
SYSBOOT5 = 1 LCD\_DATA5  
SYSBOOT4 = 0 LCD\_DATA4  
SYSBOOT3 = 1 LCD\_DATA3  
SYSBOOT2 = 0 LCD\_DATA2  
SYSBOOT1 = 0 LCD\_DATA1  
SYSBOOT0 = 0 LCD\_DATA0

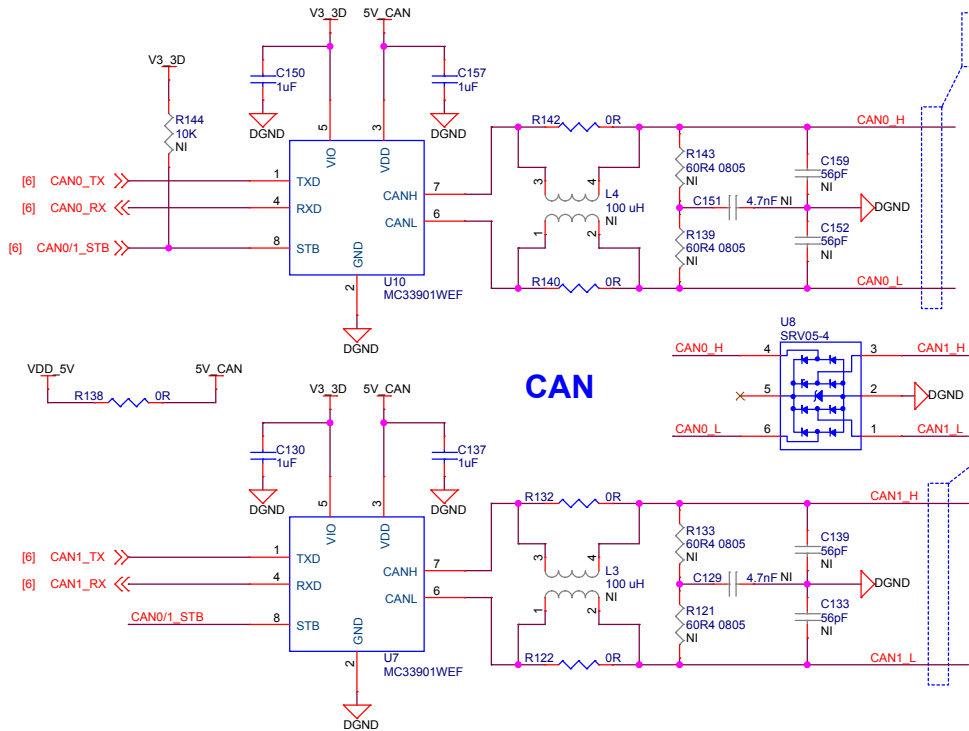
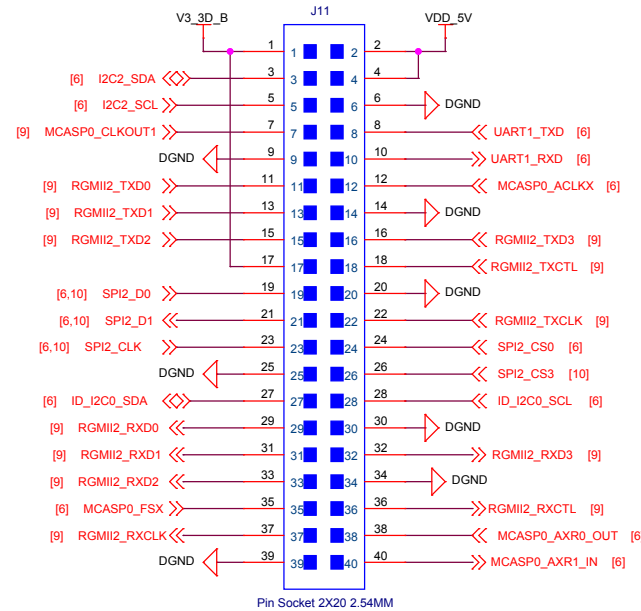
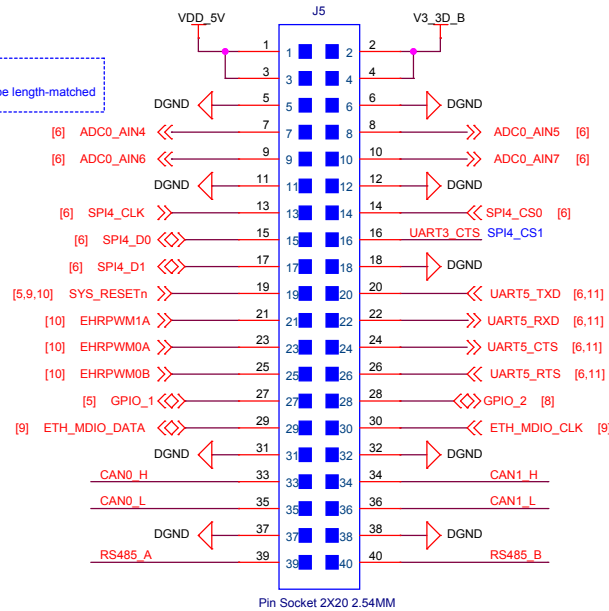






## RS485

**Layout Note:**  
The RGMII2 signals must be length-matched by TX and RX groups:  
That is, the TX group should be matched within 300 Mil (7.62 mm),  
and the RX group should be matched within 300 Mil (7.62 mm).  
Total length should not exceed 1750 Mil (44.5 mm).  
There is no requirement to match the TX and RX groups because their clocks are not related.



**Layout Note:**  
Signals must be length-matched

**Layout Note:**  
Signals must be length-matched

## Debug

