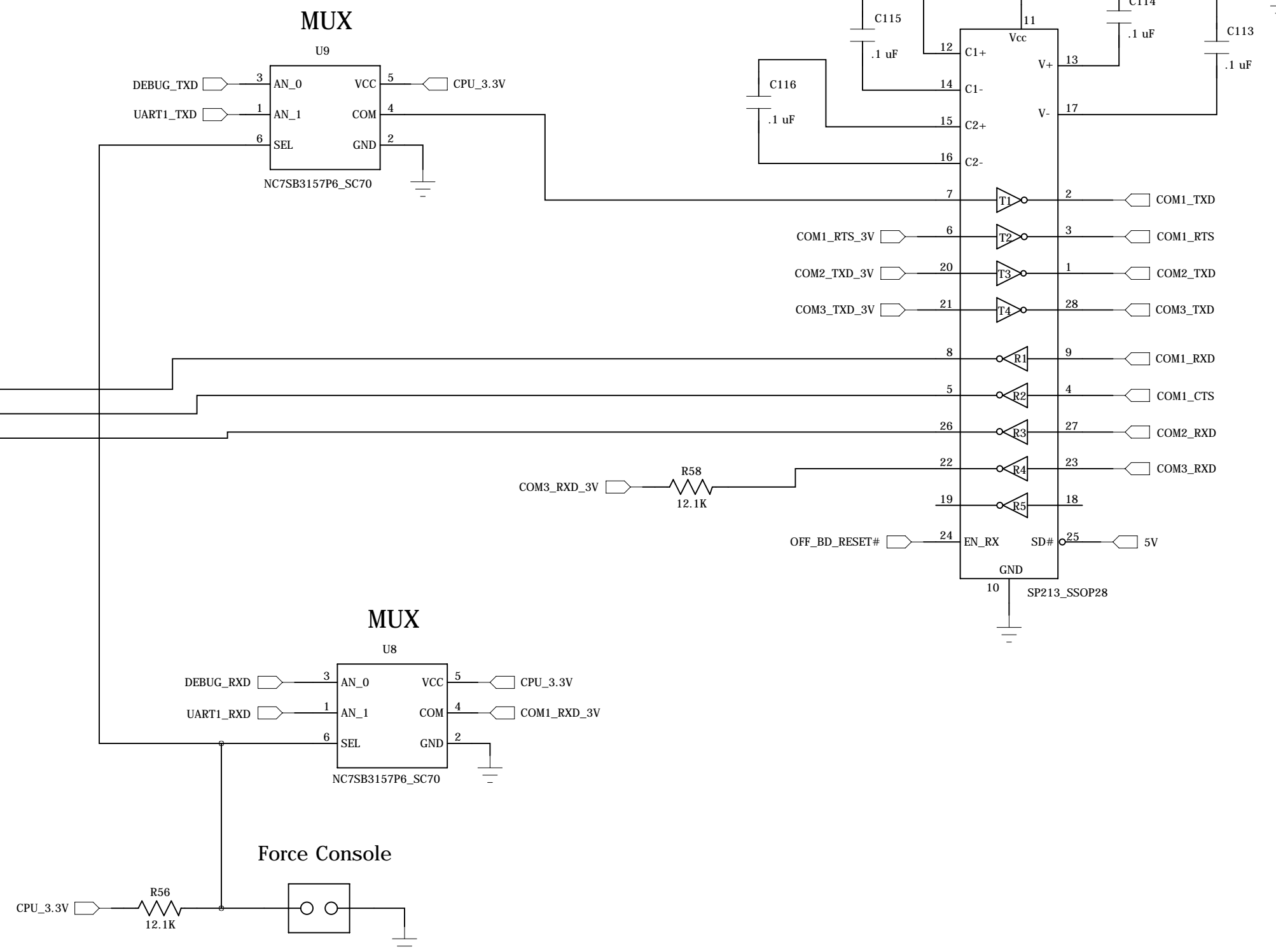
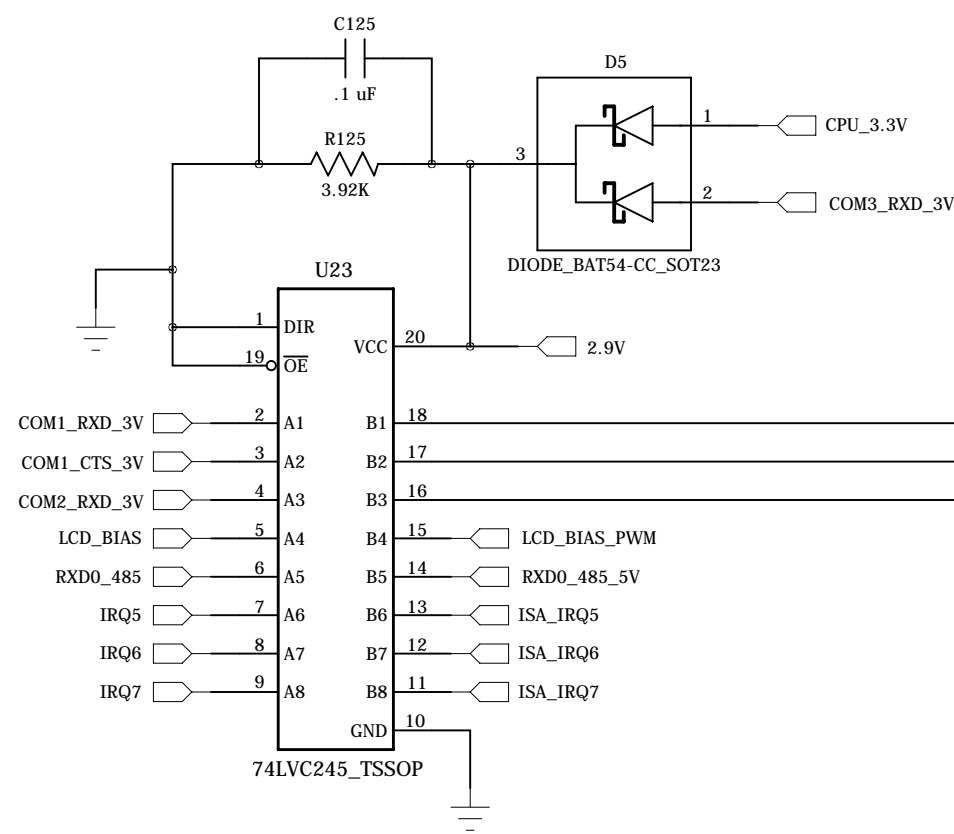
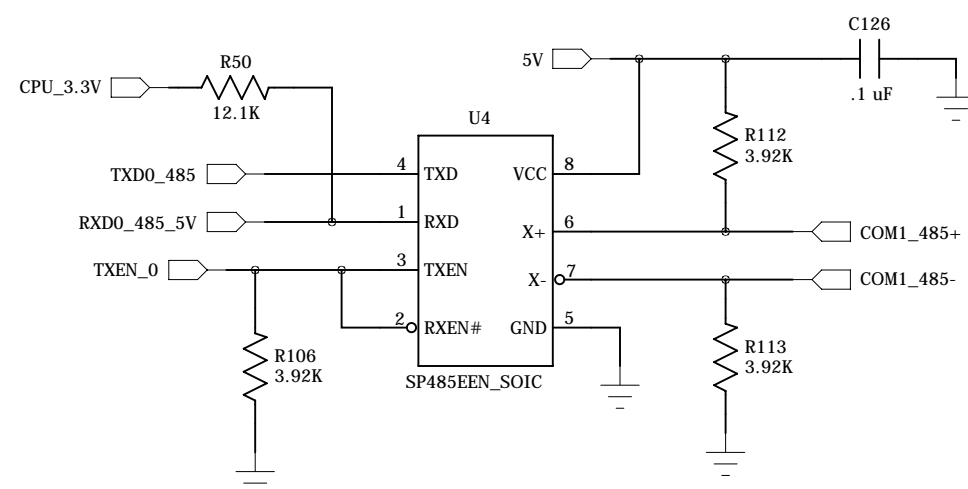


RS-232 Transceiver

2.9V <-- 5V Level shifter



COM1 RS-485 Driver

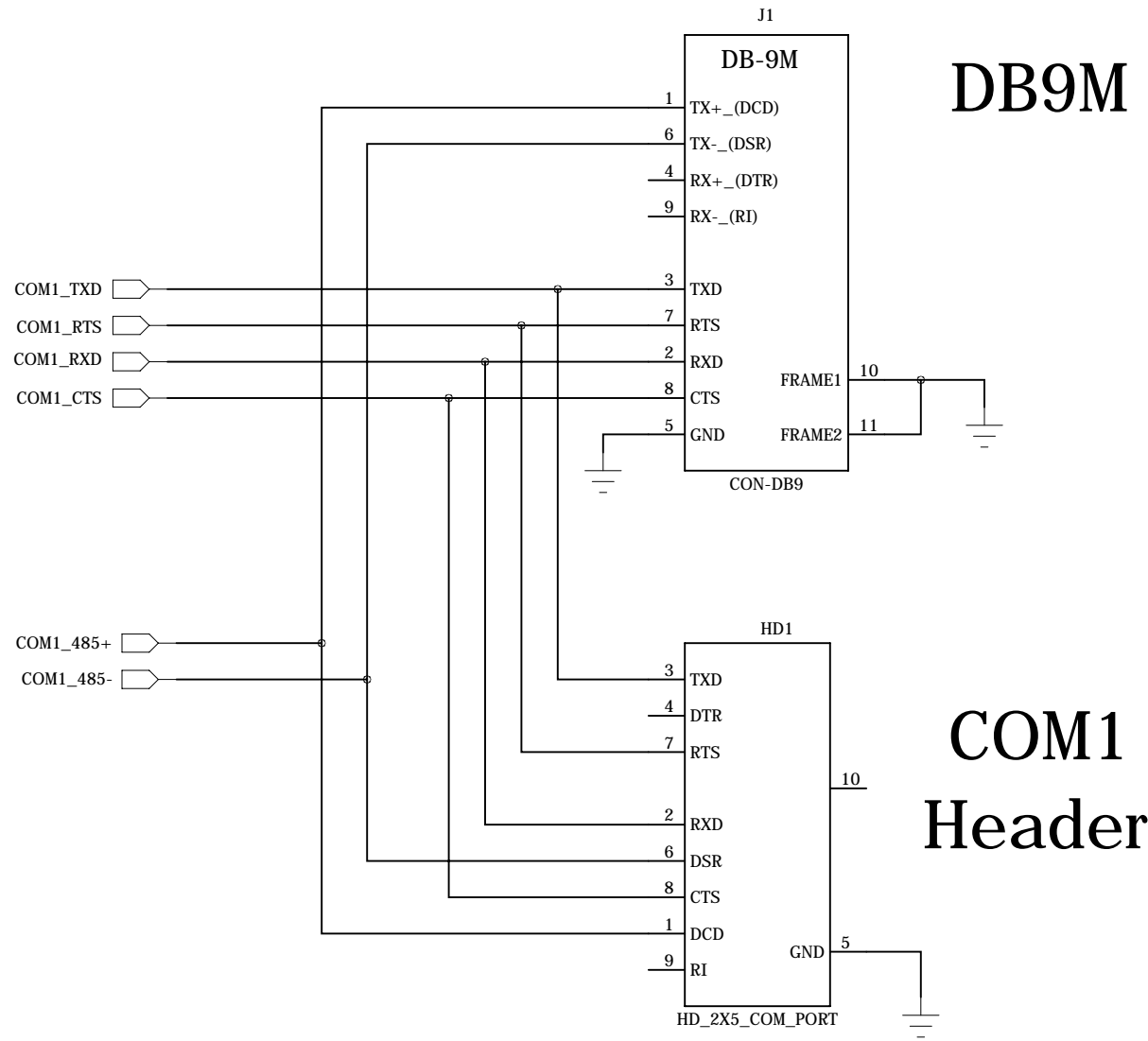


Rev.A to Rev.B Changes

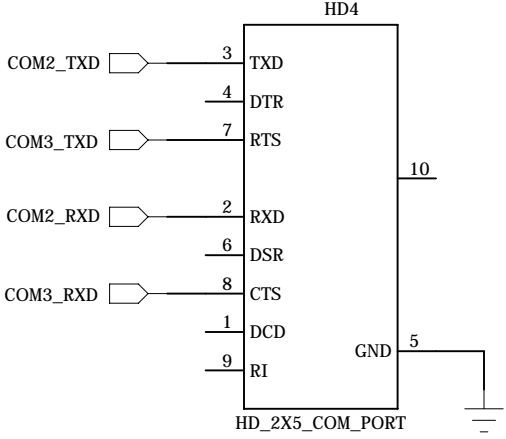
added C44 (10 uF 50V) for EMI

COM Connectors and Headers

COM1



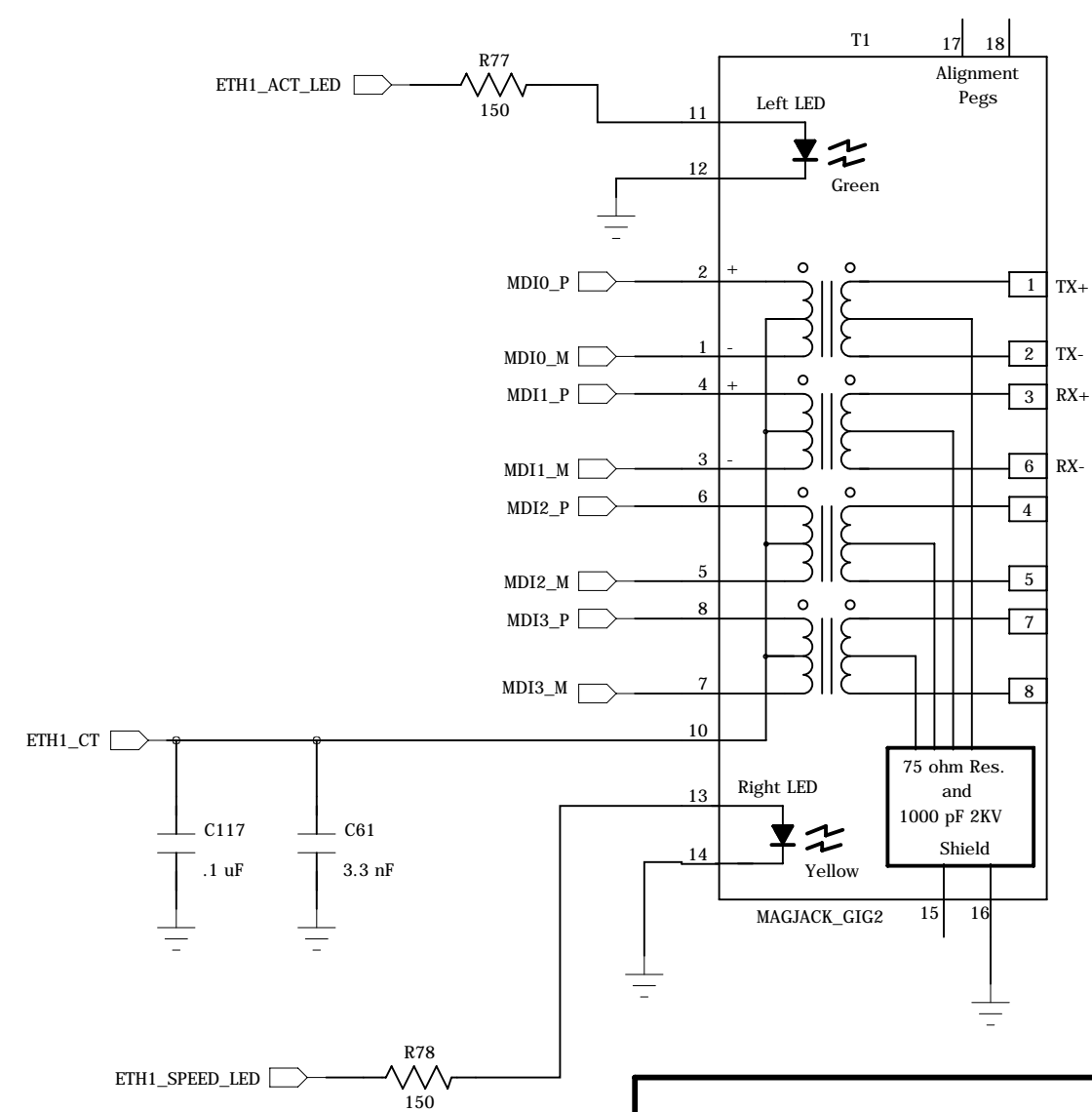
COM2 Header



Beware Non-standrd pin-out

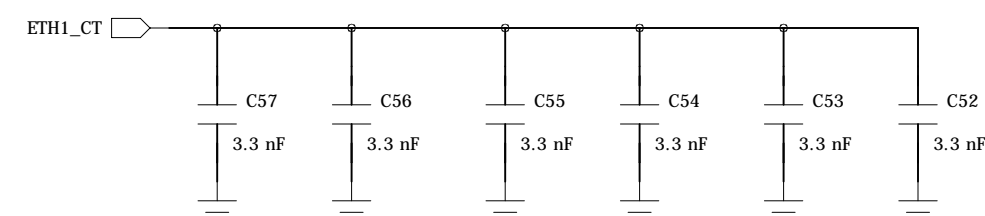
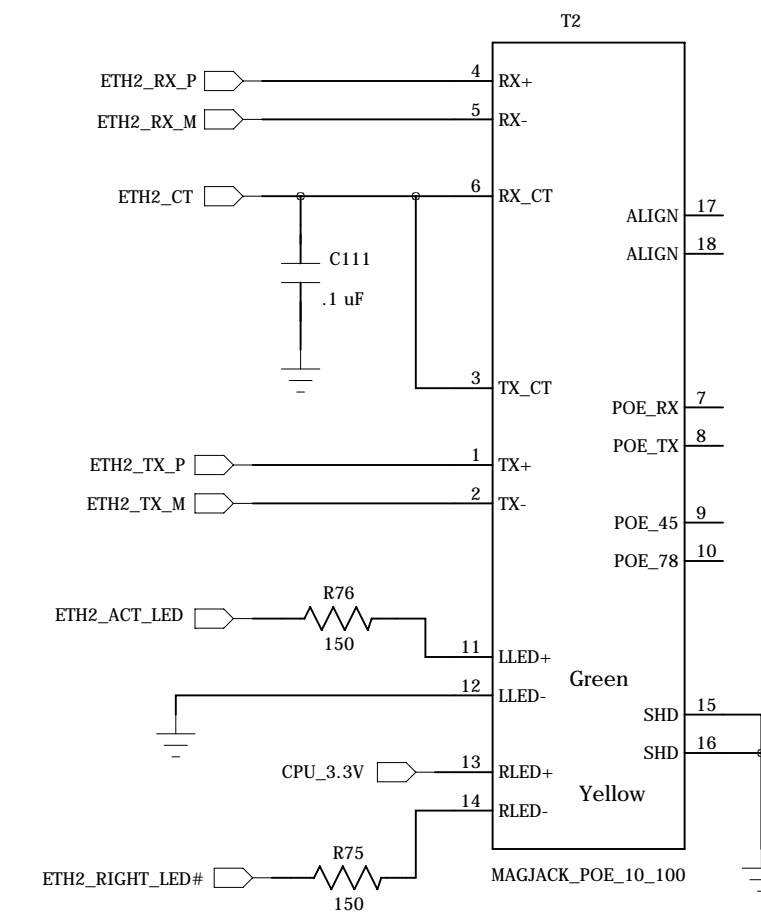
Ethernet Ports

Port #1 Gig MagJack



Note: Pin 15 not connected for this TS-8150 layout only because both MagJacks share a hole

Port #2 10/100 MagJack



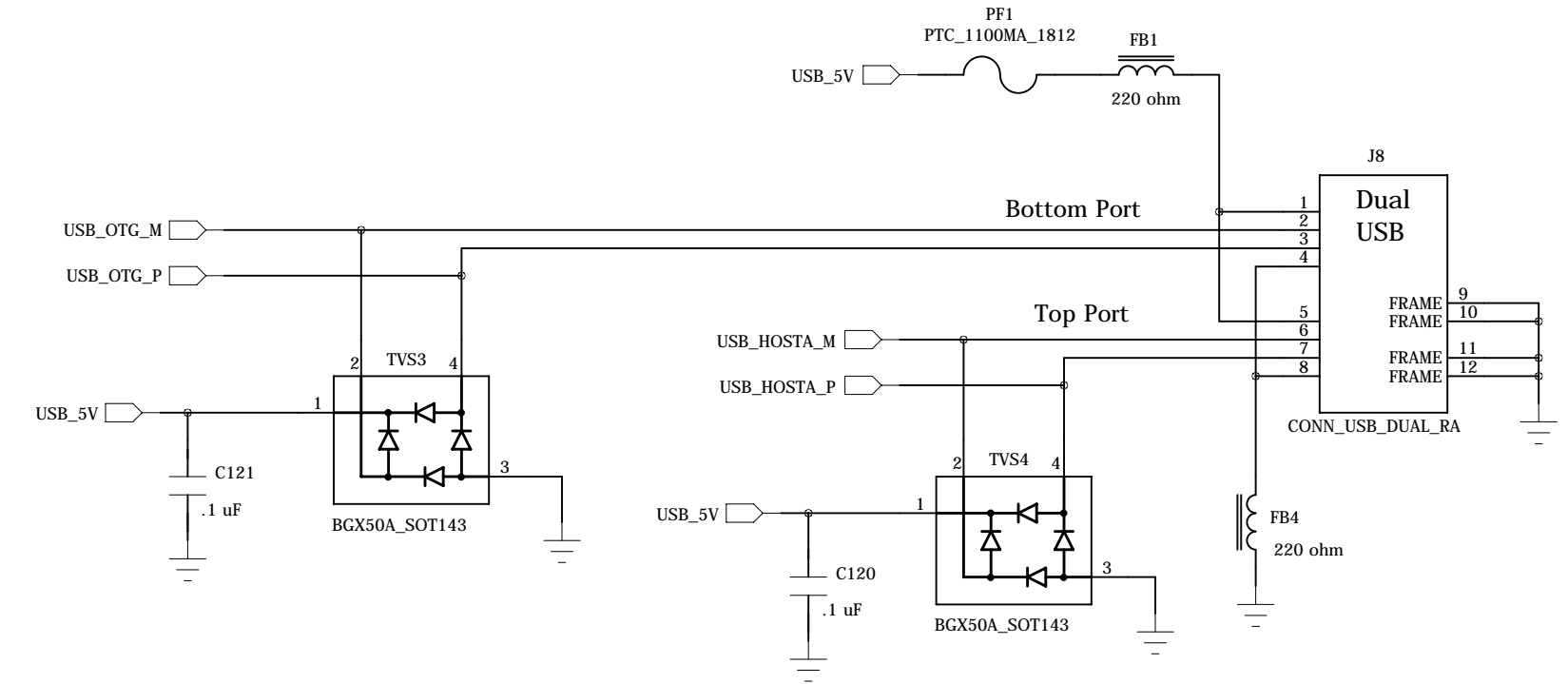
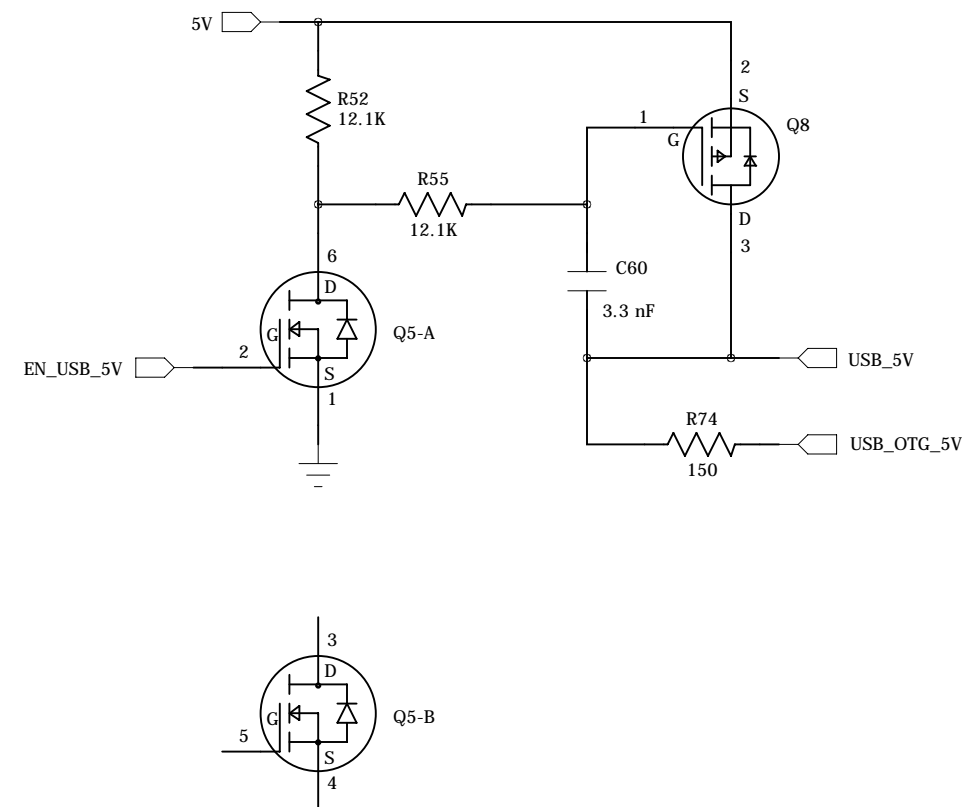
These caps tie ETH1_CT plane to GND plane

Technologic Systems	April 8, 20143
Title: TS-8150 Ethernet Ports	
Rev: B	Designer
Sheet 3 of 9	

USB Ports

External Dual USB

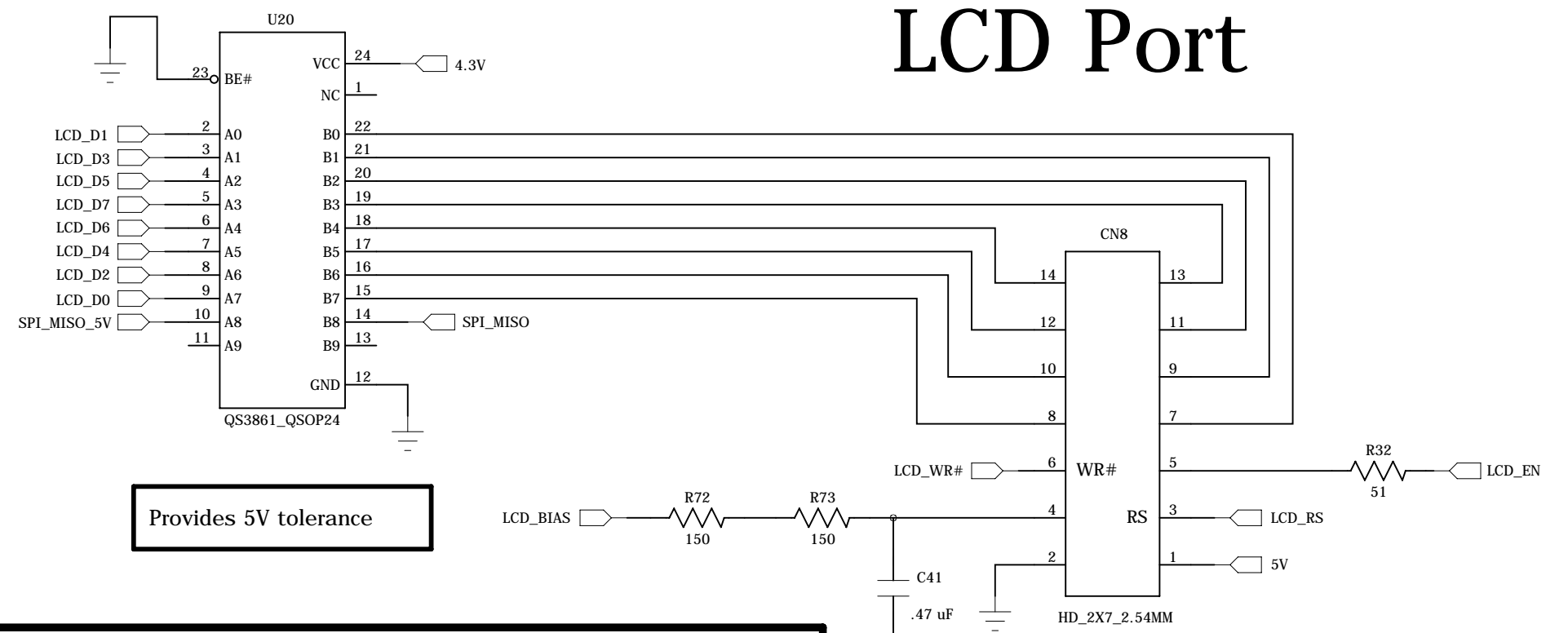
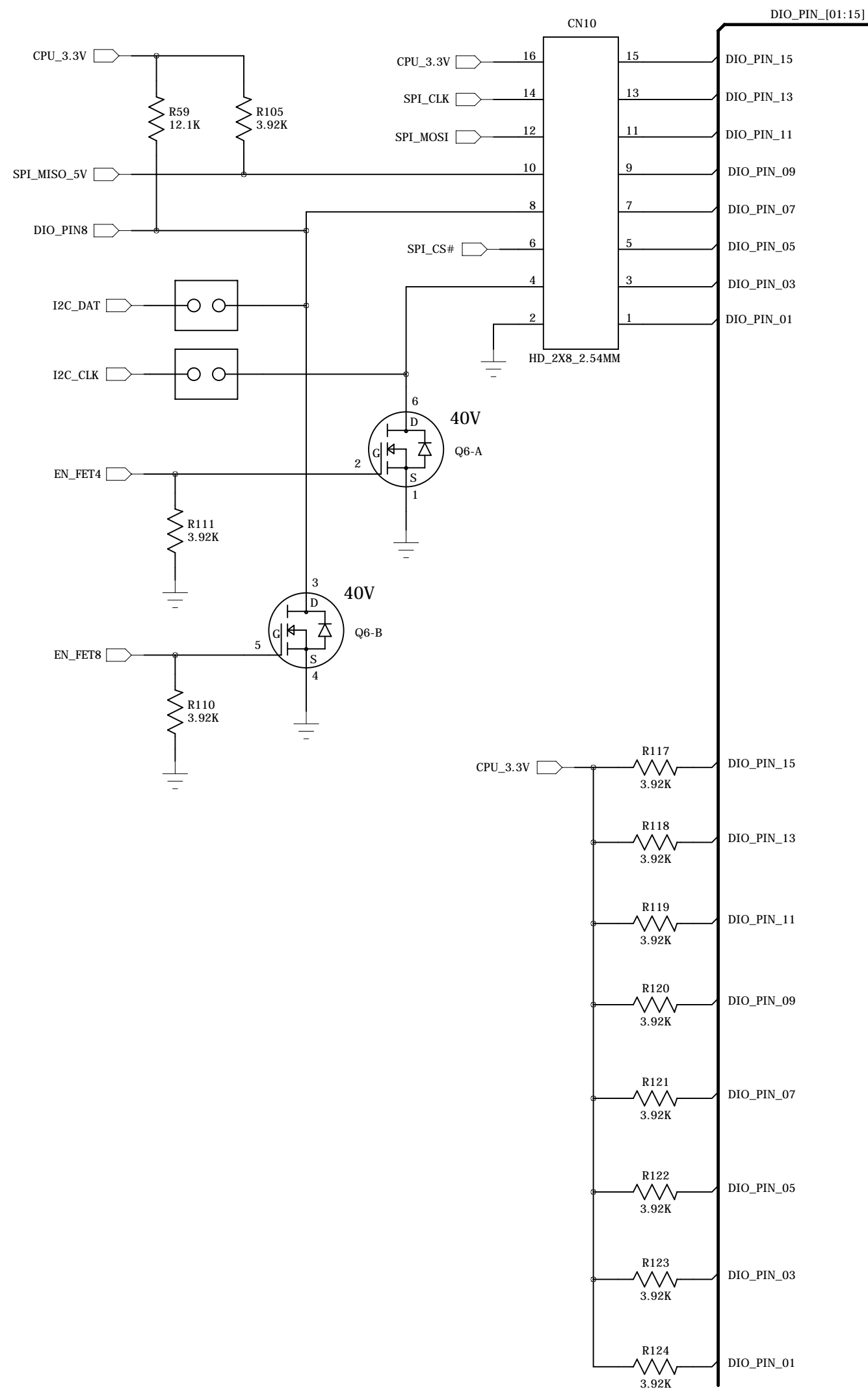
External USB Power Switch



DIO and LCD

Jumpers labeled "I2C" on PCB and "DIO8"

DIO Port



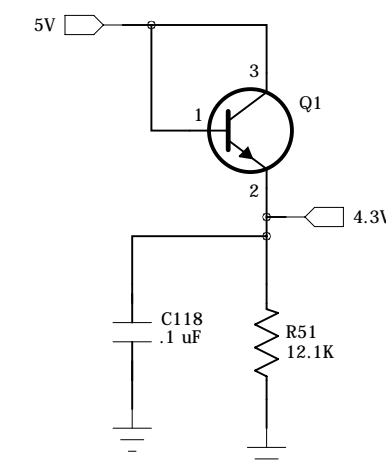
LCD Port

Warning:
LCD_D0 thru LCD_D7 are 5V tolerant
LCD_WR#, LCD_RS, and LCD_EN are not !

All LCD pins are bi-directional DIO

Warning:
DIO are not 5V tolerant !
Only SPI_MISO is 5V tolerant

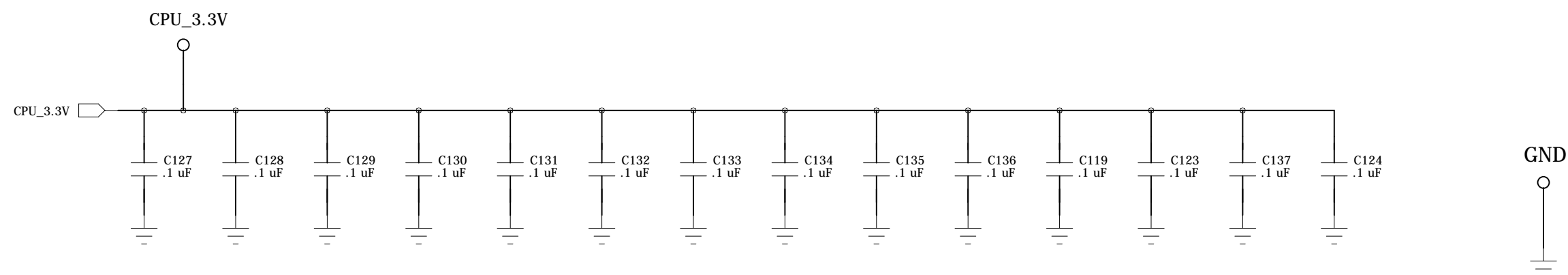
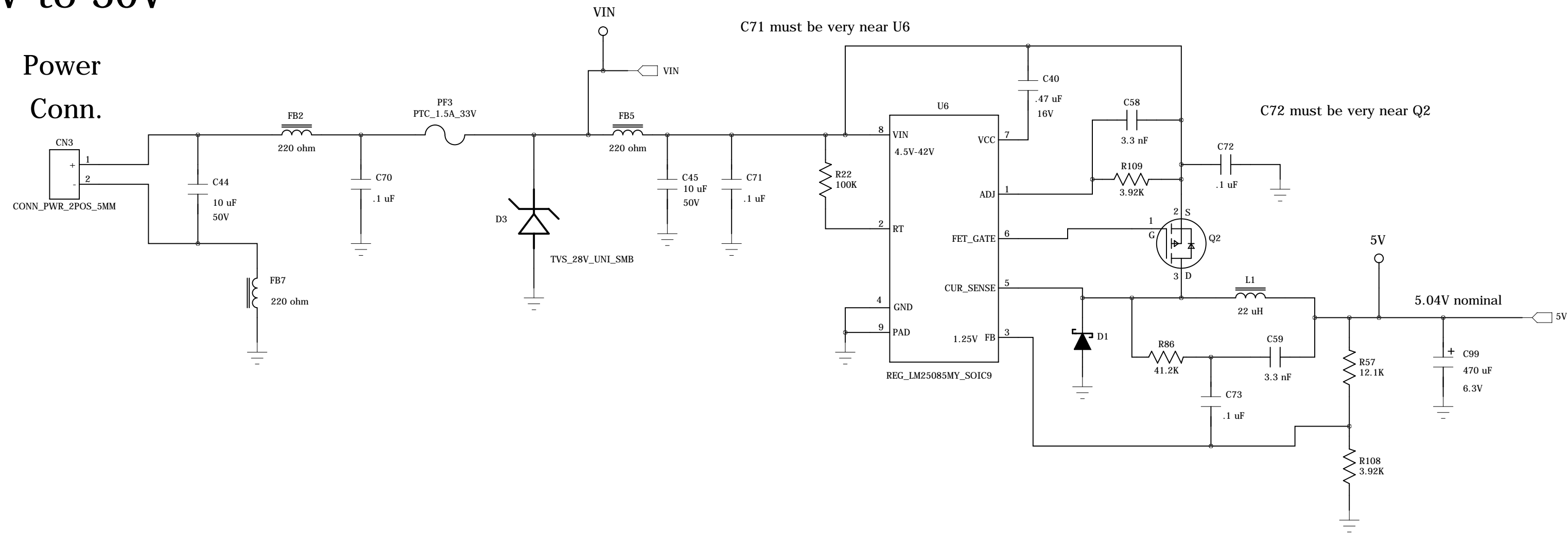
4.3V Supply



5V Power Supply (2.0 Amps)

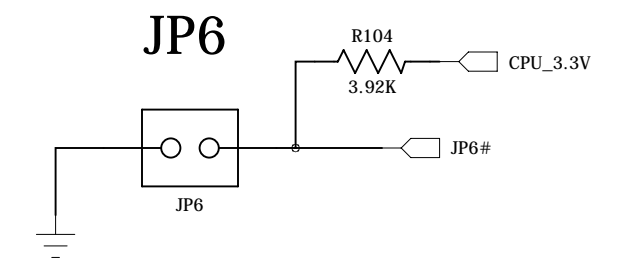
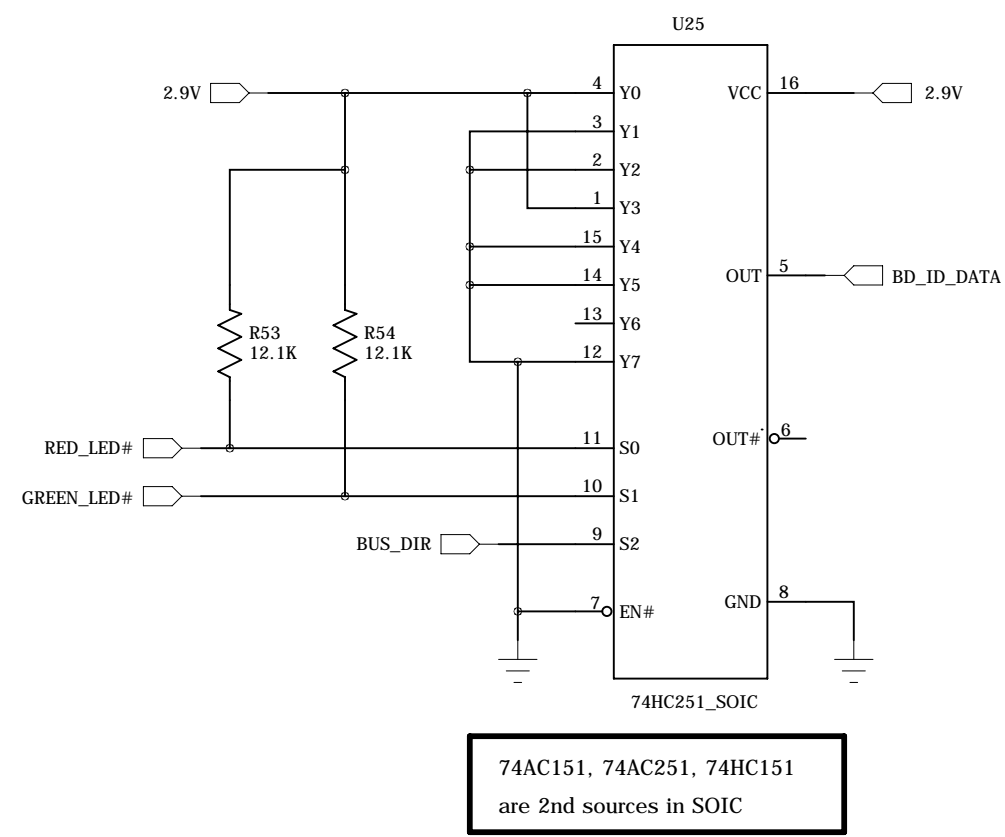
Input Power
5.0V to 30V

Power
Conn.

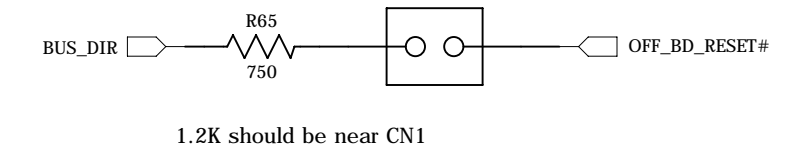


Technologic Systems	April 8, 20143
Title: TS-8150 5V Power	
Rev: B	Designer
Sheet 6 of 9	

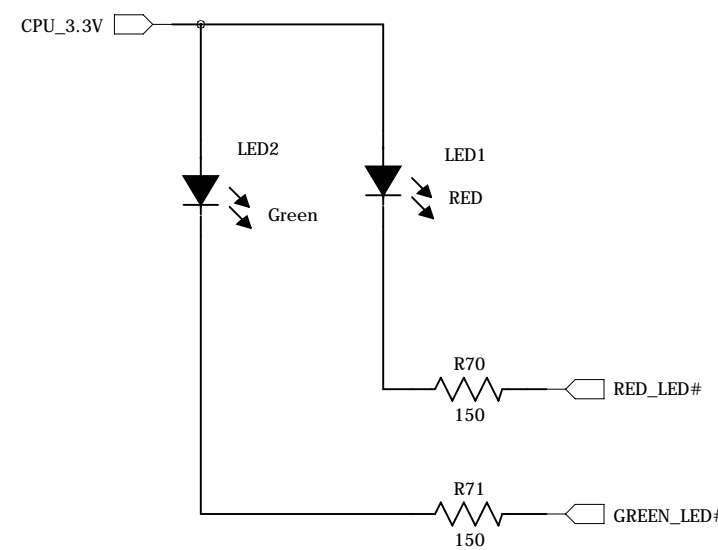
Board ID = 9



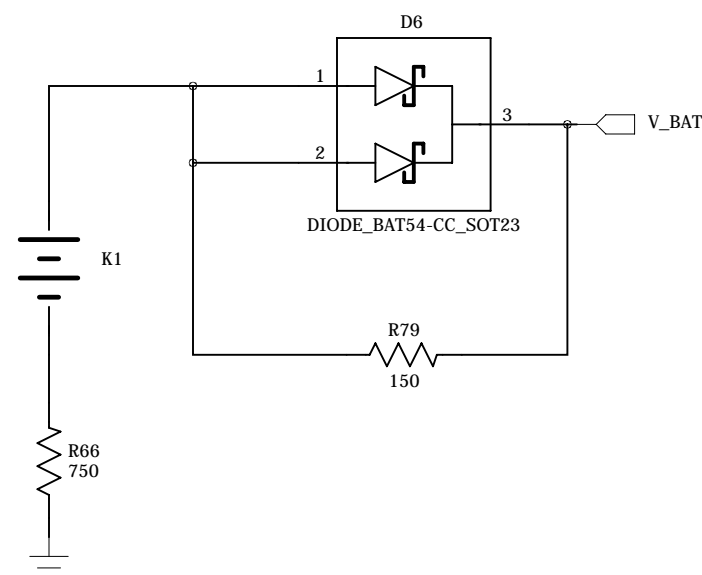
Force Boot to SD card



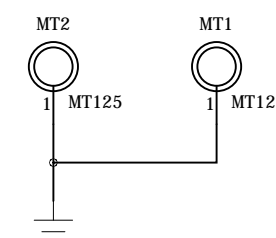
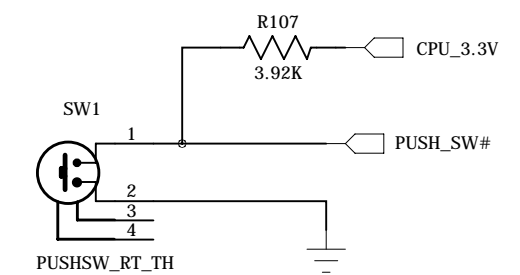
LEDs



RTC Battery



Push Switch



Technologic Systems	April 8, 20143
Title: TS-8150 Battery, Board ID, LEDs	
Rev: B	Designer RLM
Sheet 7 of 9	

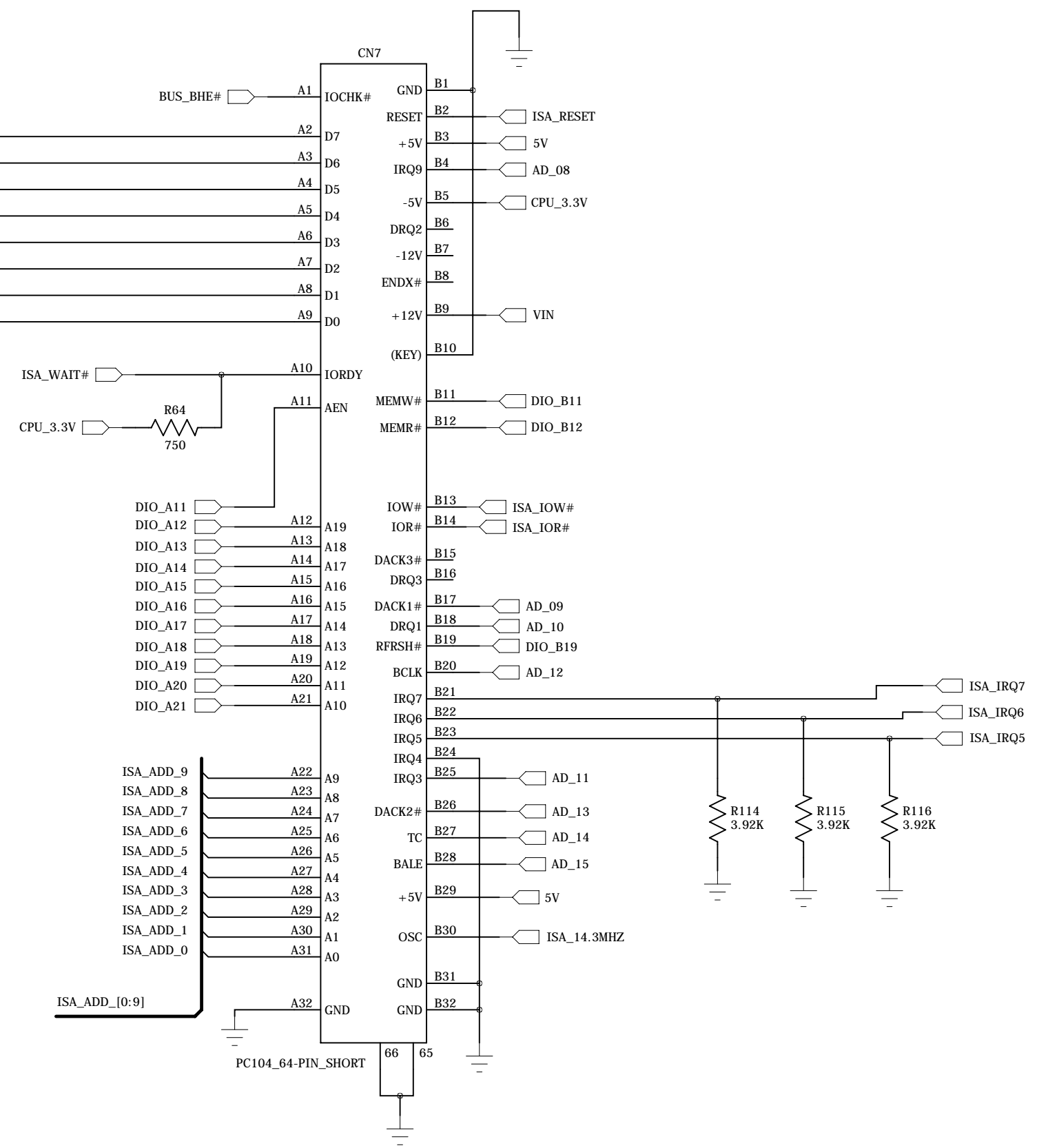
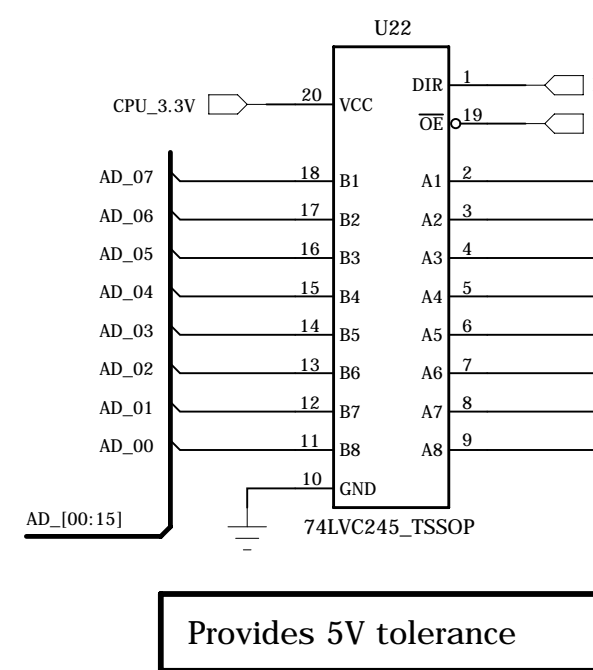
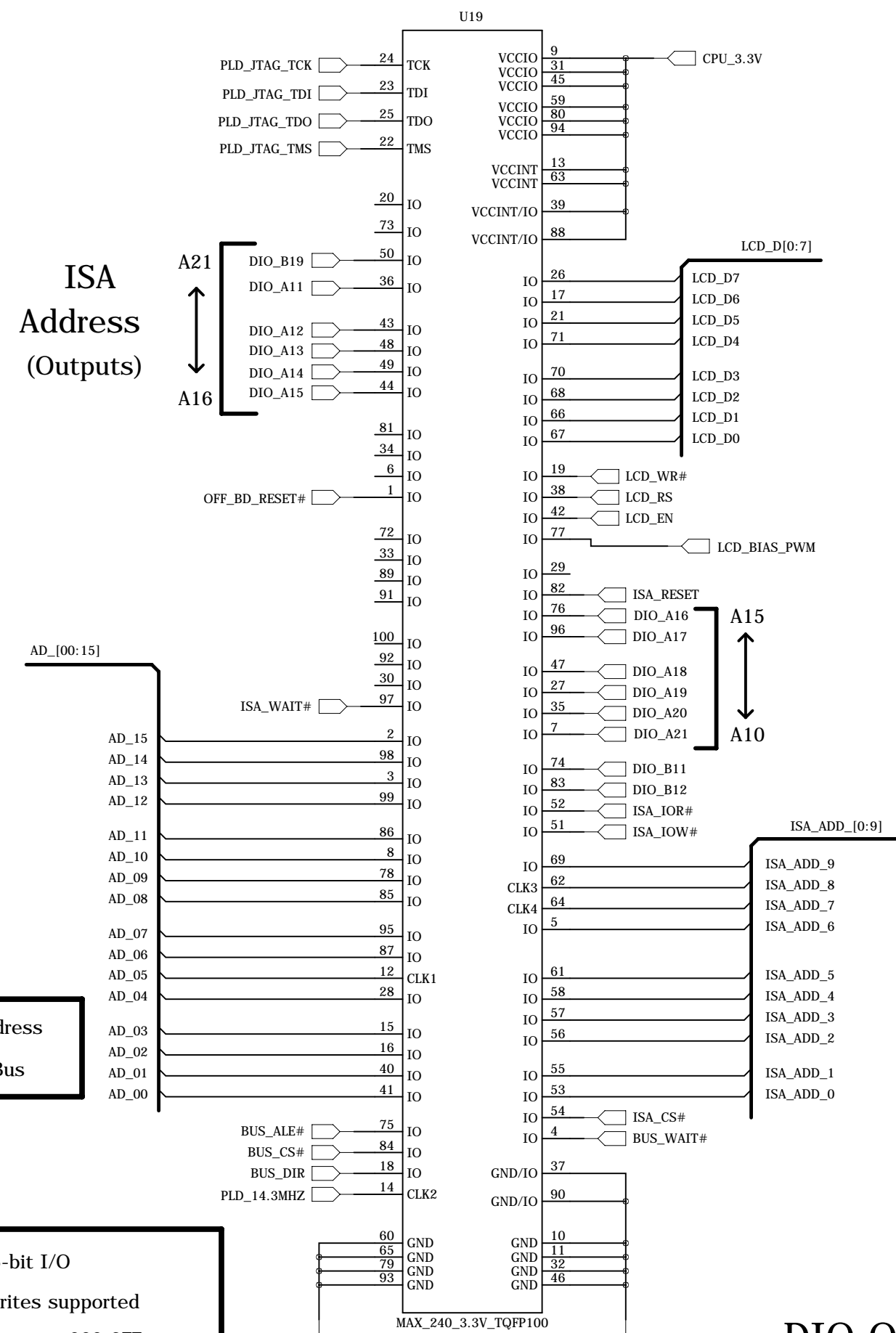
Inputs on Left

PLD

Outputs on Right

PC/104

64-pin Connector



MUXed Address and Data Bus

8-bit and 16-bit I/O
Read and Writes supported
over address range 000-3FF

Address range 100-3FF
drives PC/104 bus

Address range 000-0FF
is internal PLD registers

MAX240

Warning:
Make sure PLD pins
39 and 88 are Inputs

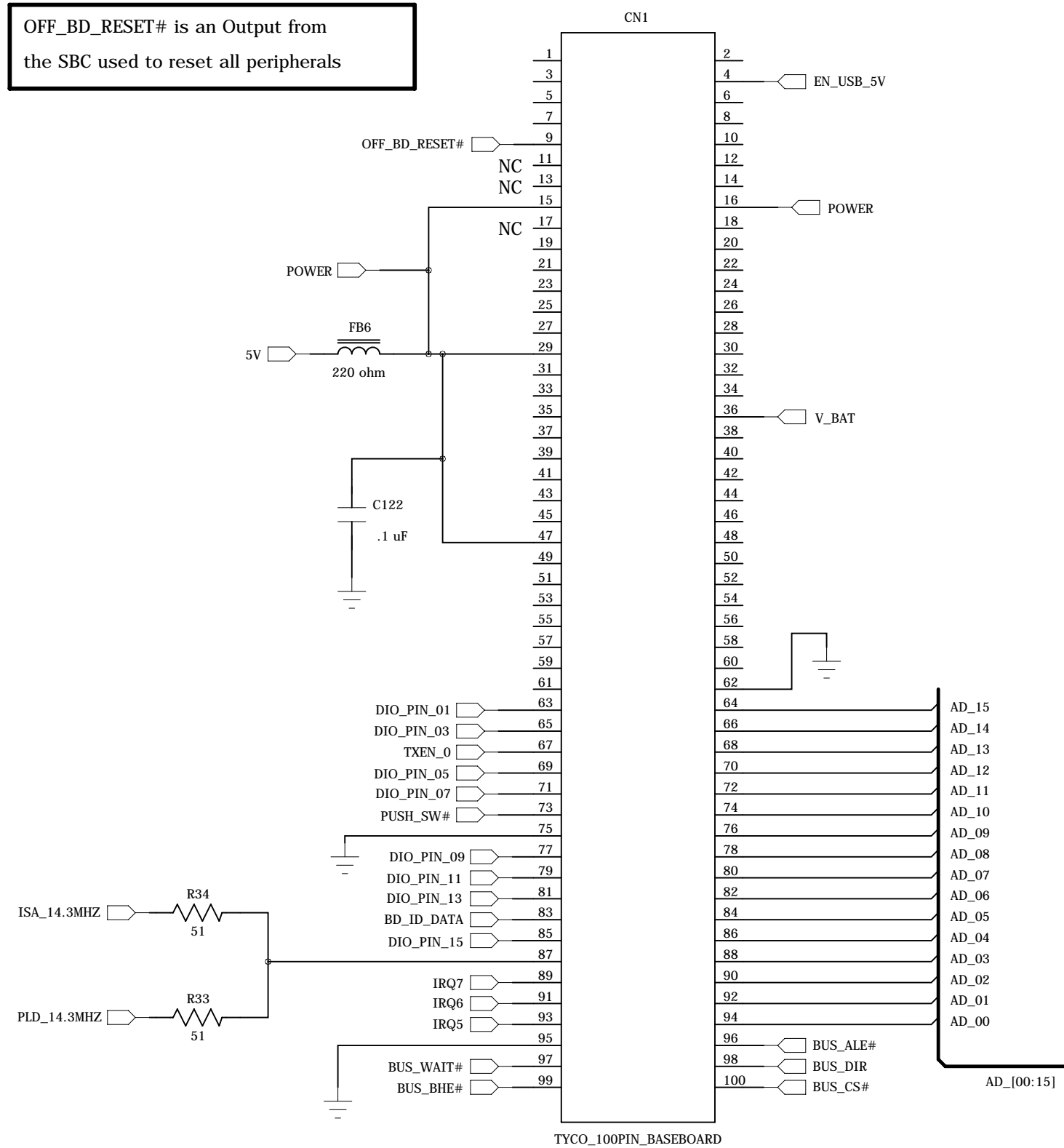
DIO Outputs
DIO_A11 thru DIO_A21 and LCD_EN
should default to logic zero

DIO_B11 and DIO_B12
should default to logic "1"

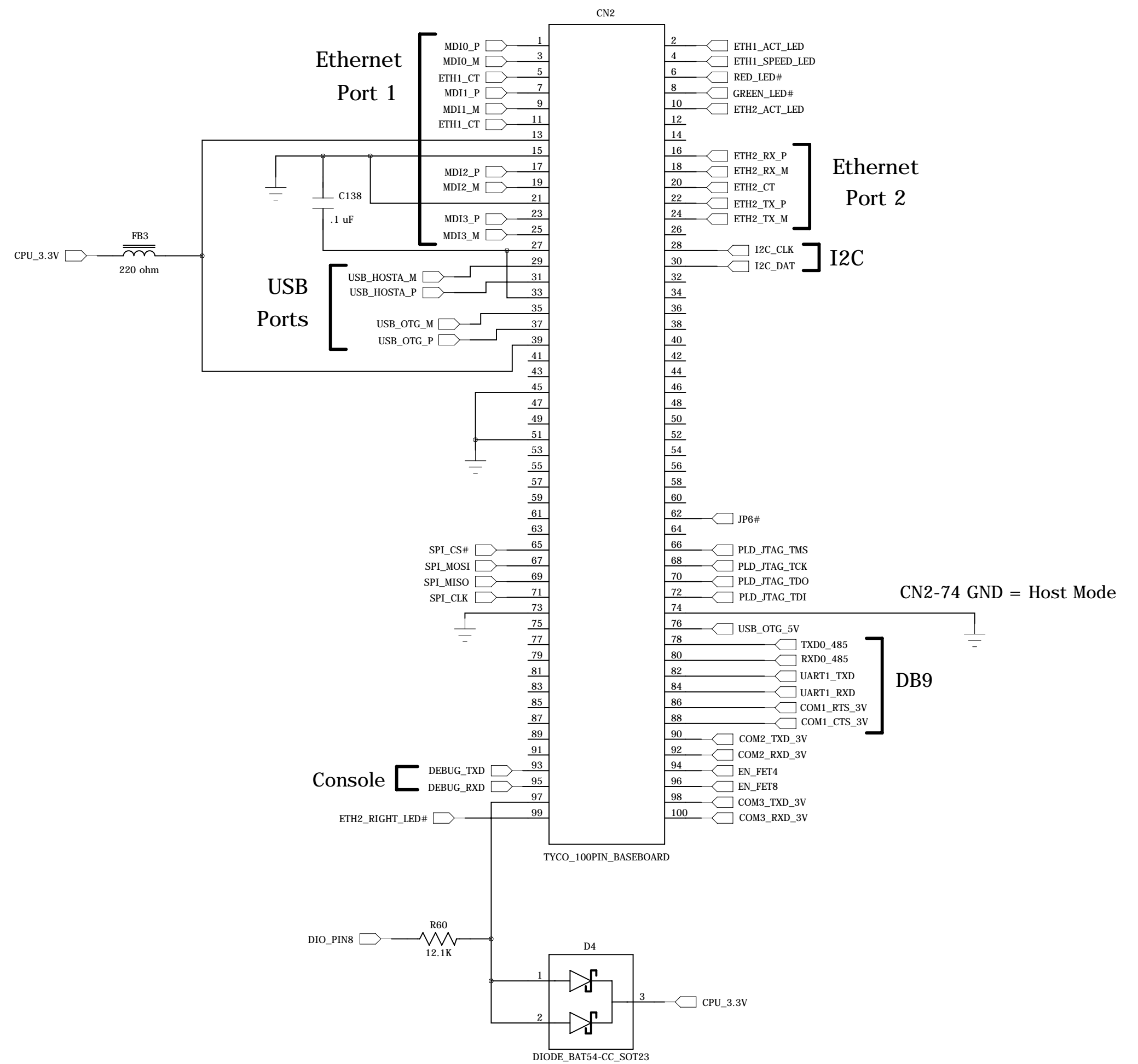
DIO Inputs
LCD_WR#, LCD_RS and
LCD_D0 thru LCD_D7
should default as Inputs

Two 100-pin Module Connectors

Left



Right



Boot Strap

BUS_DIR	SBC Boots from
1	NAND Flash
0	SD Card

BUS_DIR state is latched prior to OFF_BD_RESET# deasserted

BUS_DIR has a 12K pull-up resistor on the SBC module

Use 1.2K ohm resistor to OFF_BD_RESET# to strap logic low