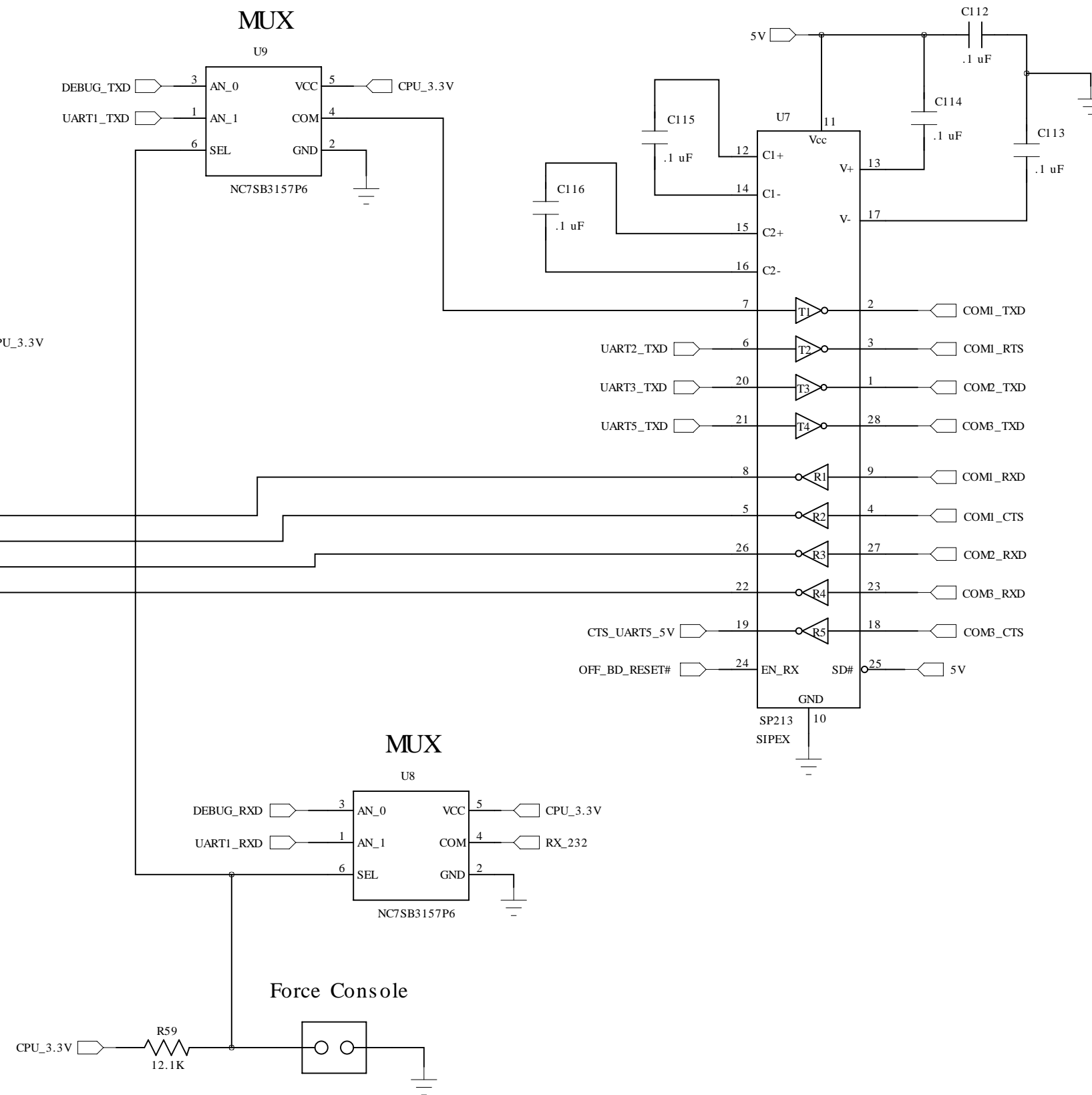
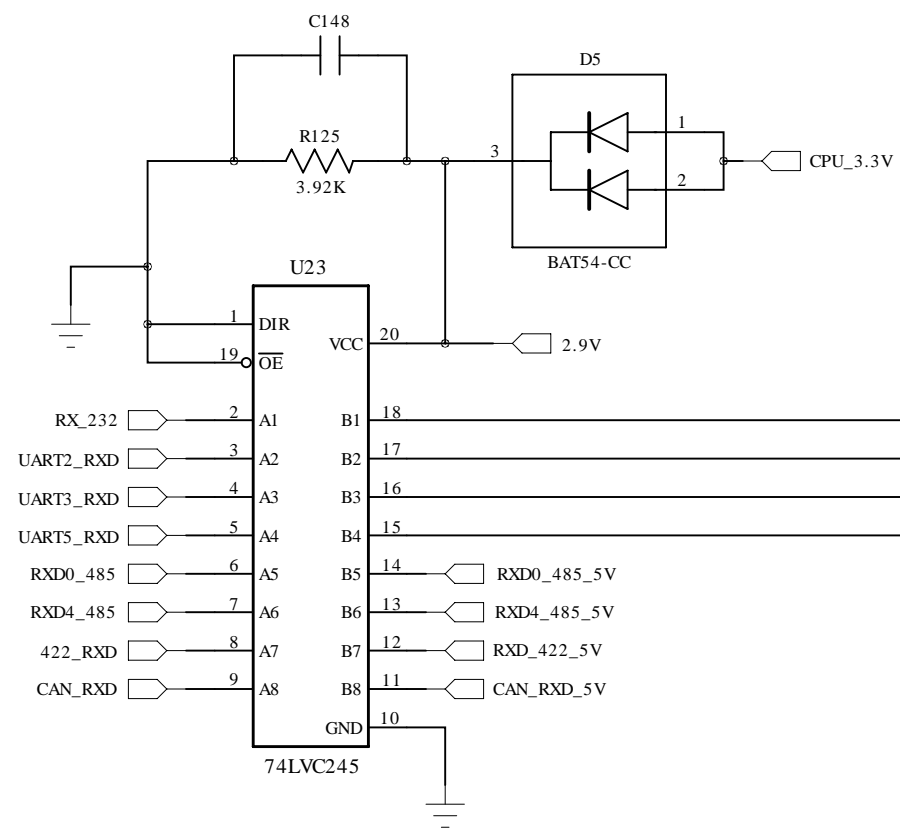
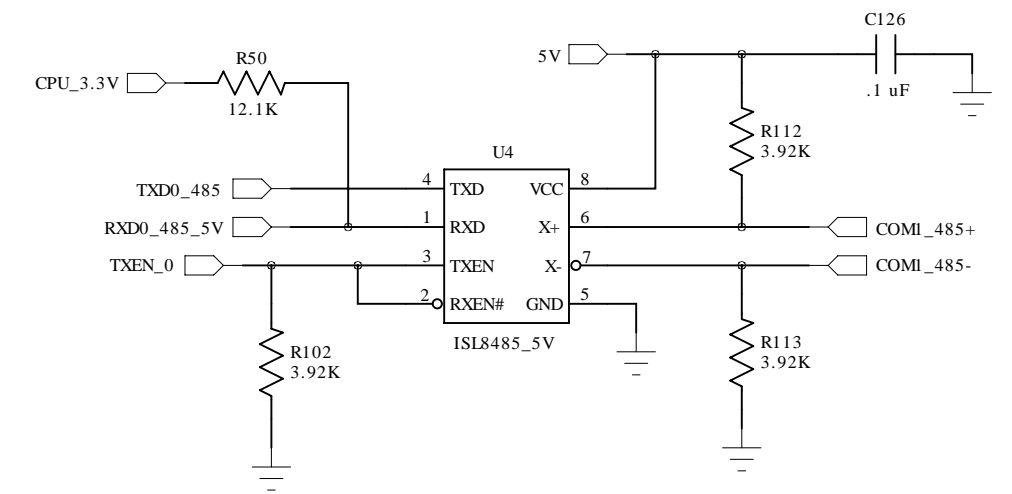


RS-232 Transceiver

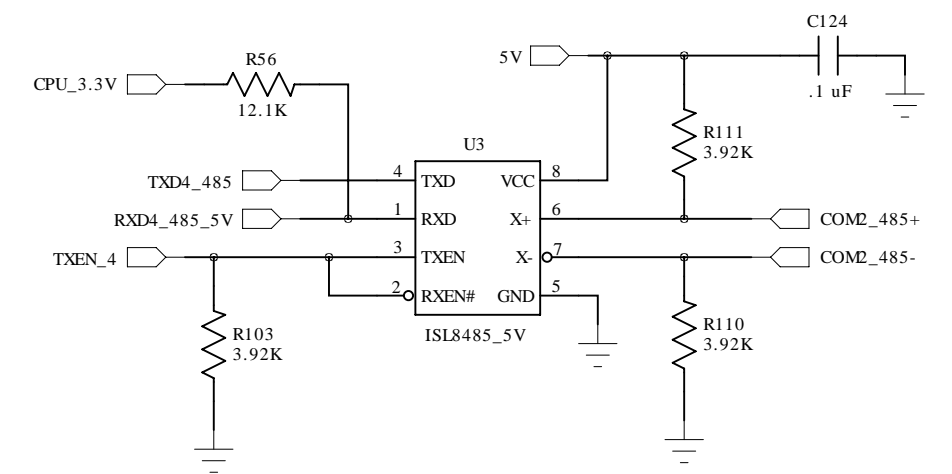
2.9V <-- 5V
Level shifter



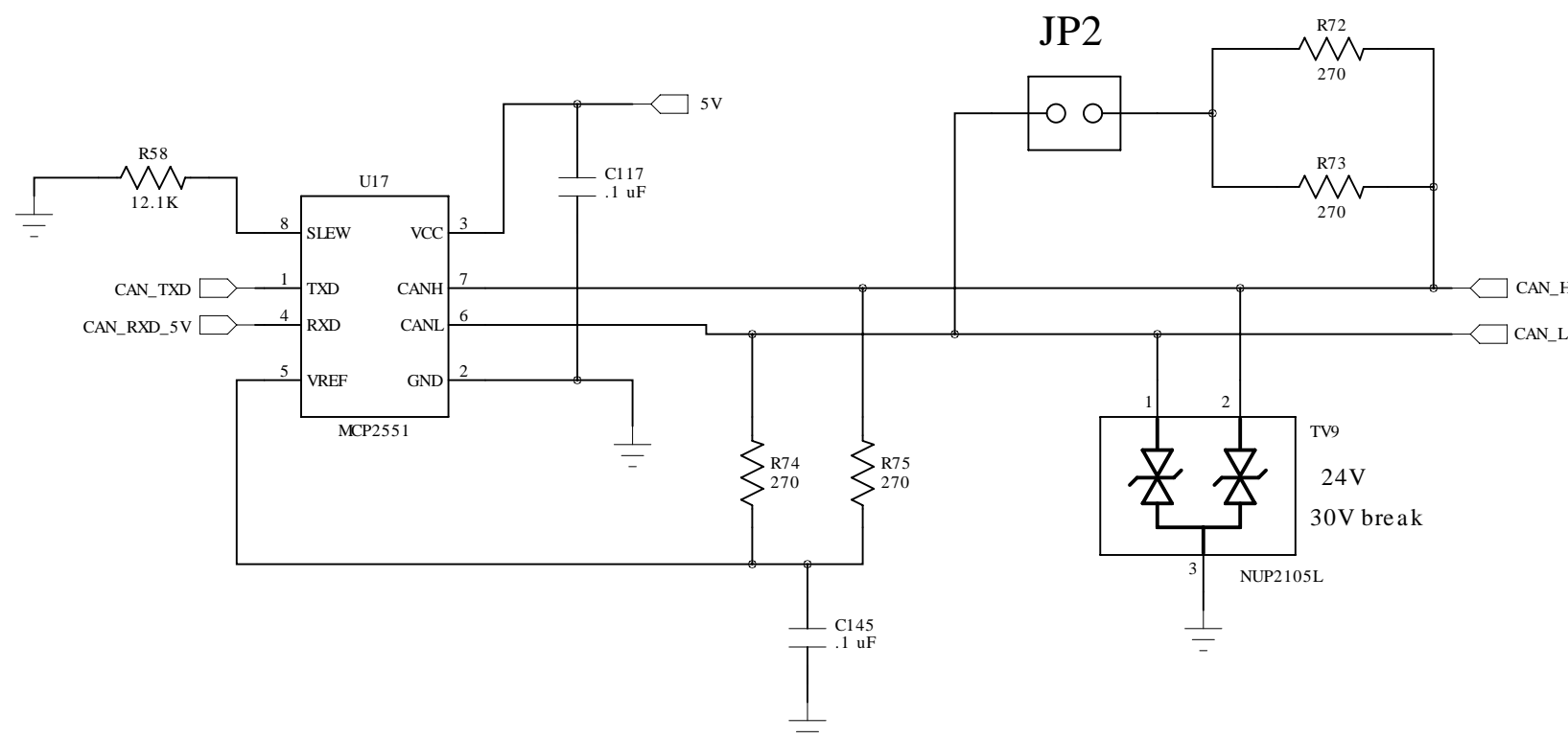
COM1 RS-485 Driver



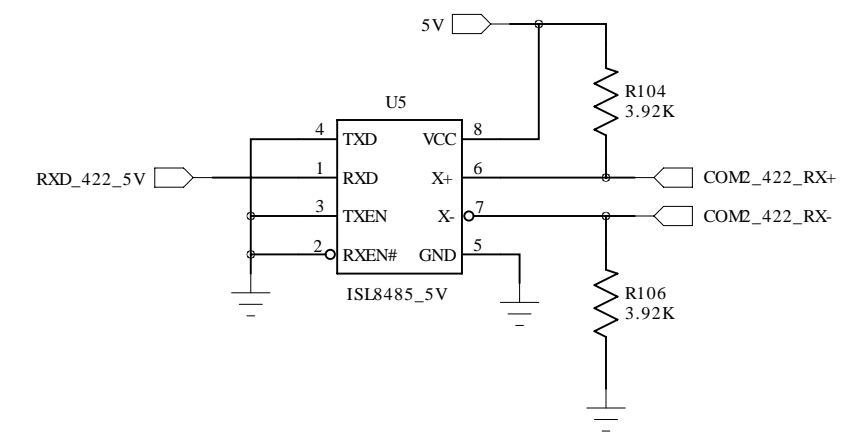
COM2 RS-485 Driver



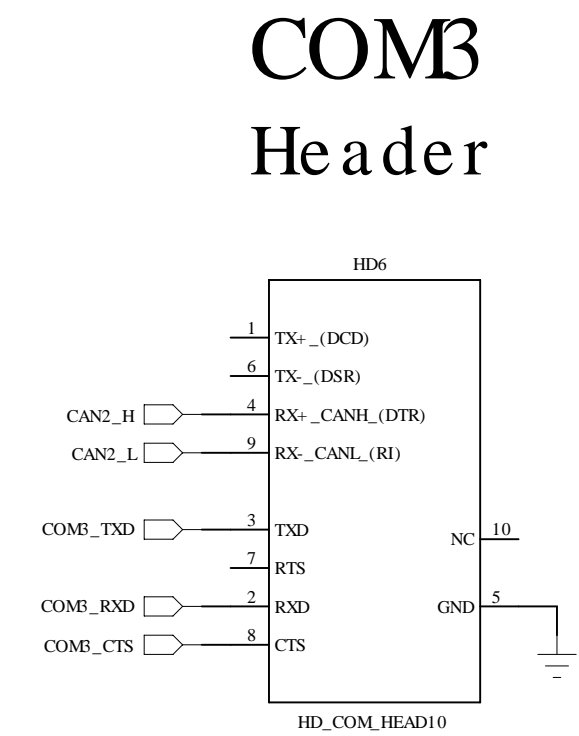
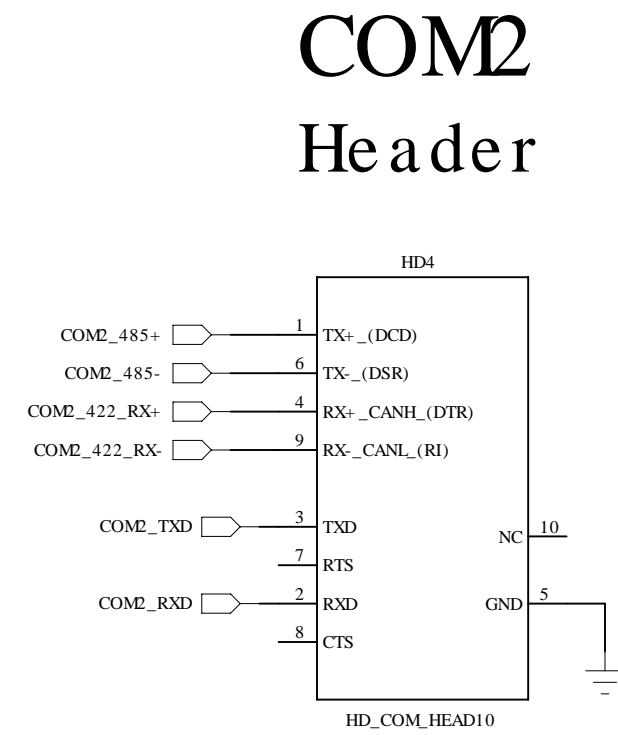
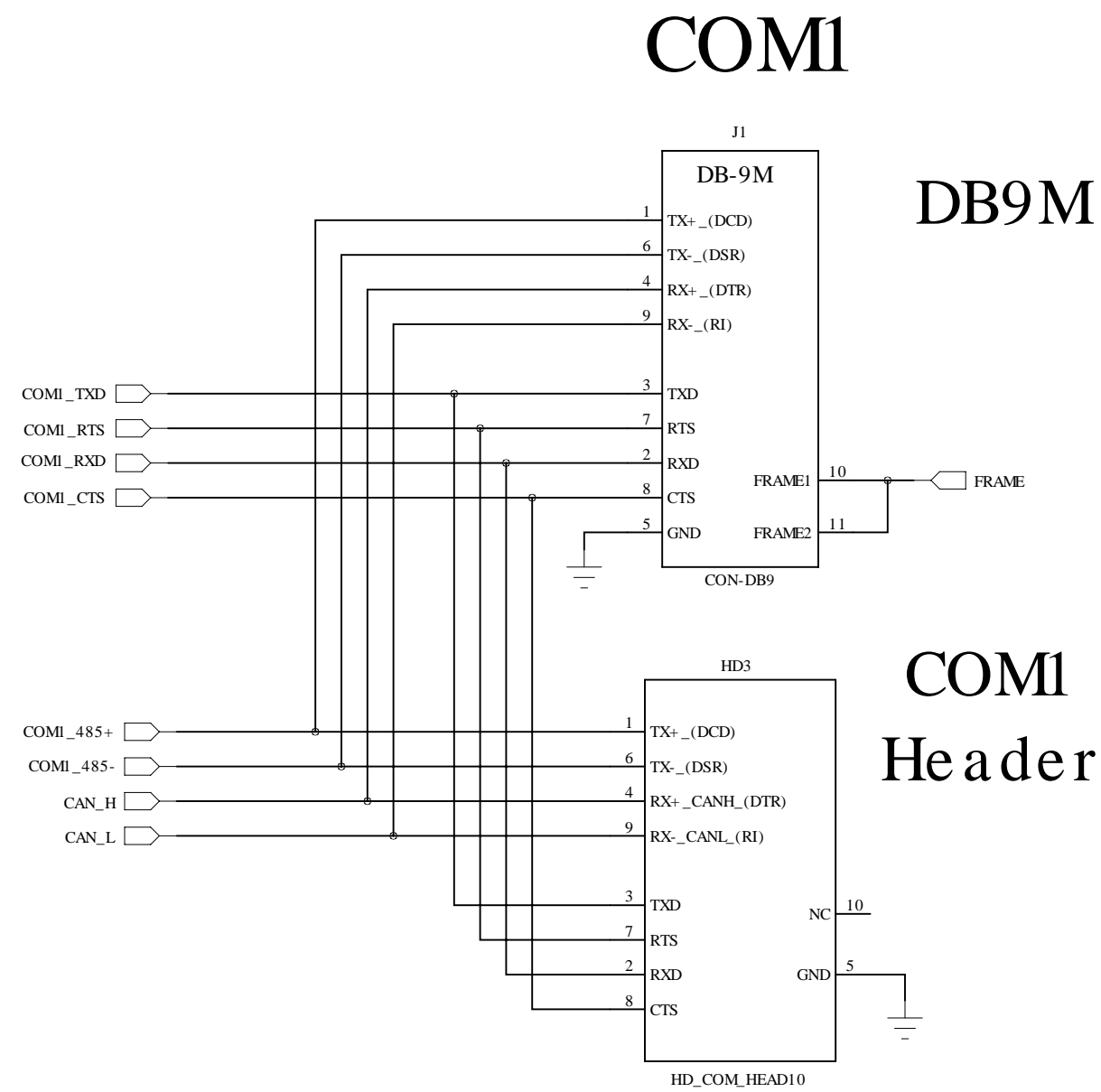
Primary CAN Transceiver



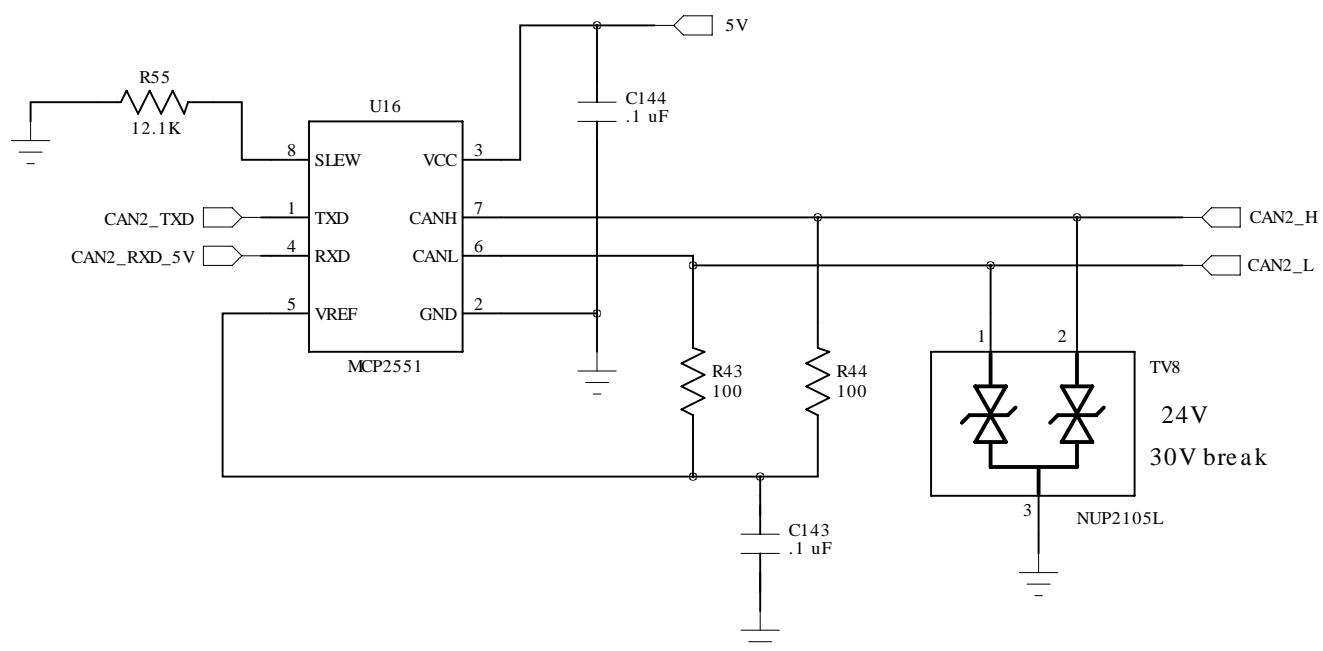
COM2 RS-422 Receiver



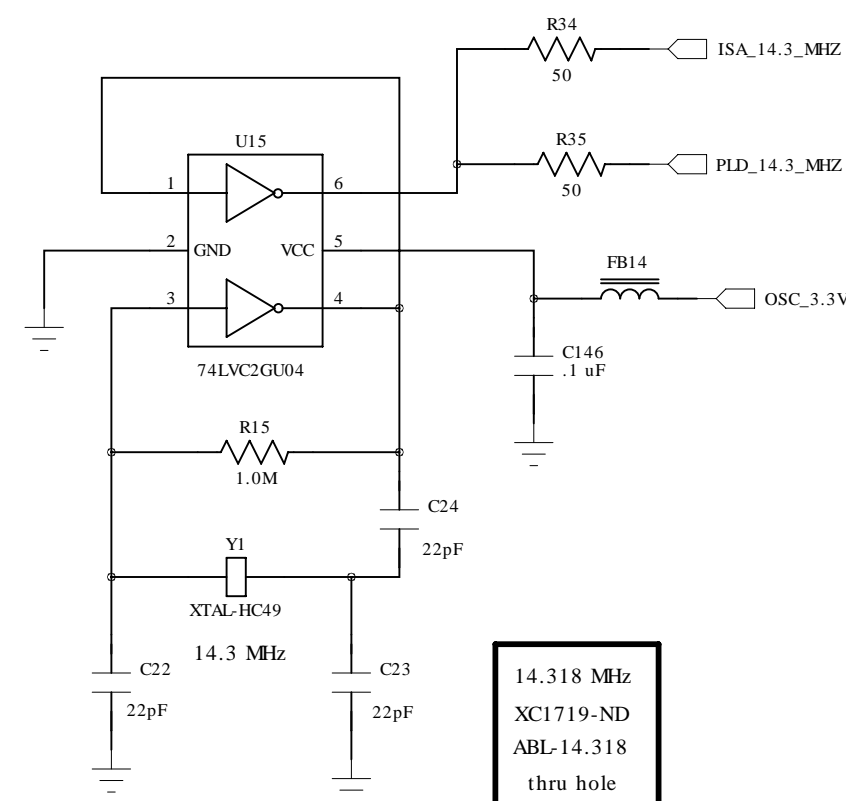
COM Connectors and Headers



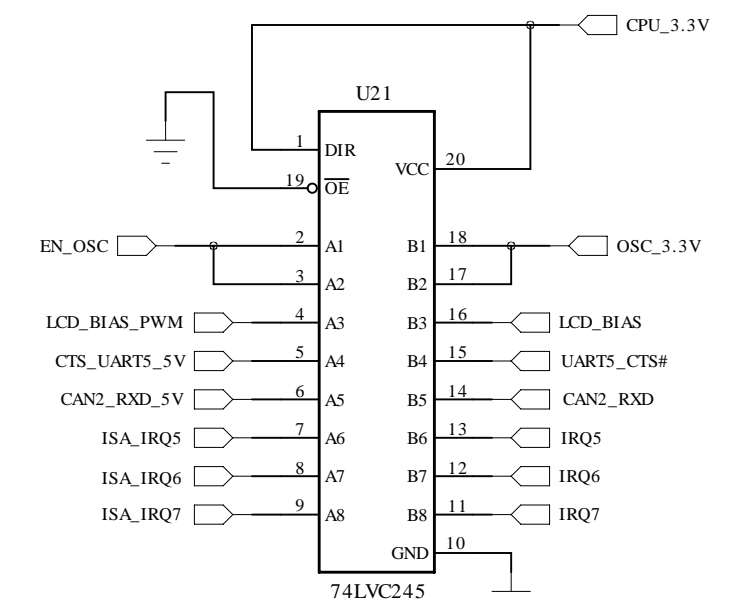
2nd CAN Transceiver



14.3 MHz Osc.



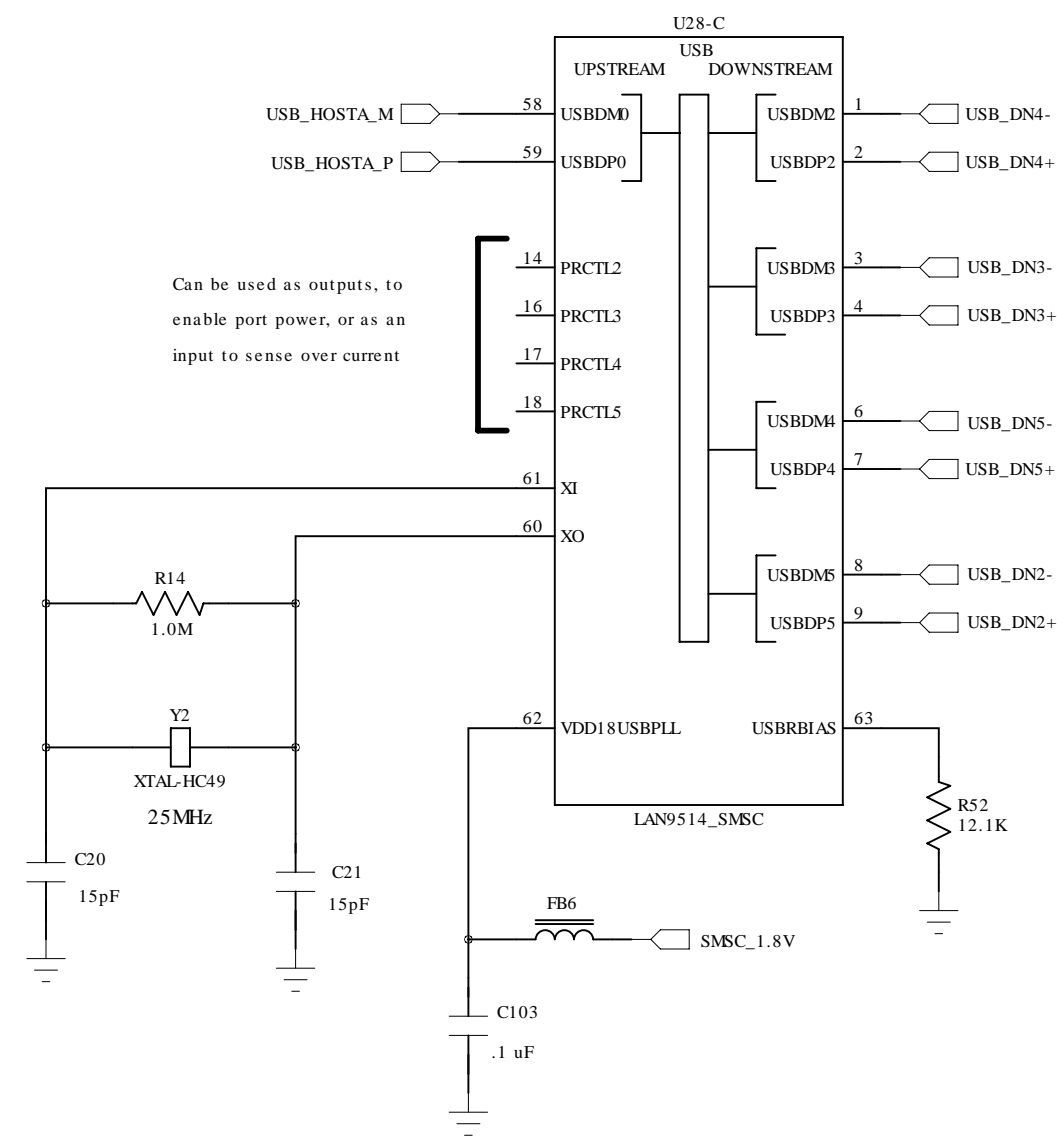
5V --> 3.3V



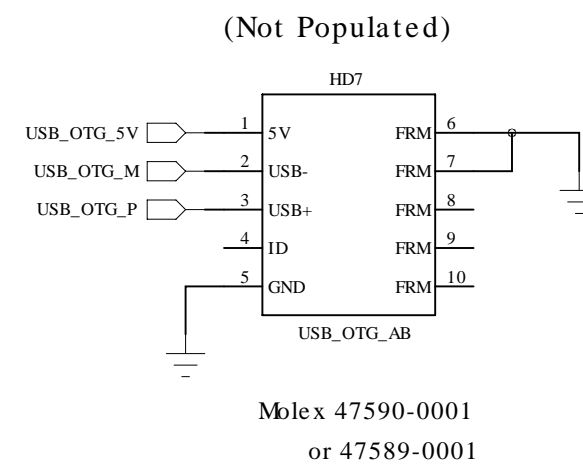
Provides 5V Tolerance

Technologic Systems		Feb. 12, 2011
Title: TS-8100 DB9, COM Headers		
Rev:	Designer	Sheet 2 of 10

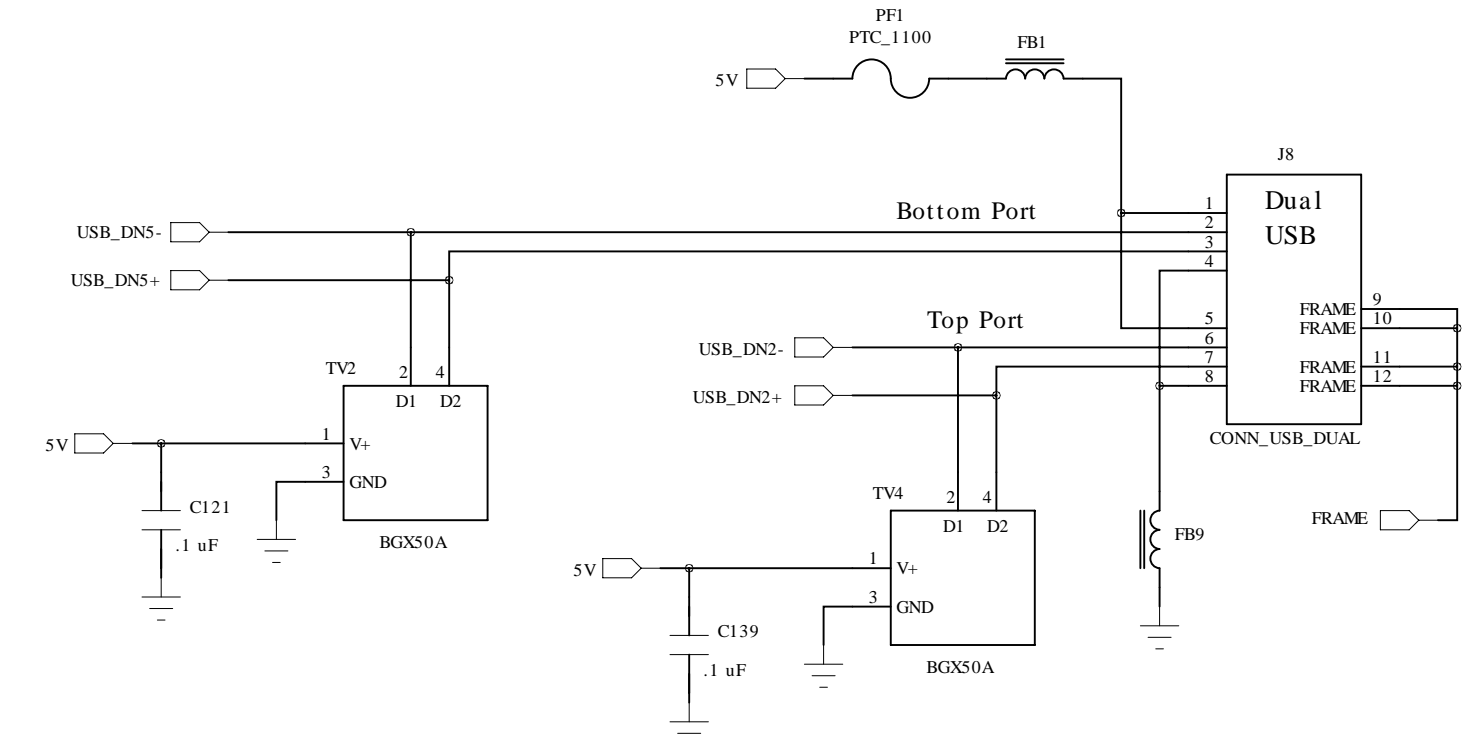
SMSC USB Hub



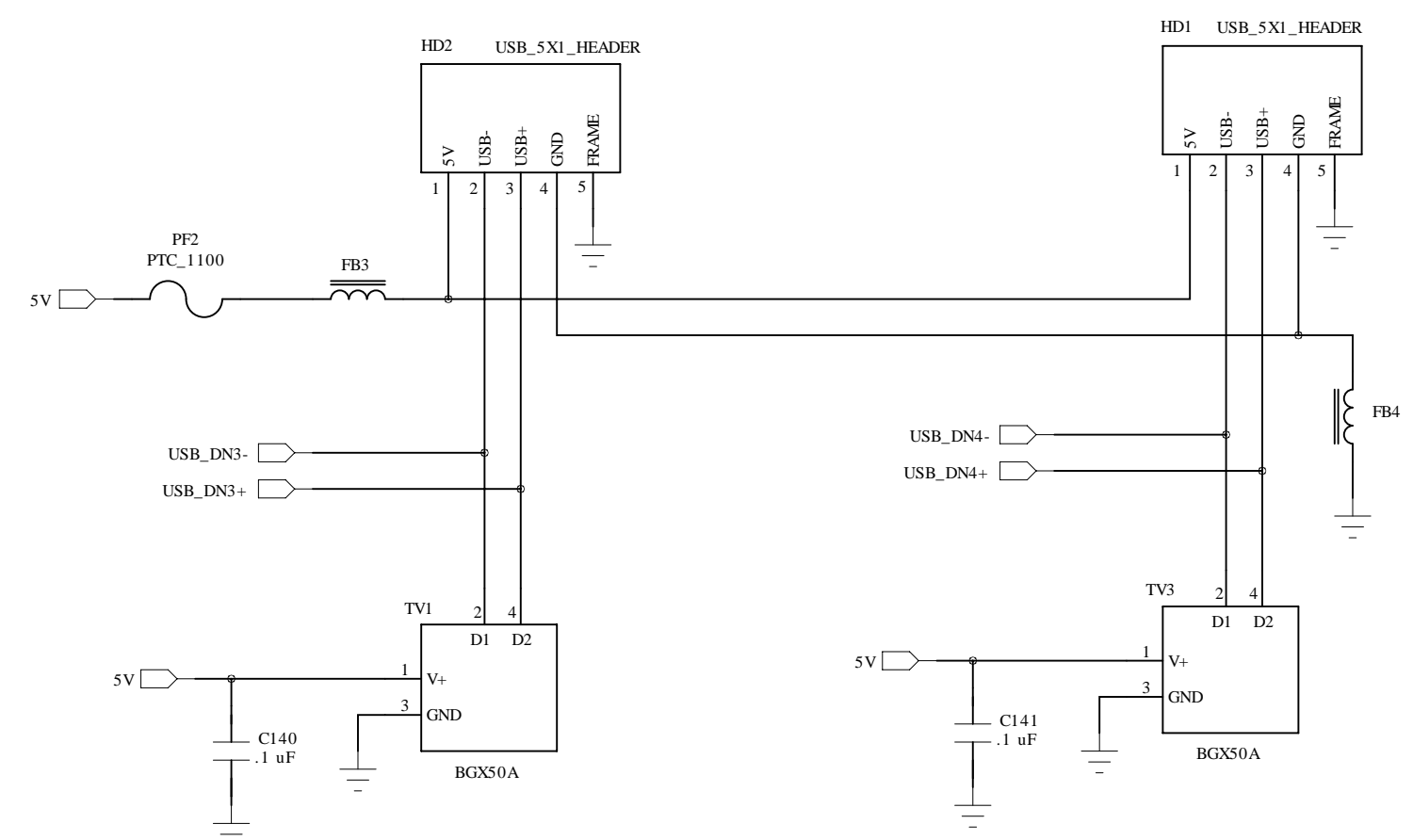
USB Device Port for Win CE



External Dual USB

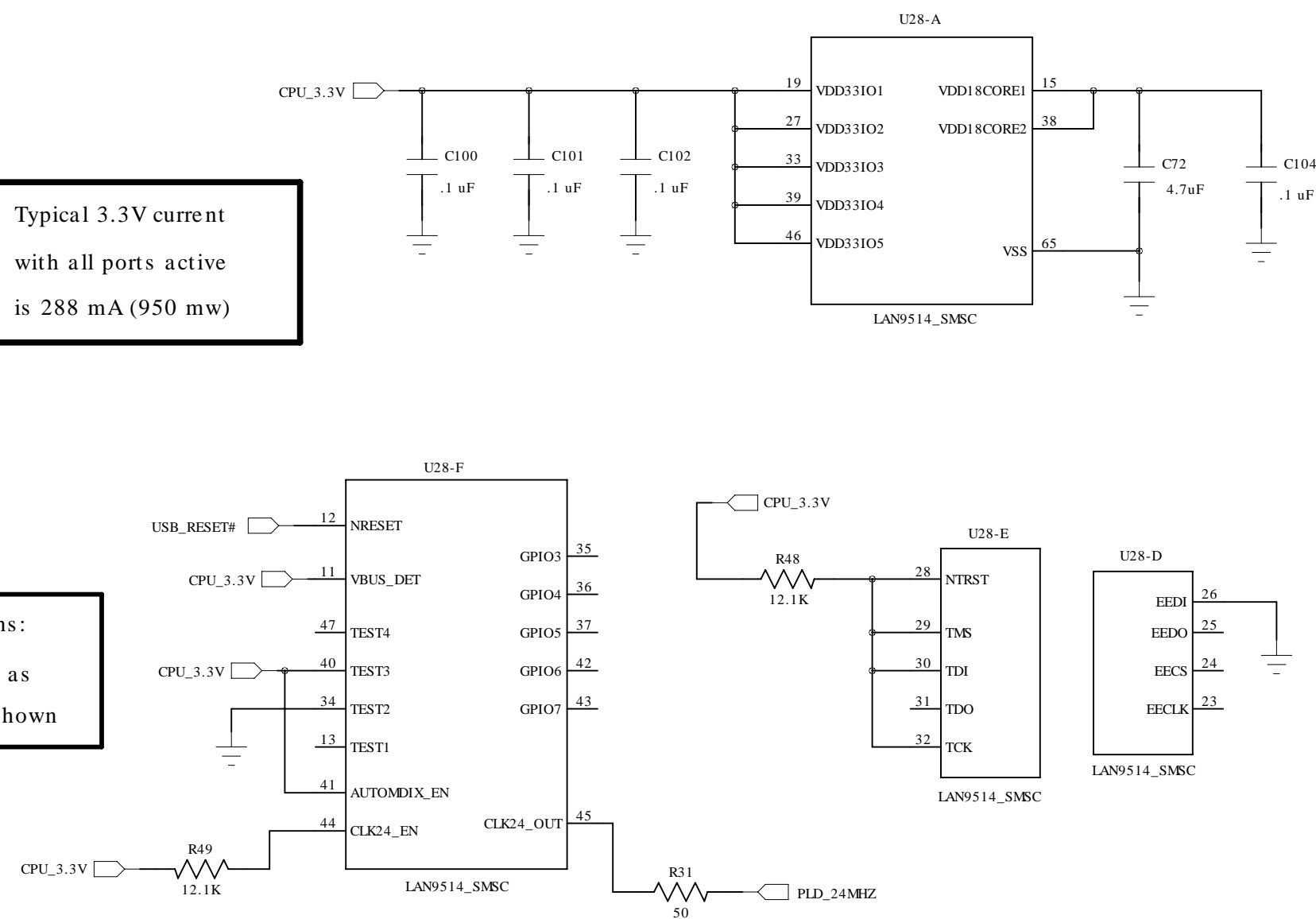


Internal USB Headers



Typical 3.3V current
with all ports active
is 288 mA (950 mw)

Test pins:
must be as
wired as shown

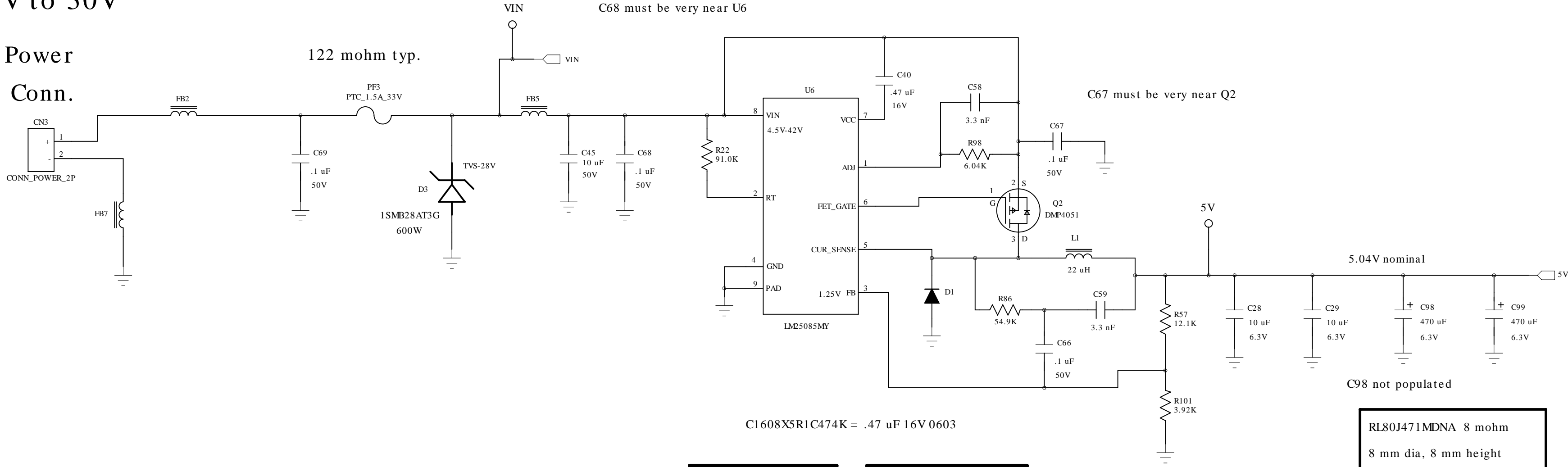


5V Power Supply (2.5 Amps)

Input Power

5.0V to 30V

Power Conn.

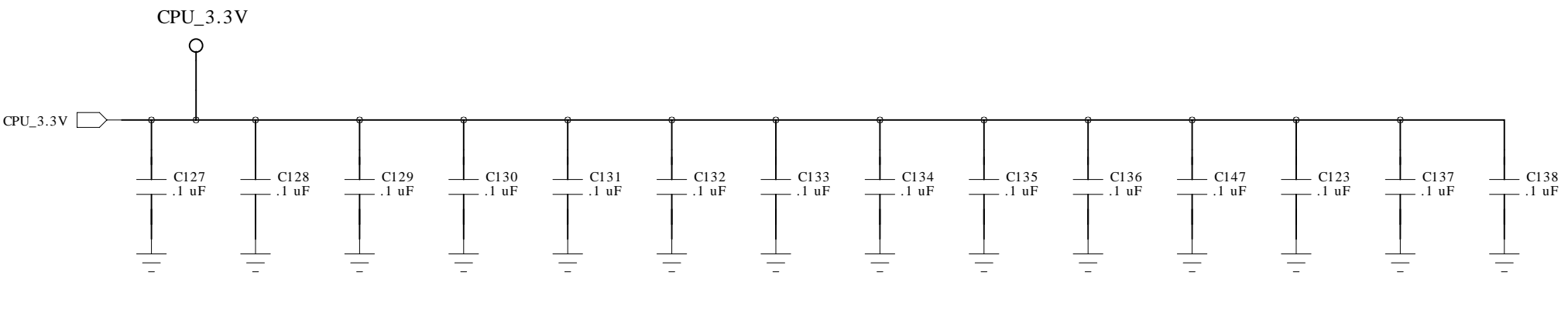


C1608X5R1C474K = .47 uF 16V 0603

MSS1260T
 3.1A @ 85 deg.
 37 mohm
 12.5 x 12.5 x 6mm
 86 cents @ 500

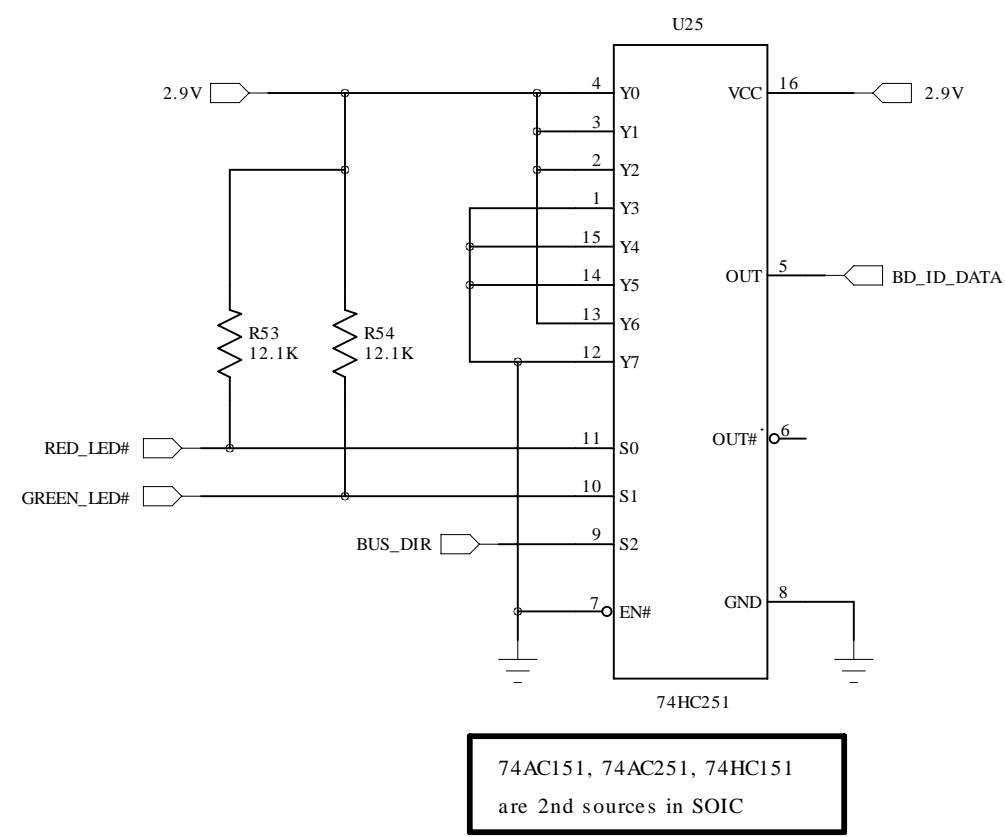
DR127-220-R
 4.0A rms @ 85 deg.
 39 mohm
 12.5 x 12.5 x 8mm
 83 cents @ 350

RL80J471MDNA 8 mohm
 8 mm dia, 8 mm height
 470 uF @ 6.3V .23 @ 1K

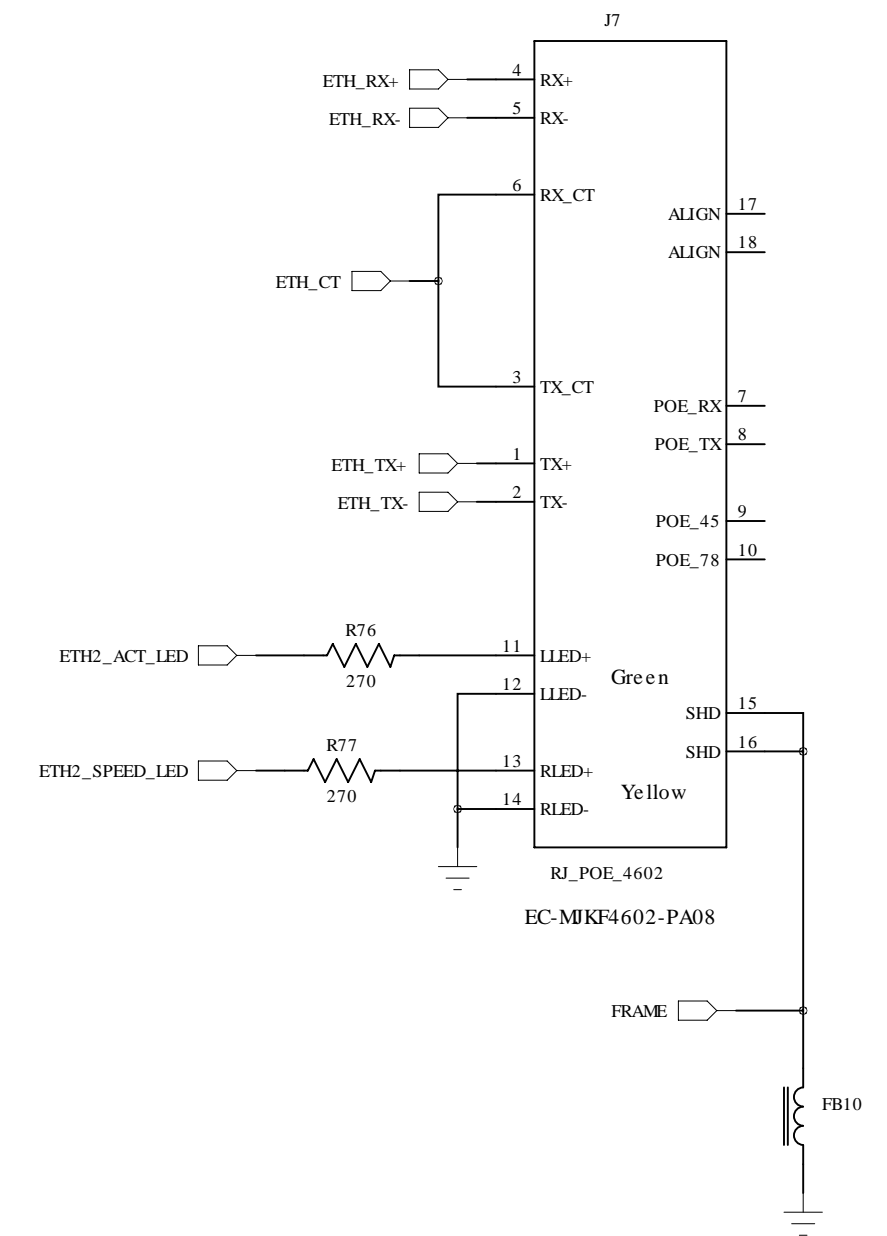


Technologic Systems		Feb. 12, 2011
Title: TS-8100 5V Power		
Rev:	Designer	Sheet 5 of 10

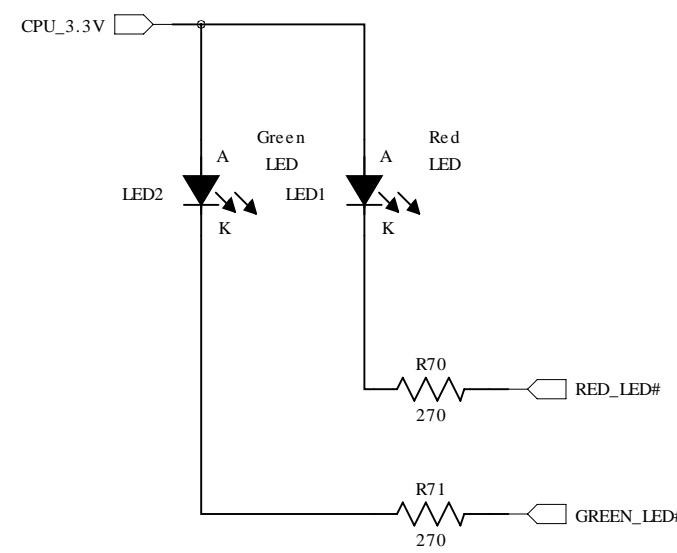
Board ID = 64 + 7



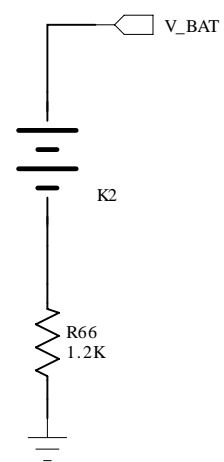
SBC Primary 10/100 Ethernet



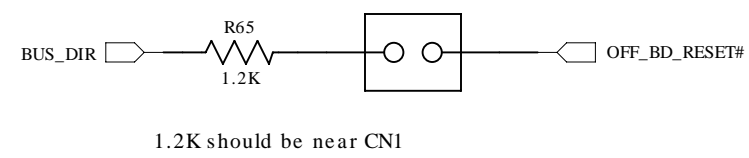
LEDs



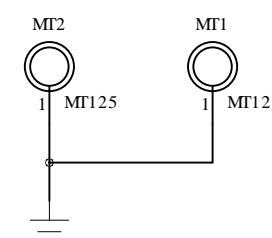
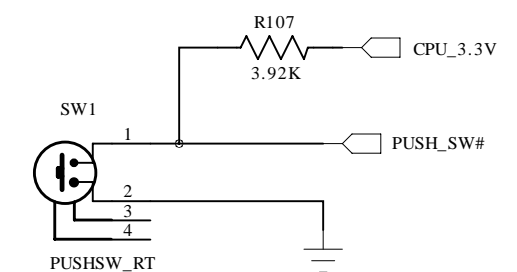
RTC Battery



Force Boot to SD card



Push Switch



Technologic Systems	Feb. 12, 2011
Title: TS-8100 Ethernet, Battery, Board ID	
Rev:	Designer RLM Sheet 6 of 10

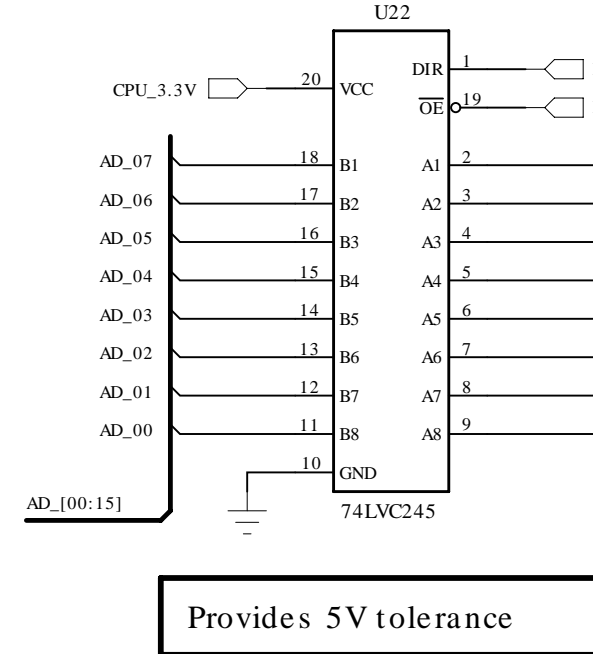
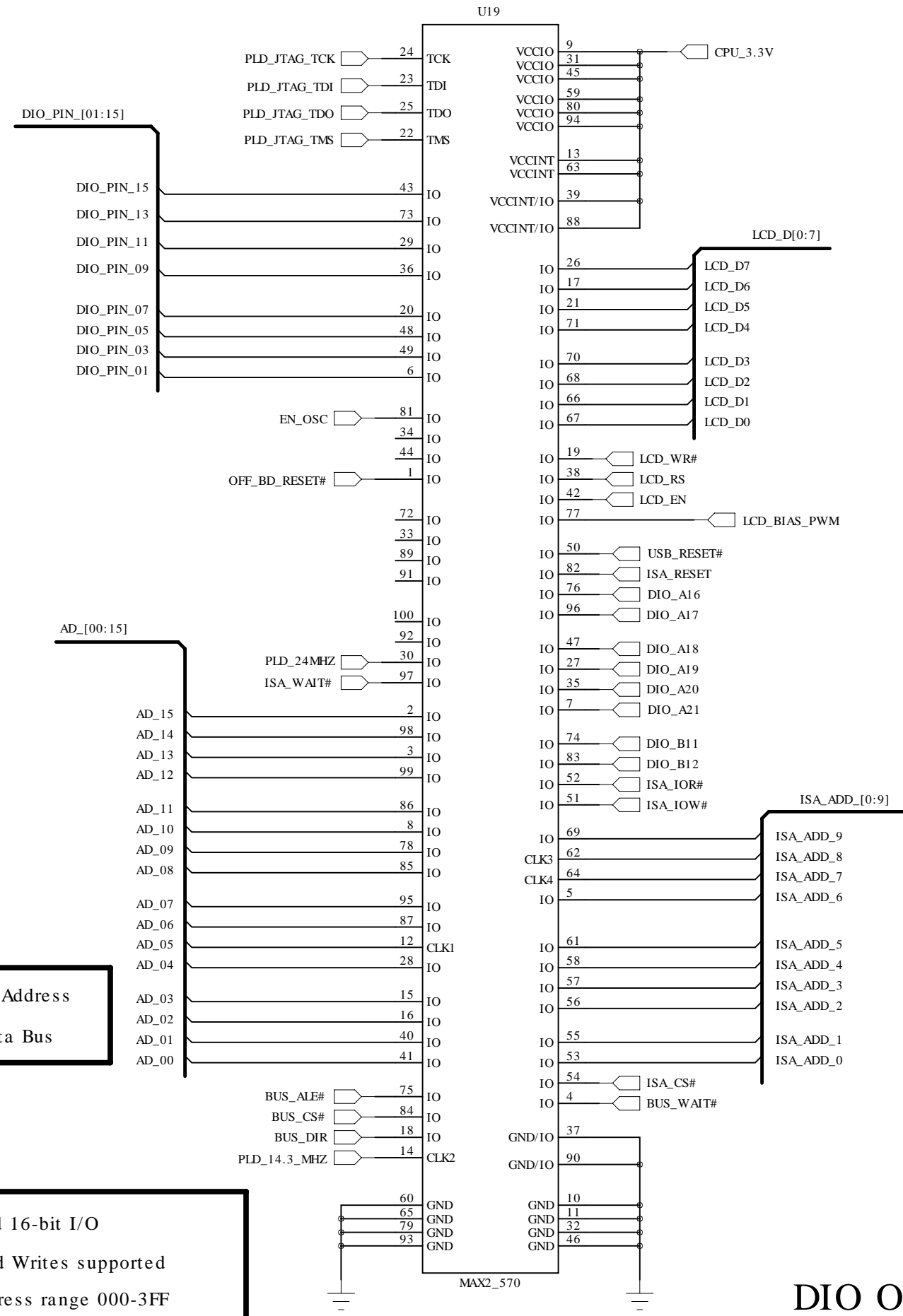
Inputs on Left

PLD

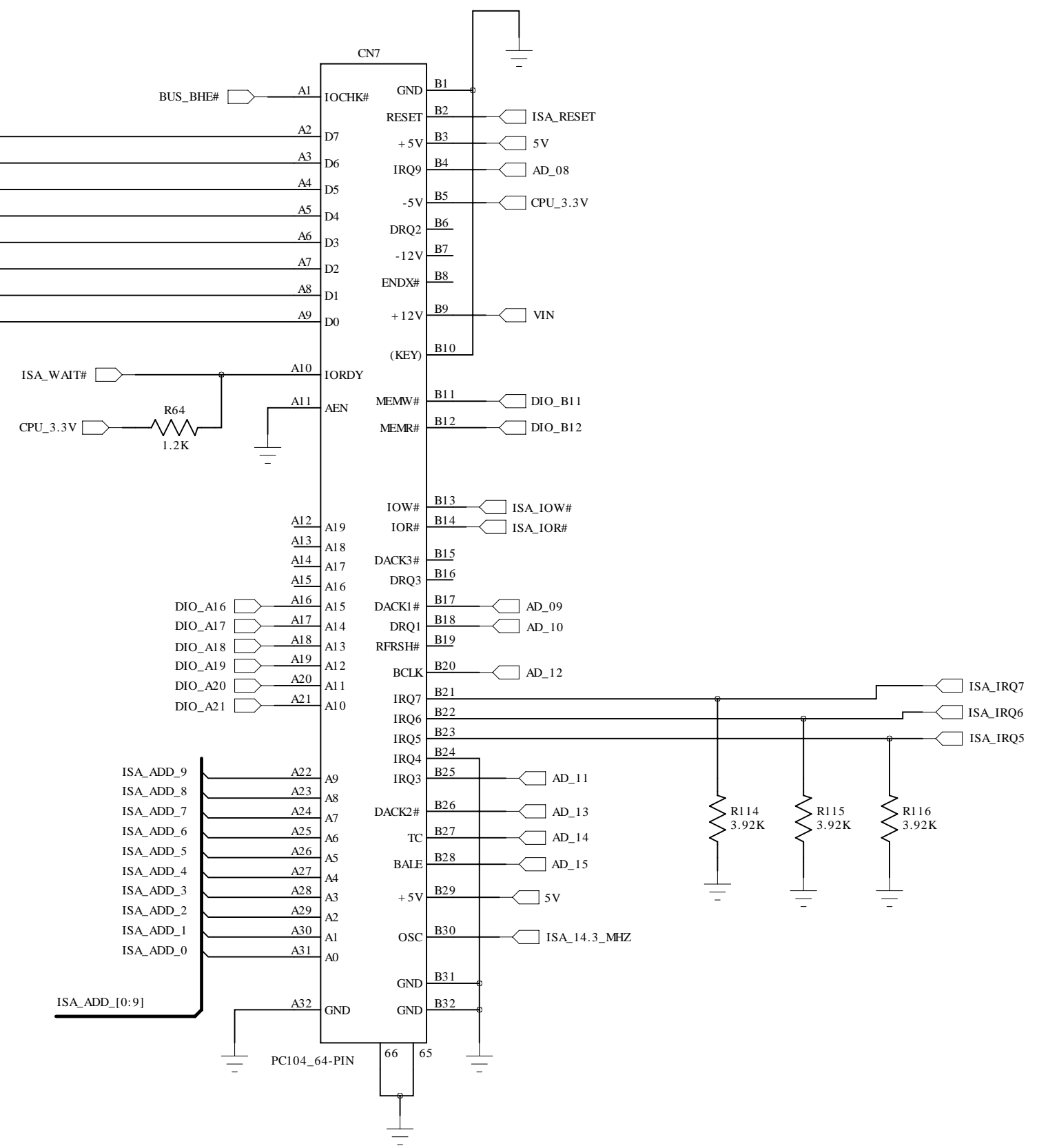
Outputs on Right

PC/104

64-pin Connector



Provides 5V tolerance



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_A16 thru DIO_A21 and LCD_EN should default to logic zero

DIO_B11 and DIO_B12 should default to logic "1"

USB_RESET# should default to a logic zero

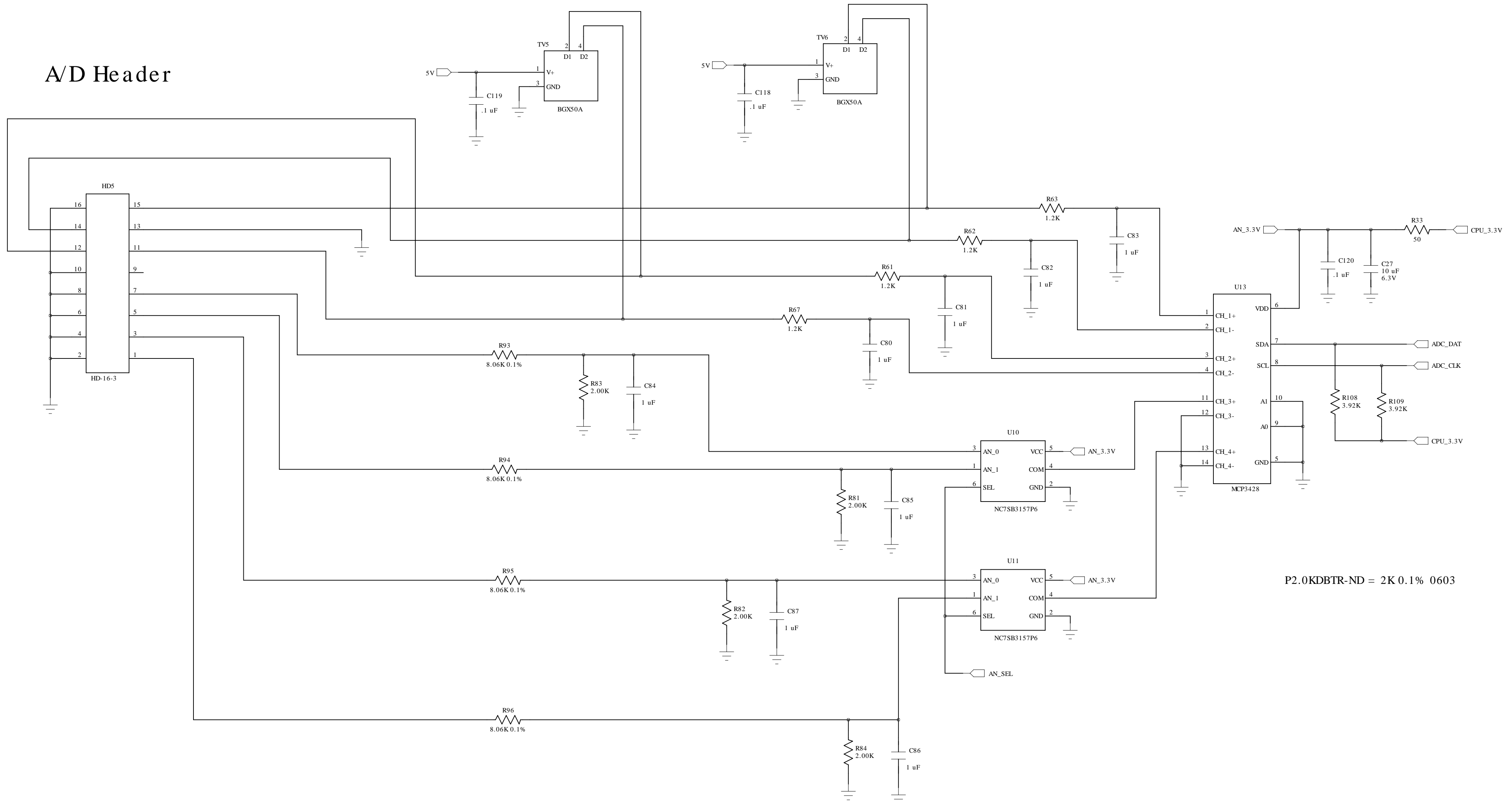
DIO Inputs

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

DIO_PIN_1 thru DIO_PIN_15 should default as Inputs

16-bit A/D Converter

Four single-ended 0-10V Inputs
Two differential pairs 0-2V range



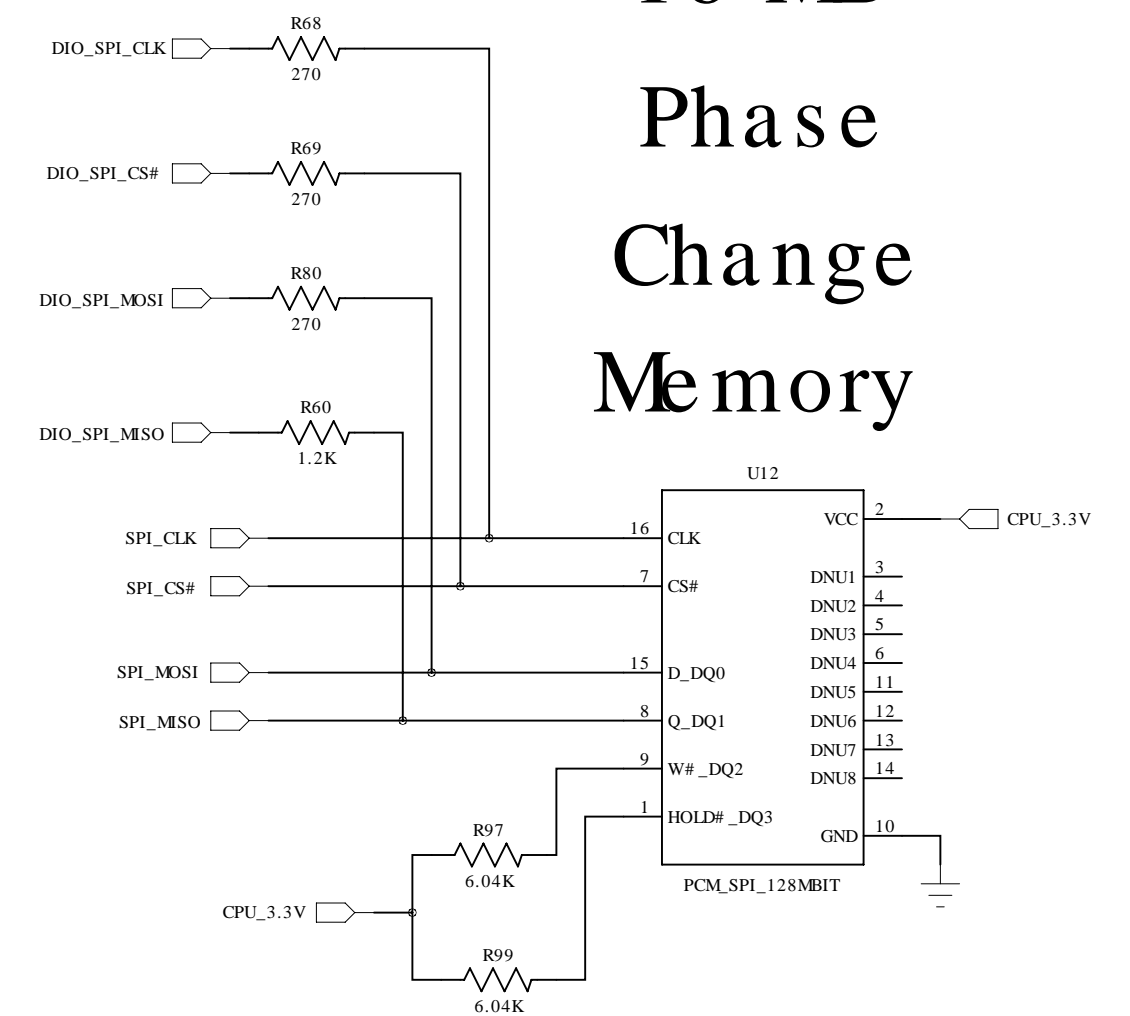
P2.0KDBTR-ND = 2K 0.1% 0603

Technologic Systems		Feb. 12, 2011
Title: TS-8100 Analog		
Rev:	Designer	Sheet 8 of 10

2nd Ethernet Port and PC Memory

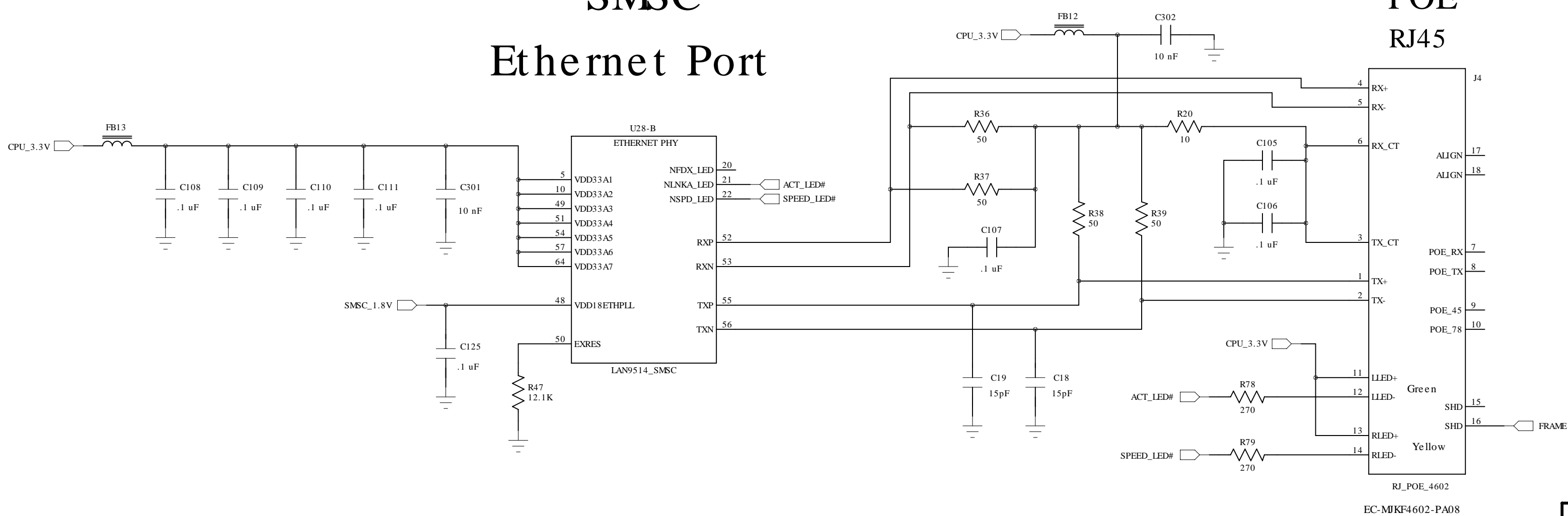
(Both Optional)

16 MB
Phase
Change
Memory



SMSC
Ethernet Port

POE
RJ45



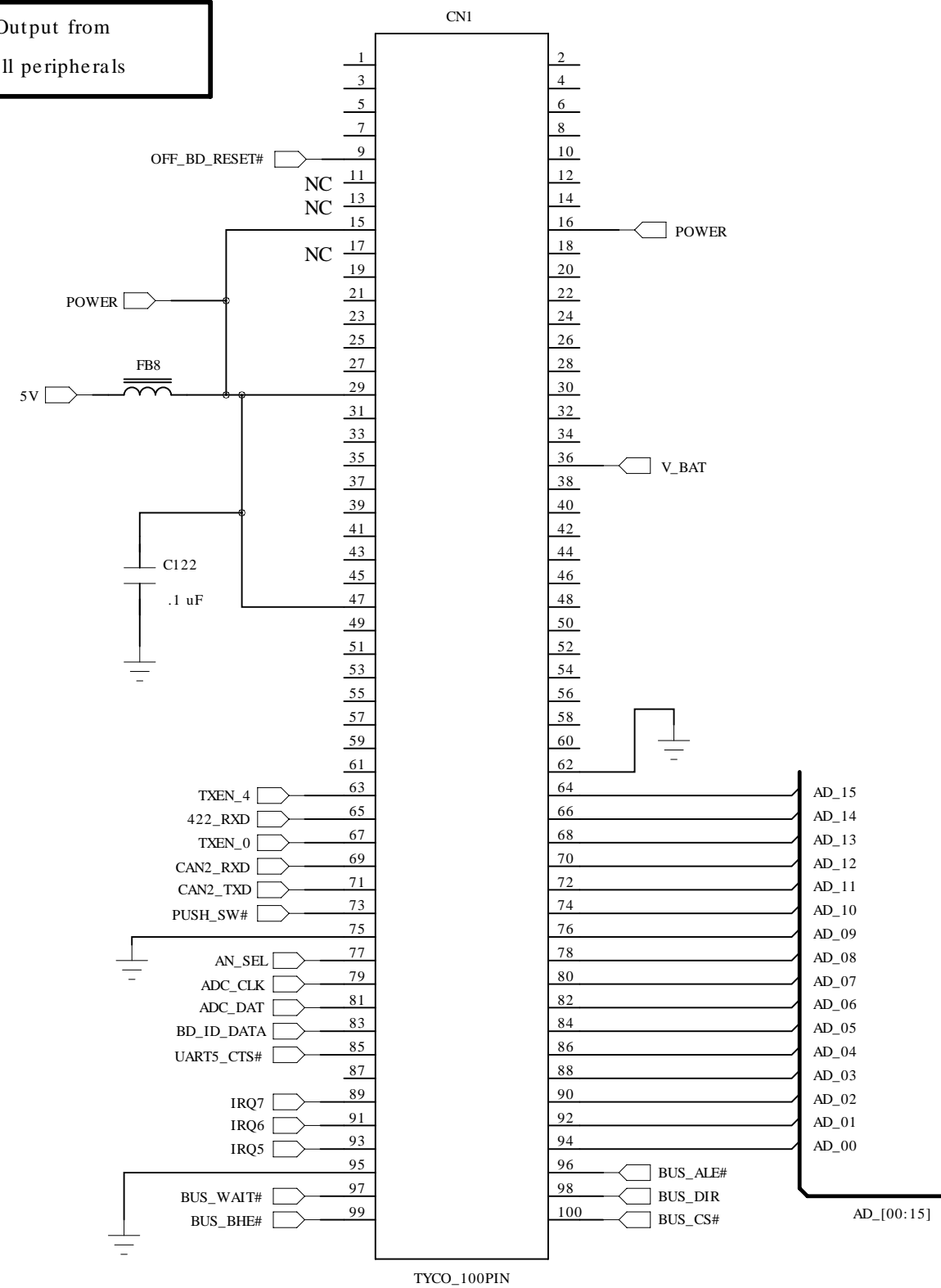
Technologic Systems		Feb. 12, 2011
Title: TS-8100 Ethernet 2 Port		
Rev:	Designer	Sheet 9 of 10

Two 100-pin Module Connectors

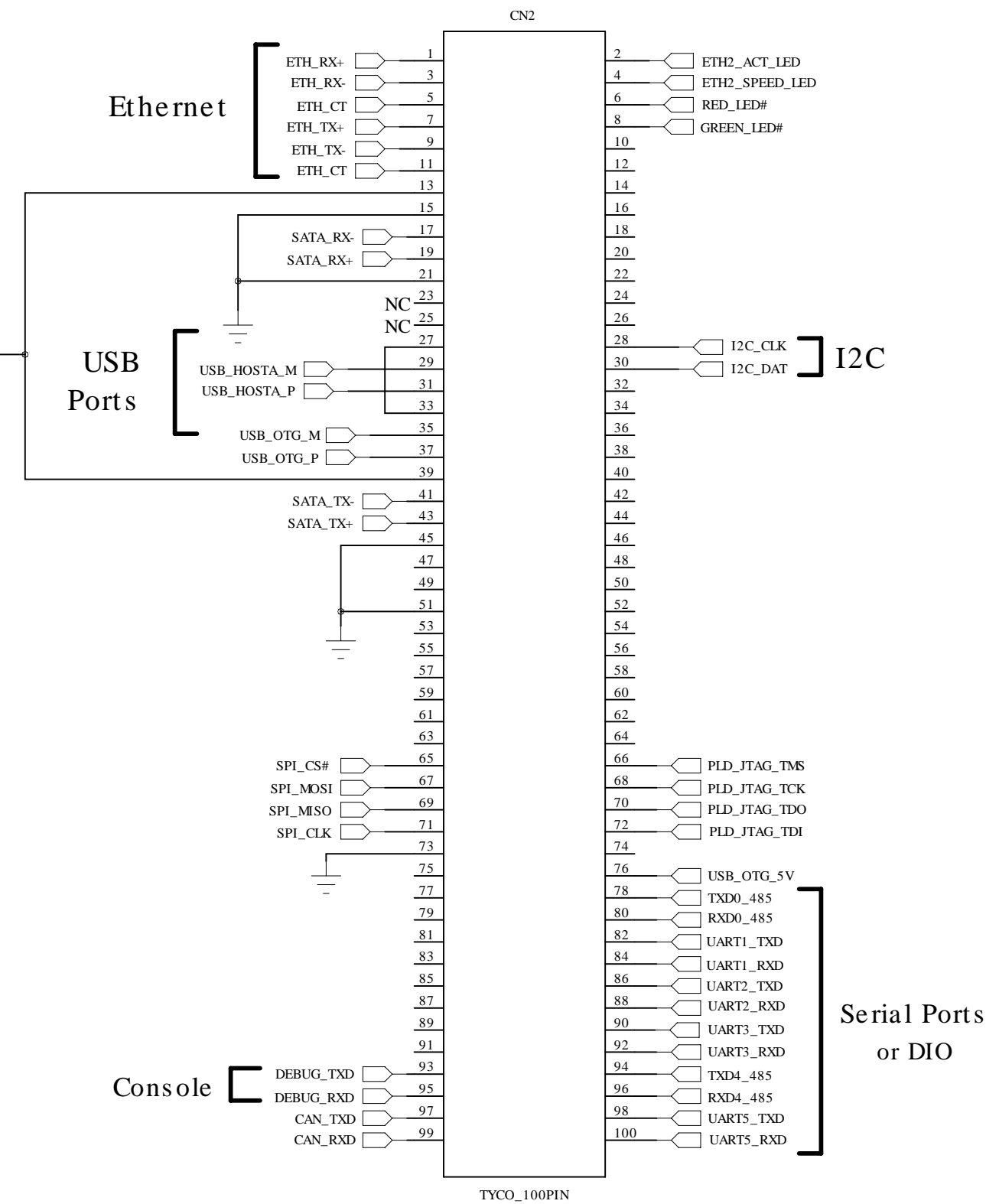
Left

Right

OFF_BD_RESET# is an Output from the SBC used to reset all peripherals



SBC can supply up to 400 mA of 3.3V power to the base board



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