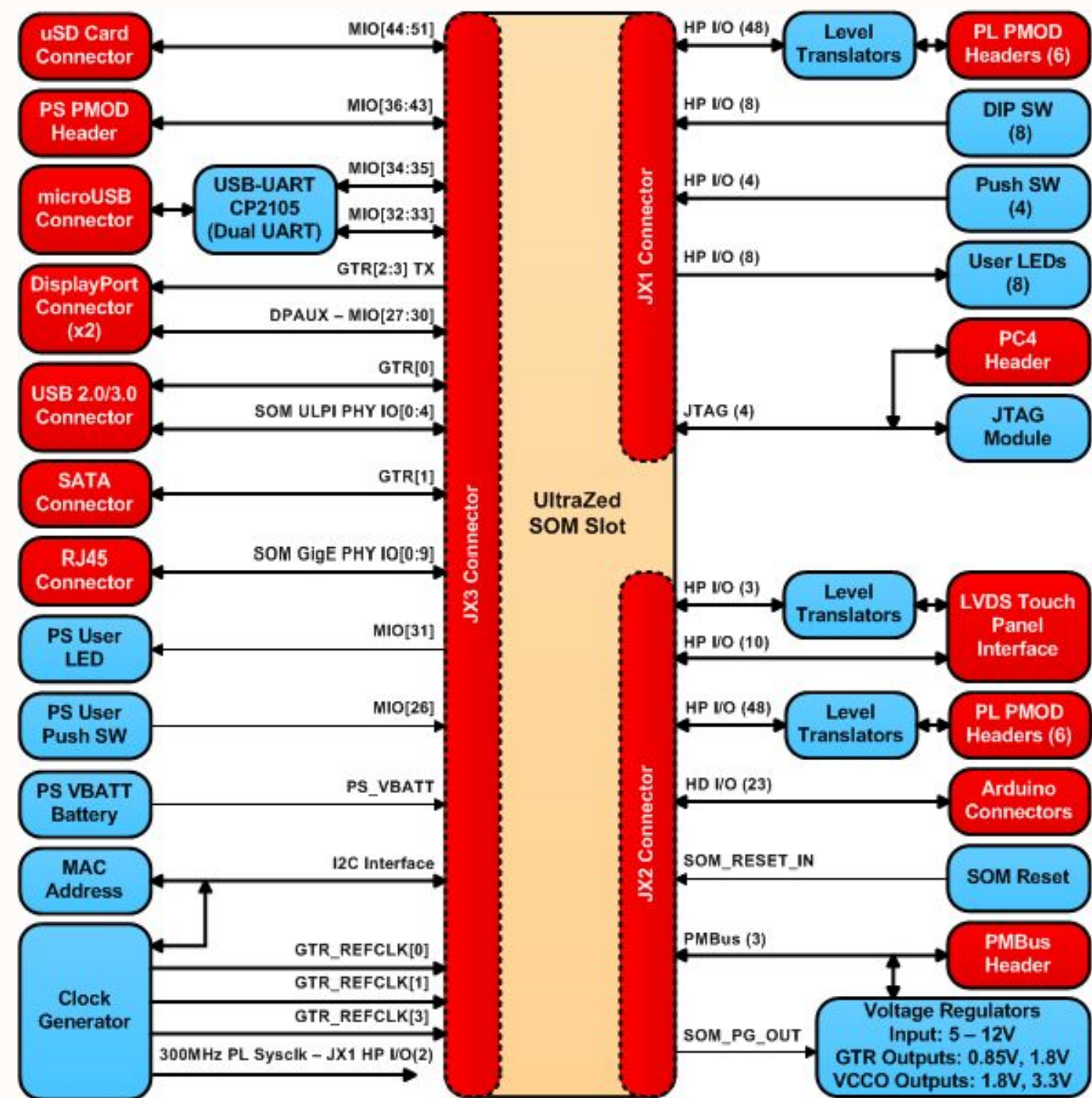
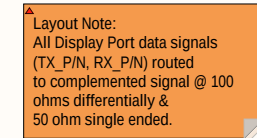


1	2	3	4	5	6
UltraZed IO Carrier Card Avnet Engineering Services www.avnetkits.com Sheet Name 01 - Avnet Lead Sheet 02 - Block Diagram 03 - Display Port 04 - Clock & LVDS Port 05 - uSD, MAC, GiGe 06 - Arduino 07 - JX1 HP PMODs 08 - JX2 HP PMODs 09 - JX1, JX2 SOM CONNS 10 - JX SOM CONNS, PS_PMOD 11 - Switches & JTAGs 12 - LEDs 13 - POWER1 14 - POWER2 15 - DUAL UART 16 - USB 2.0_3.0 17 - Back Page					
UltraZed IO Carrier Card Revision: 1					
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1	2	3	4	5	6

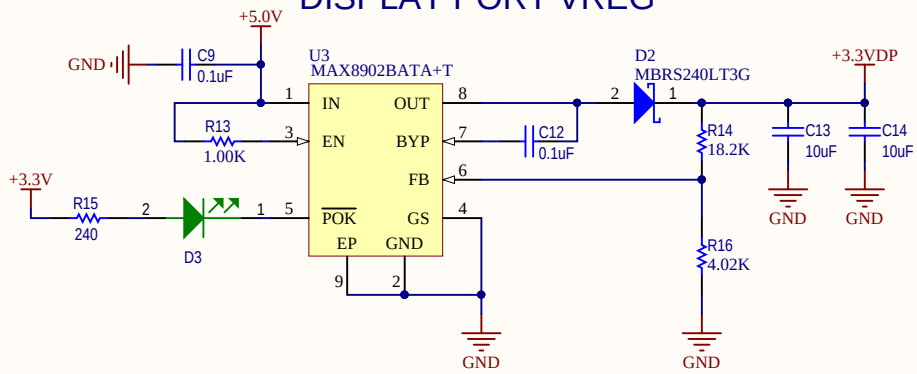
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Project Name:	UltraZed IO Carrier Card	PCB Rev:	BOM:
Doc Num:	SCH-US1CAR	Date:	Time:
Sheet Title:	01 - Avnet Lead Sheet.SchDoc	Size:	Sheet:



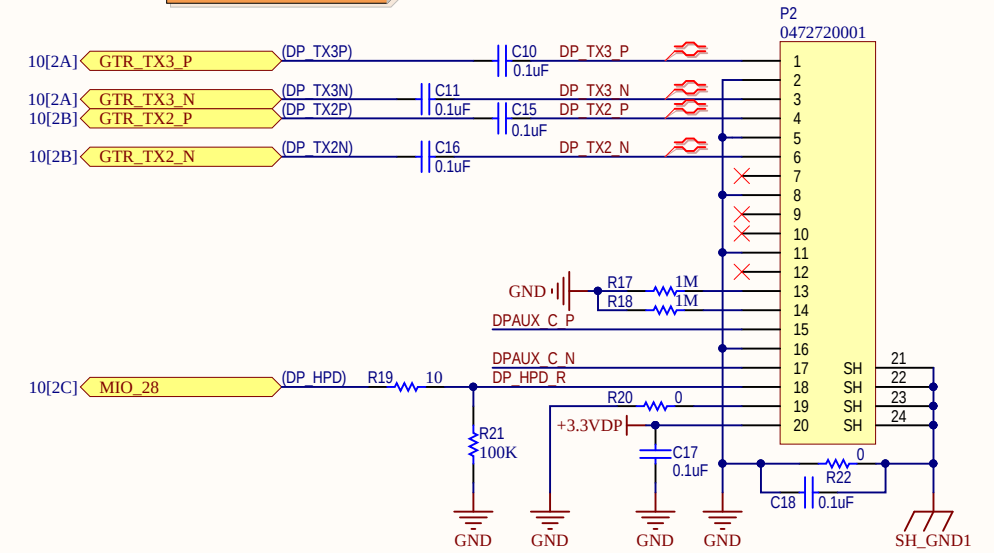
DISPLAY PORT INTERFACE



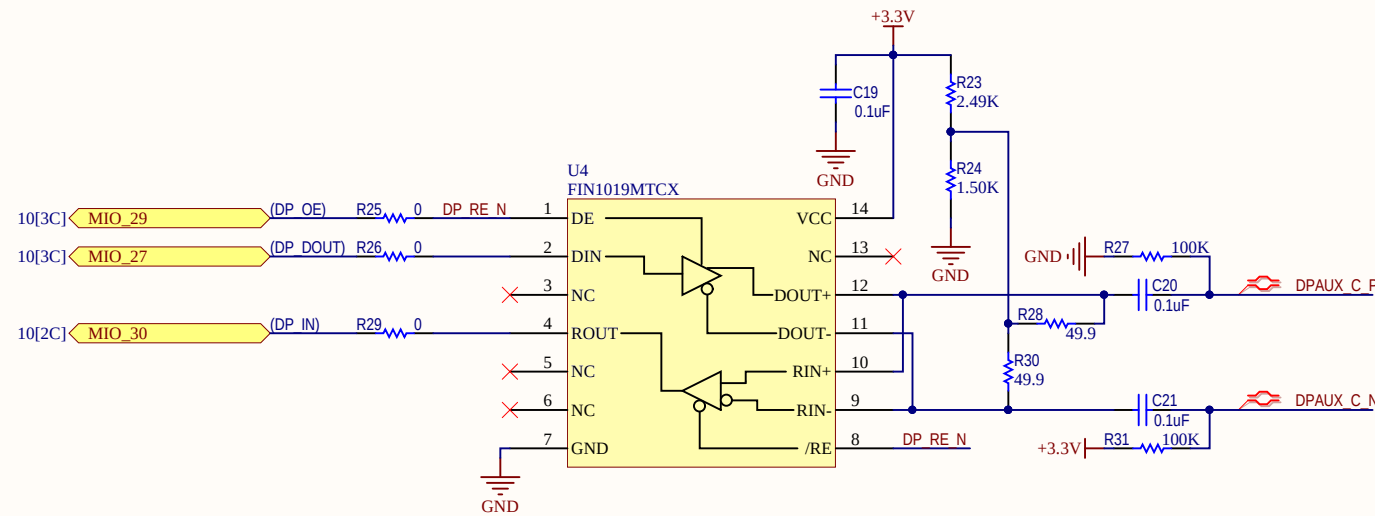
DISPLAY PORT VREG



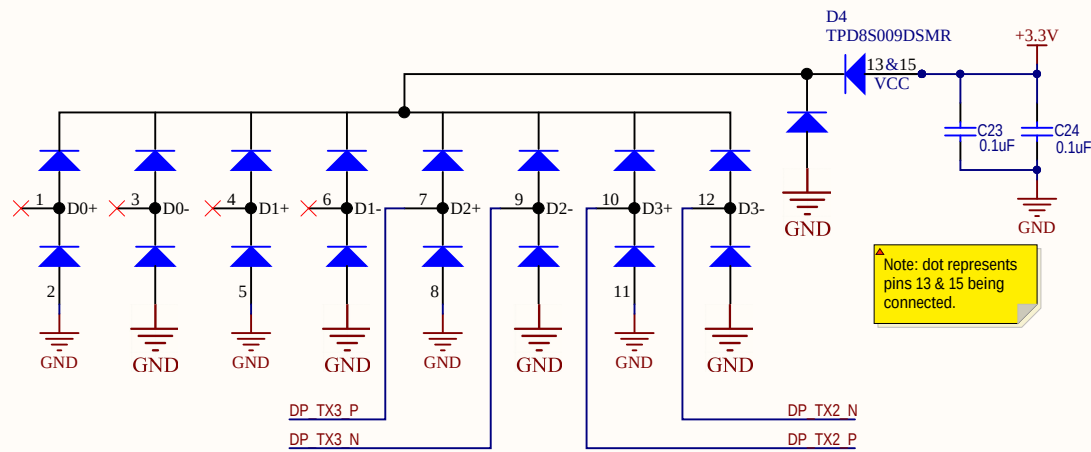
DISPLAY PORT CONNECTOR



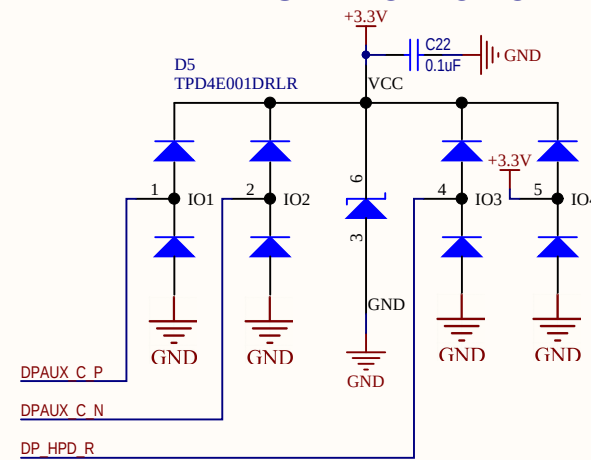
DPAUX GENERATOR



ESD PROTECTION

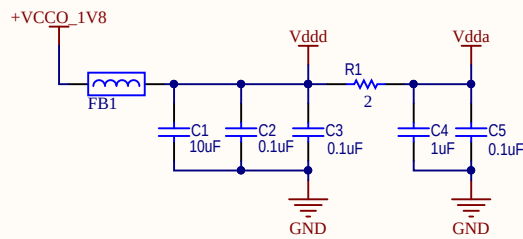


ESD PROTECTION

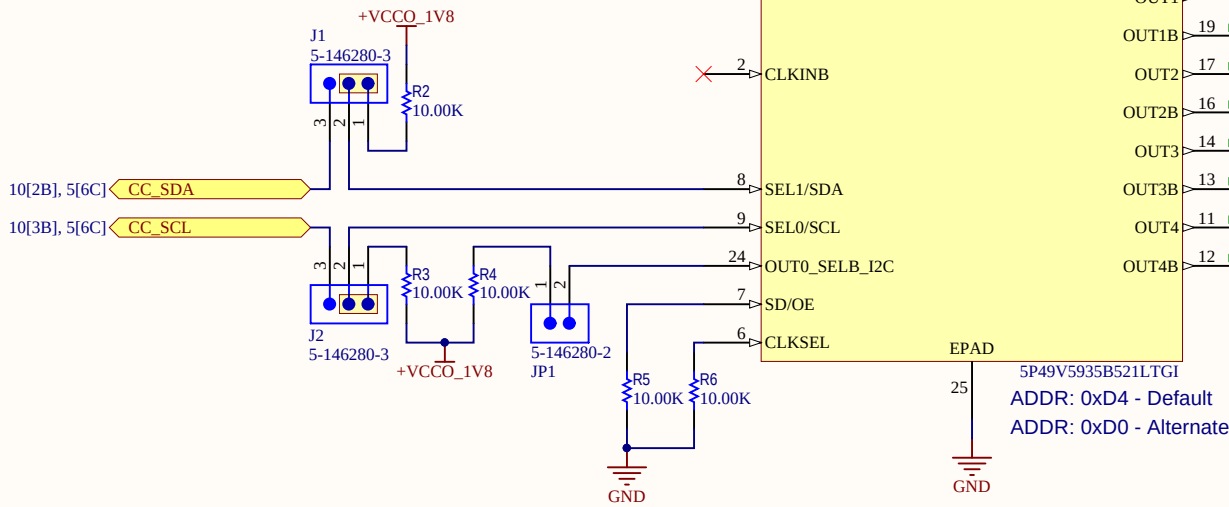


CLOCK SYNTHESIZER & LVDS PORT

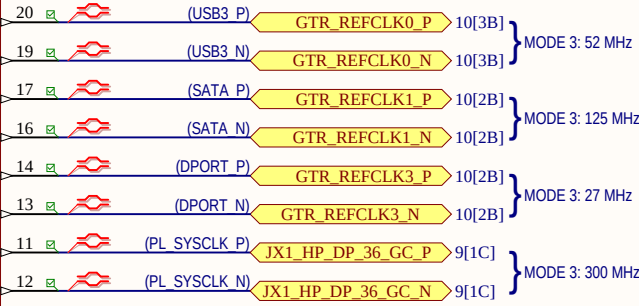
IDT CLOCK SYNTHESIZER



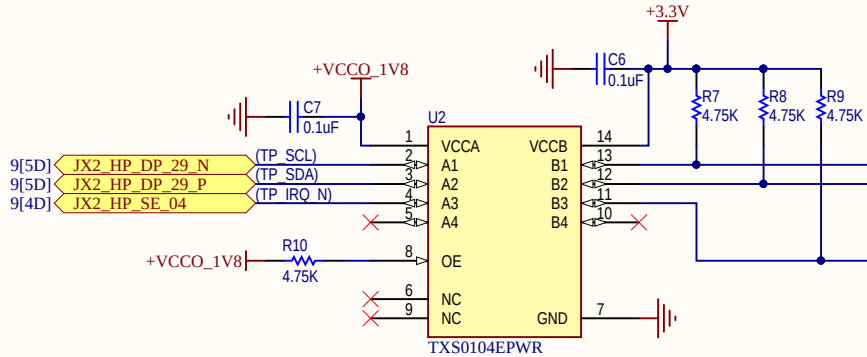
USER NOTE:
SEL [0:1] Mode (default):
JP1 installed, J1/J2 installed from
pins 1-2. This set's mode 3.
I2C Mode: JP1 not installed, J1/J2
installed



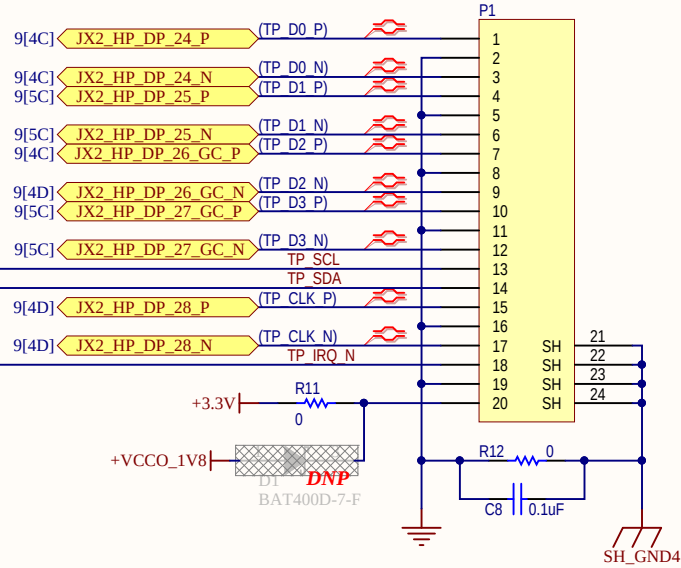
Layout Note:
Differential pairs:
Route at 100 ohms
Termination on JX3
connectors.



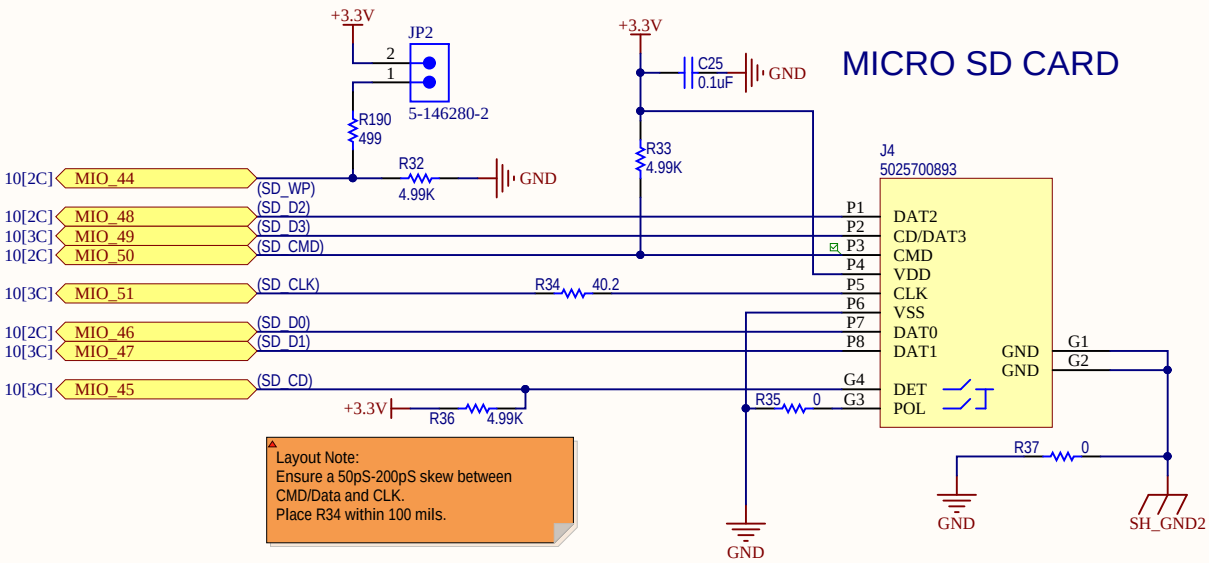
LVDS CONNECTOR



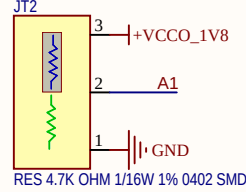
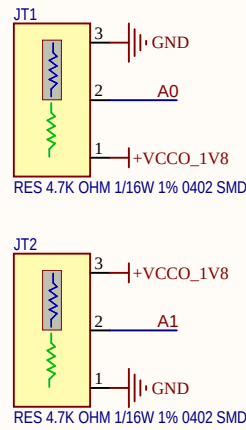
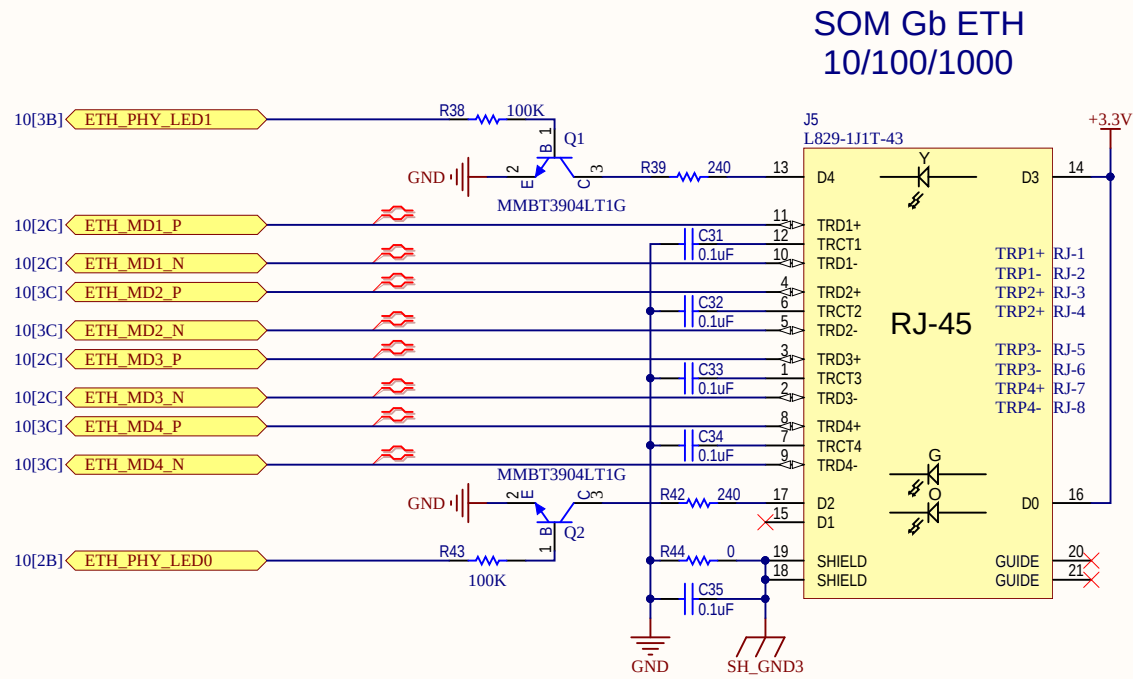
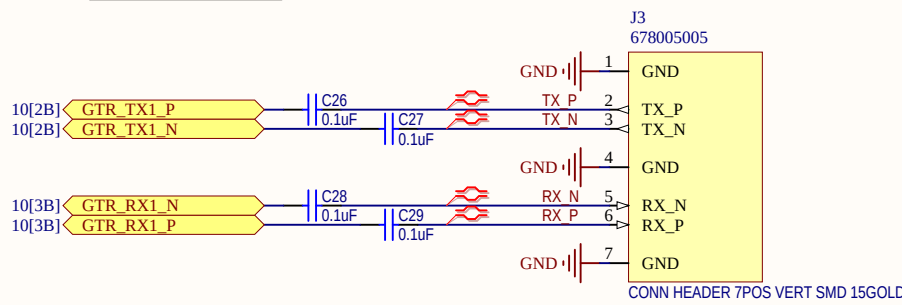
Layout Note:
50 ohm single ohm.
100 ohm +/- 10% diff routing.



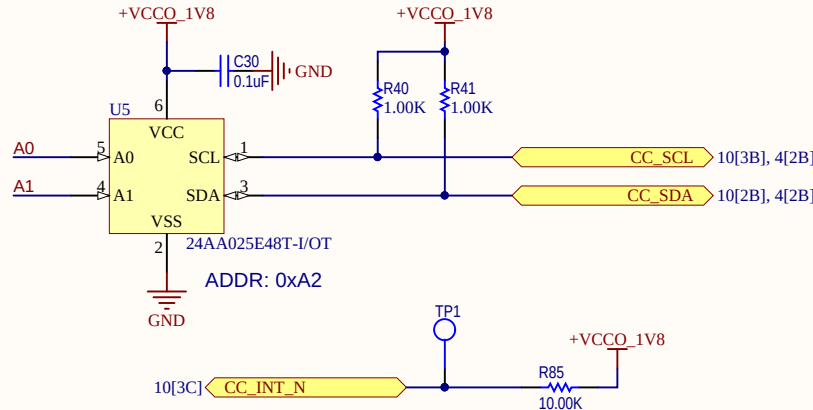
uSD, MAC, GiGE, SATA I/F



Layout Note:
SATA: GSSG on caps.
100 ohm +/- 15% diff routing.

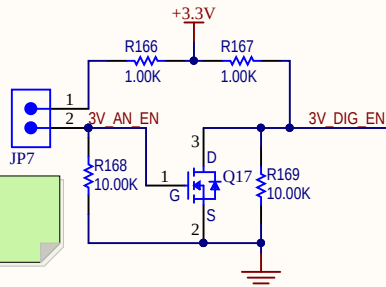


MAC ID - EEPROM



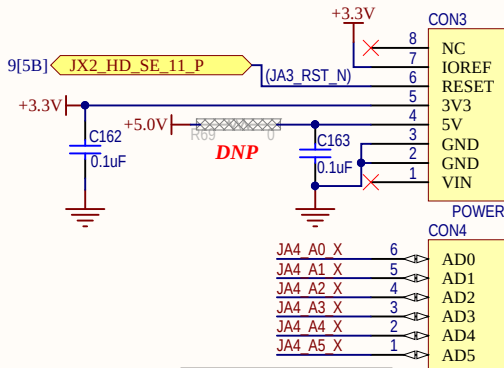
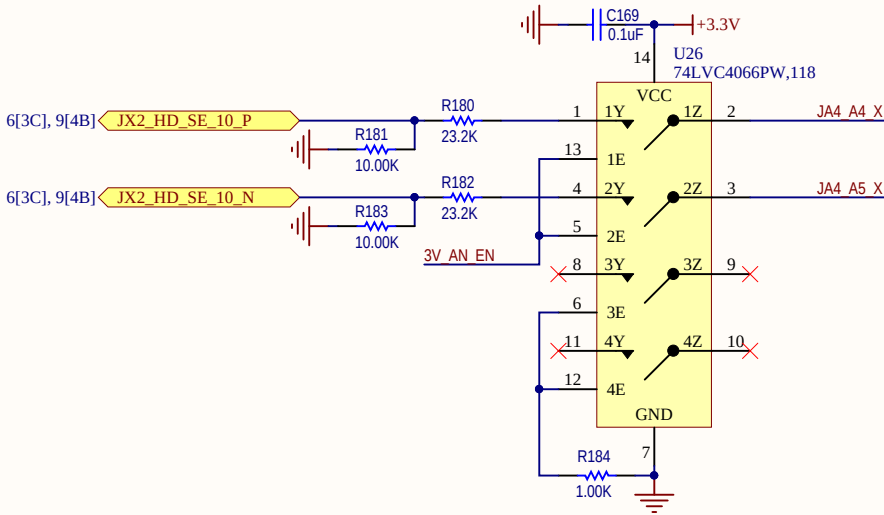
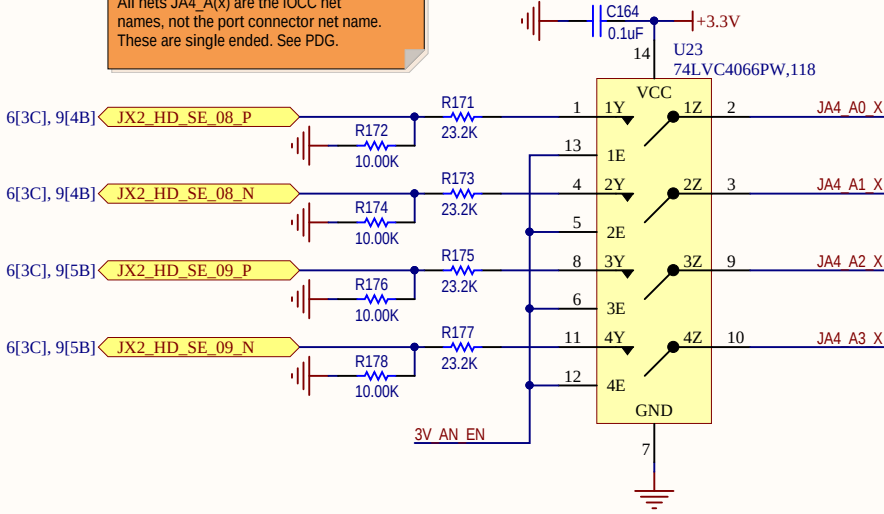
ARDUINO SHIELD CONNECTORS

JA4 ANALOG/DIGITAL
MODE SELECT



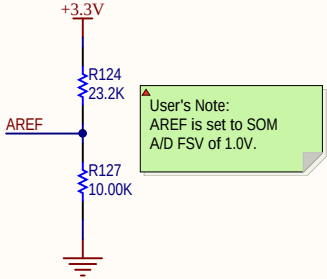
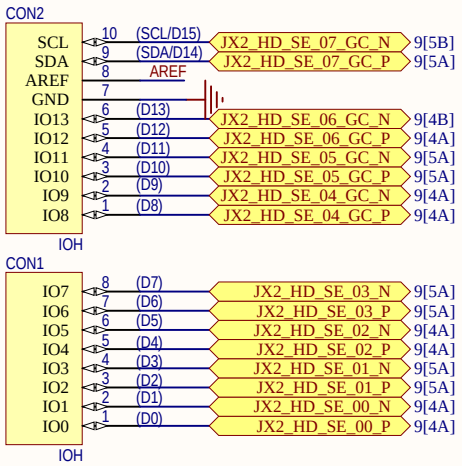
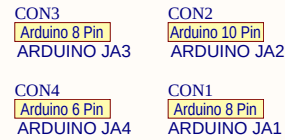
User's Note:
JP3 placed: 3V JA4 analog
not-placed: 3V JA4 digital

Layout Note:
All nets JA4_A(x) are the IOCC net
names, not the port connector net name.
These are single ended. See PDG.



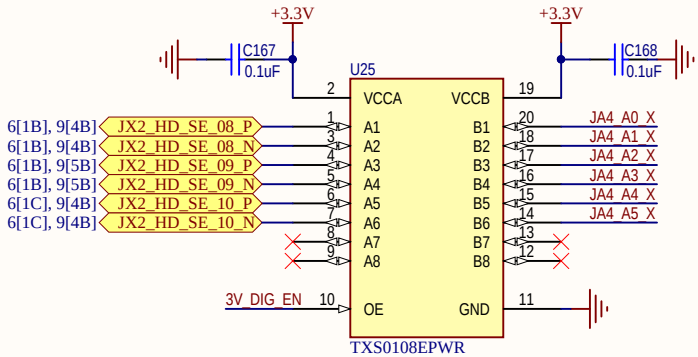
User's Note:
The analog interface is
an output only from the
Arduino shield.

Arduino R5 Shield Symbol/Footprint



User's Note:
AREF is set to SOM
A/D FSV of 1.0V.

JA4 DIGITAL ISOLATION



SH9



SHUNT, ECON, PHBR

Avnet Engineering Services

Project Name: UltraZed IO Carrier Card

PCB Rev: 1

BOM: 01

Variant: 02

Doc Num: SCH-US1CAR

Date: 11/9/2016

Time: 1:51:53 PM

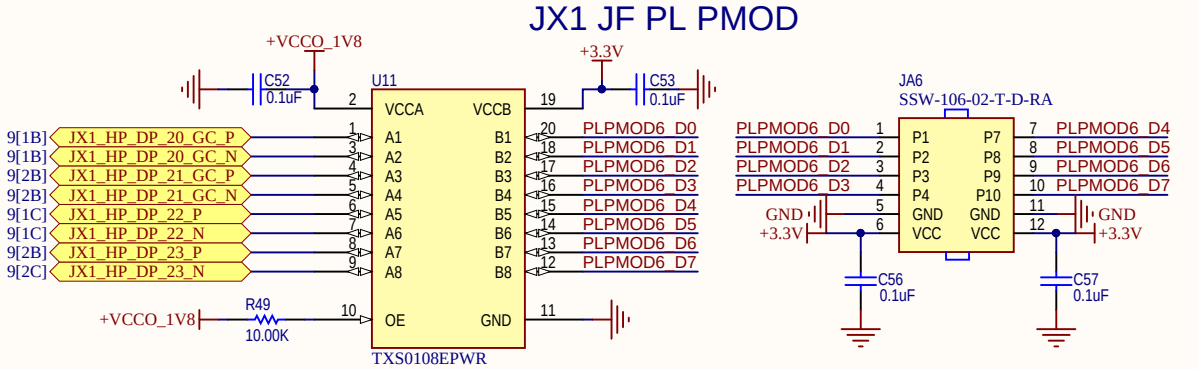
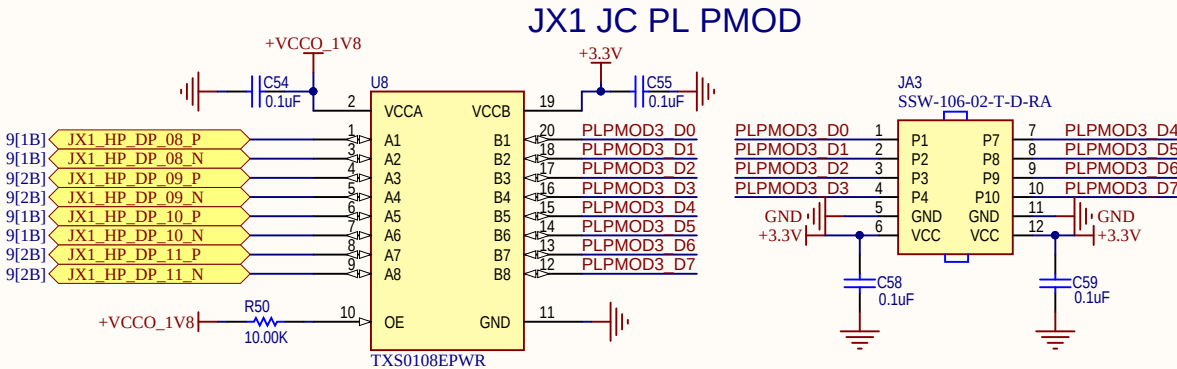
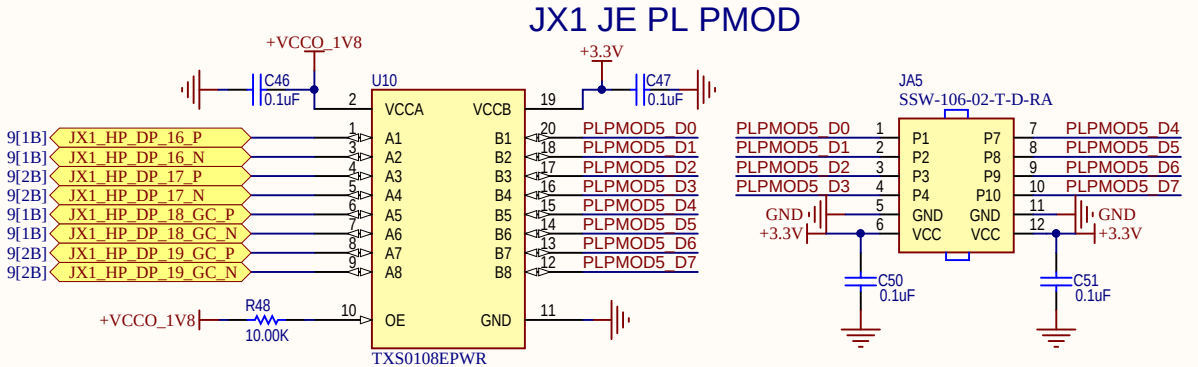
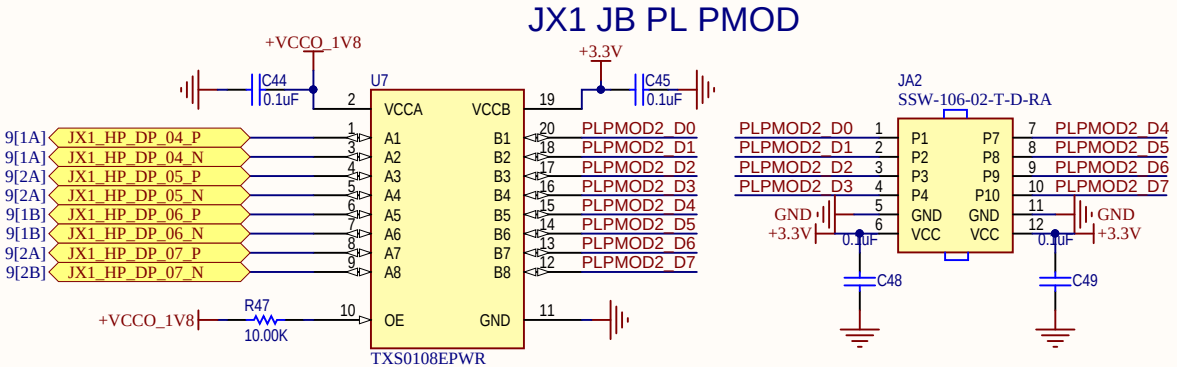
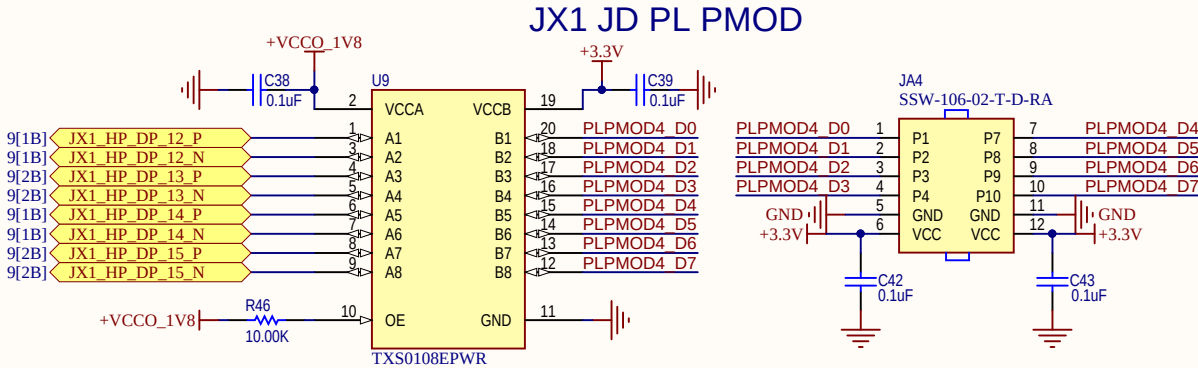
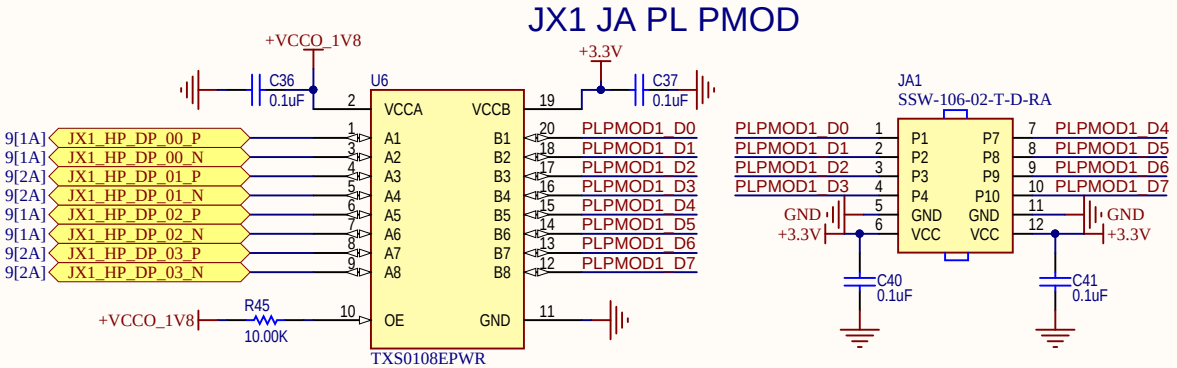
Size: B

Sheet: 6 of 17

06 - Arduino.SchDoc

JX1 HP PL PMODs

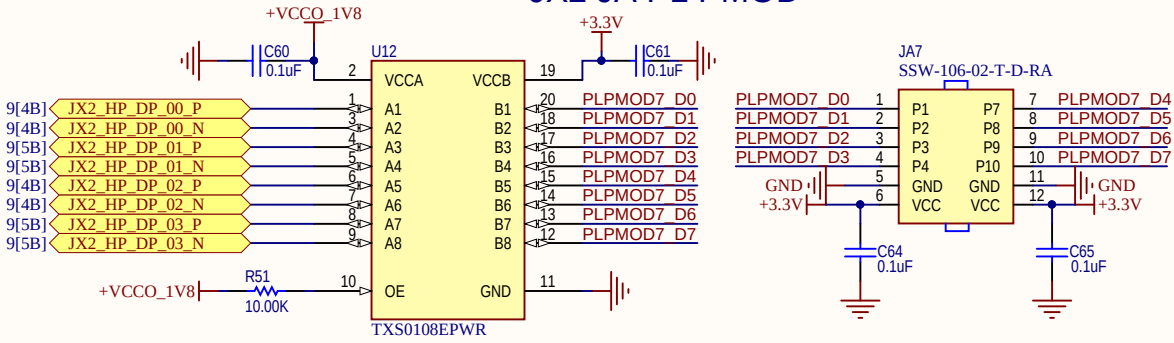
Layout Note:
ALL PMODs routed
single ended at 50 ohms.



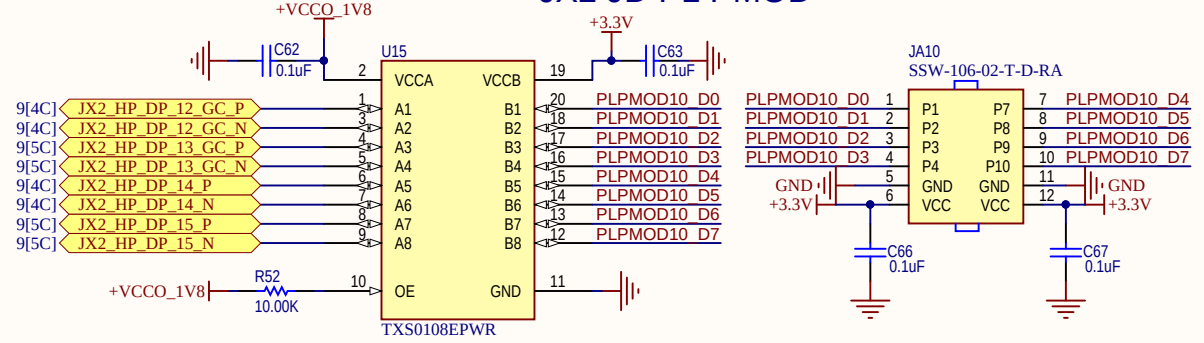
JX2 HP PL PMODs

Layout Note:
ALL PMODs routed
single ended at 50 ohms.

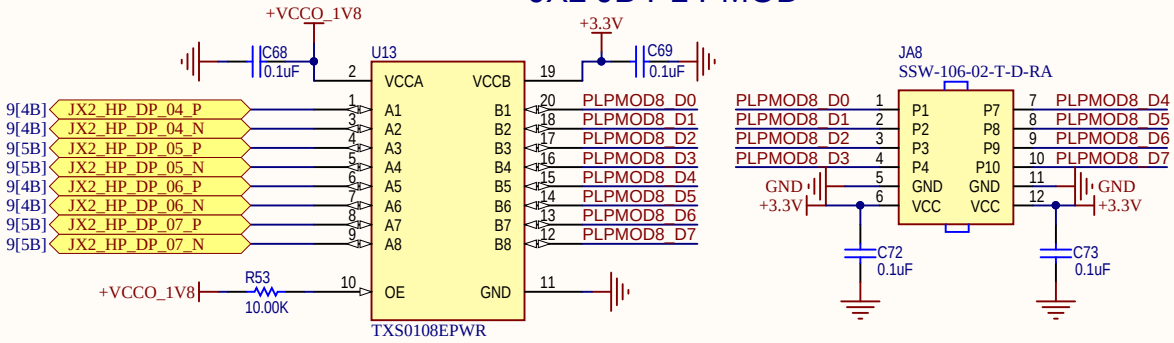
JX2 JA PL PMOD



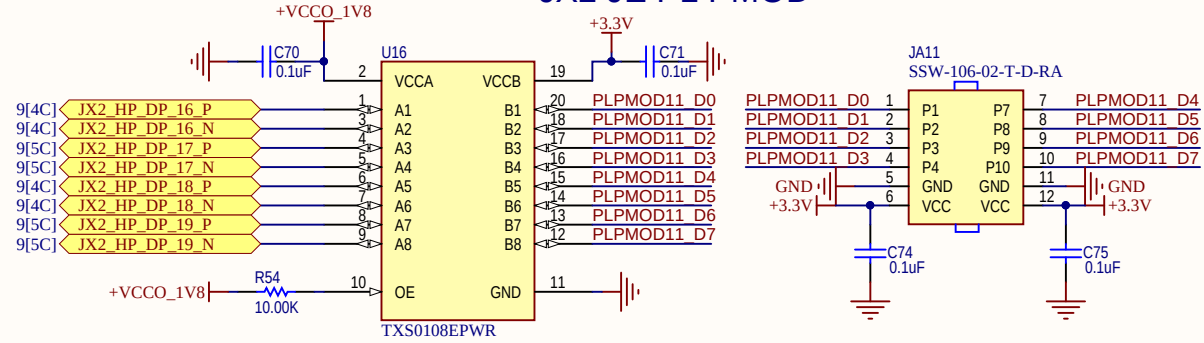
JX2 JD PL PMOD



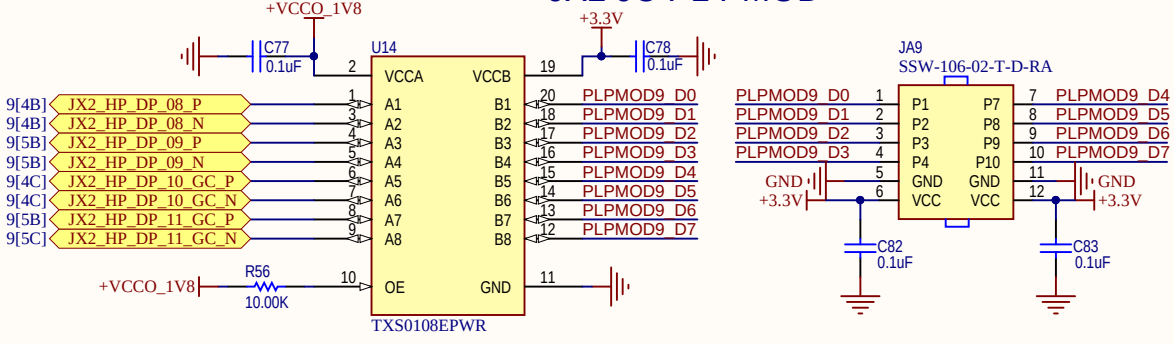
JX2 JB PL PMOD



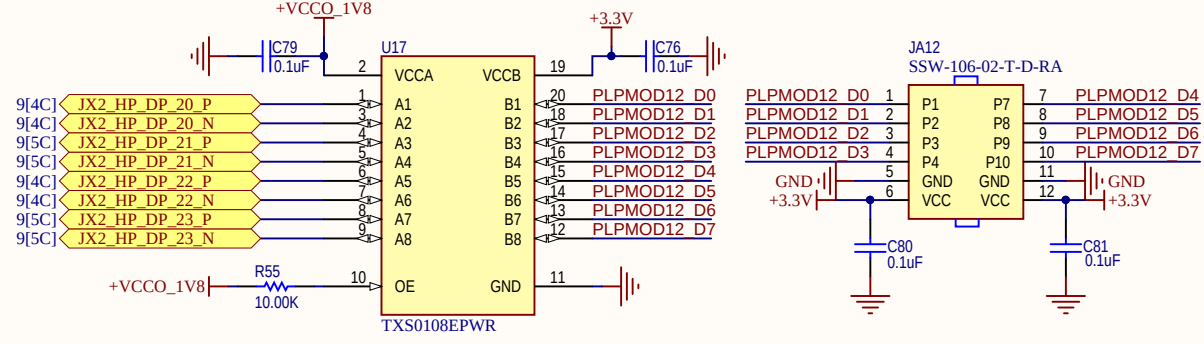
JX2 JE PL PMOD



JX2 JC PL PMOD

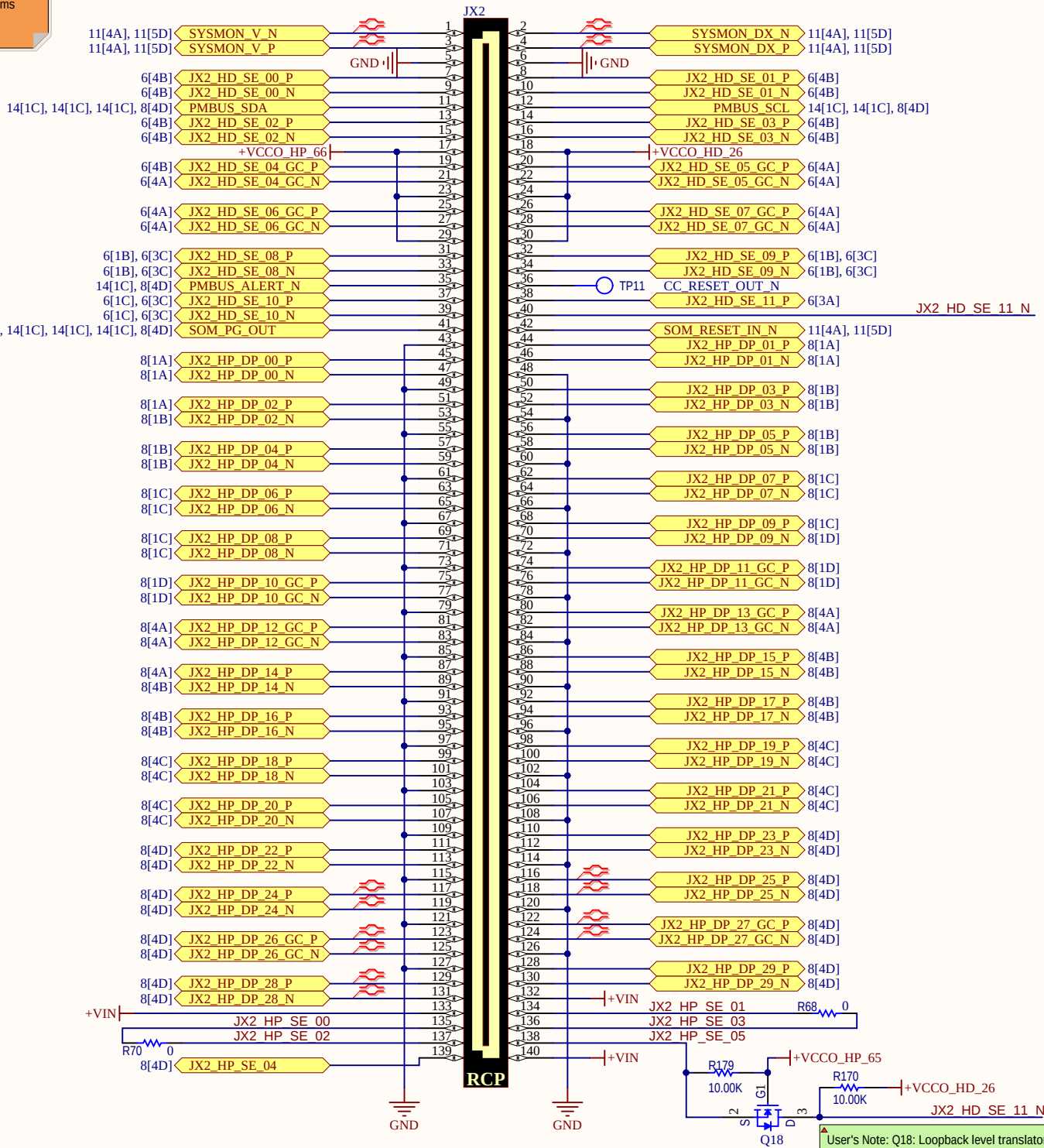
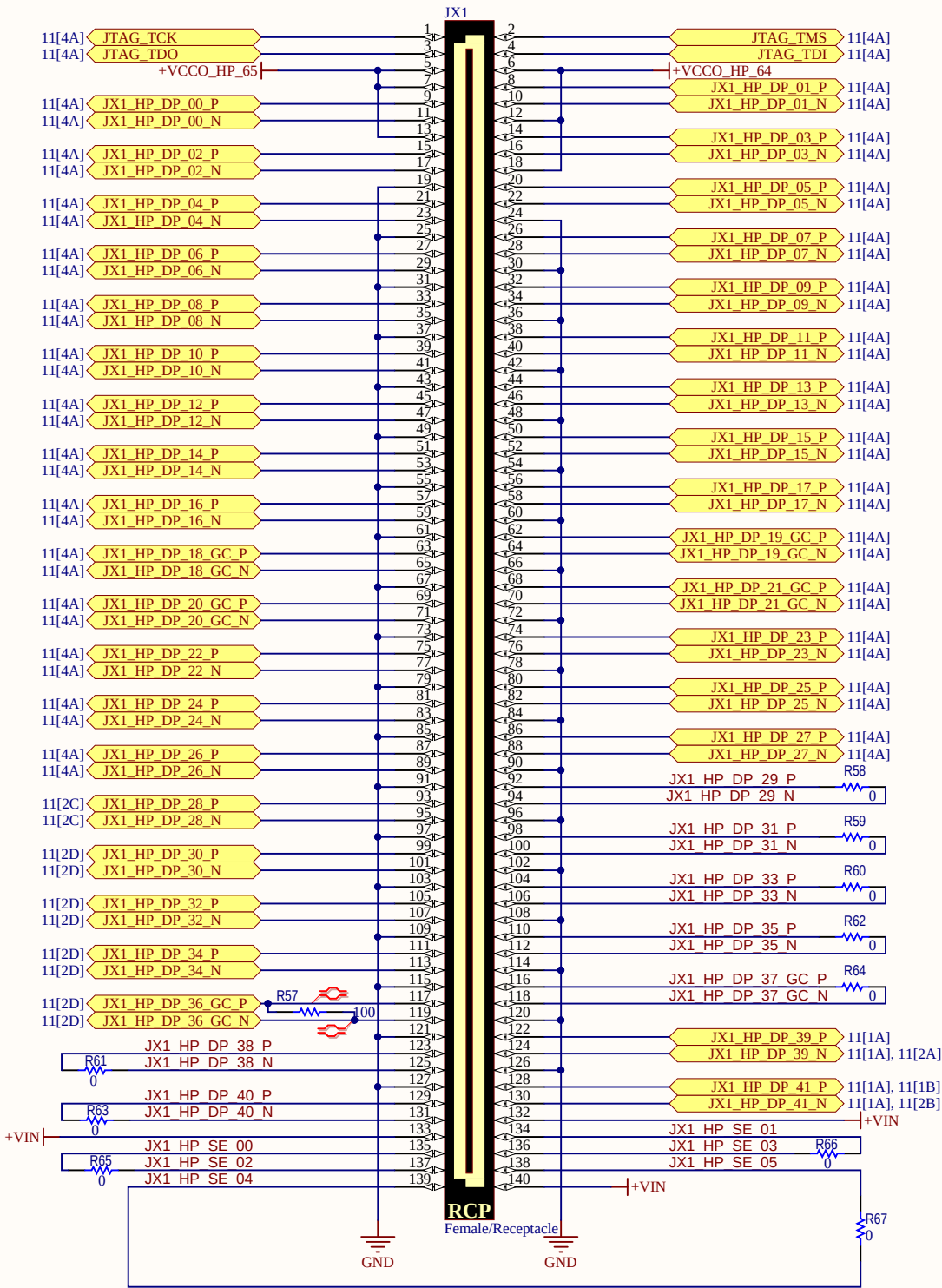


JX2 JF PL PMOD



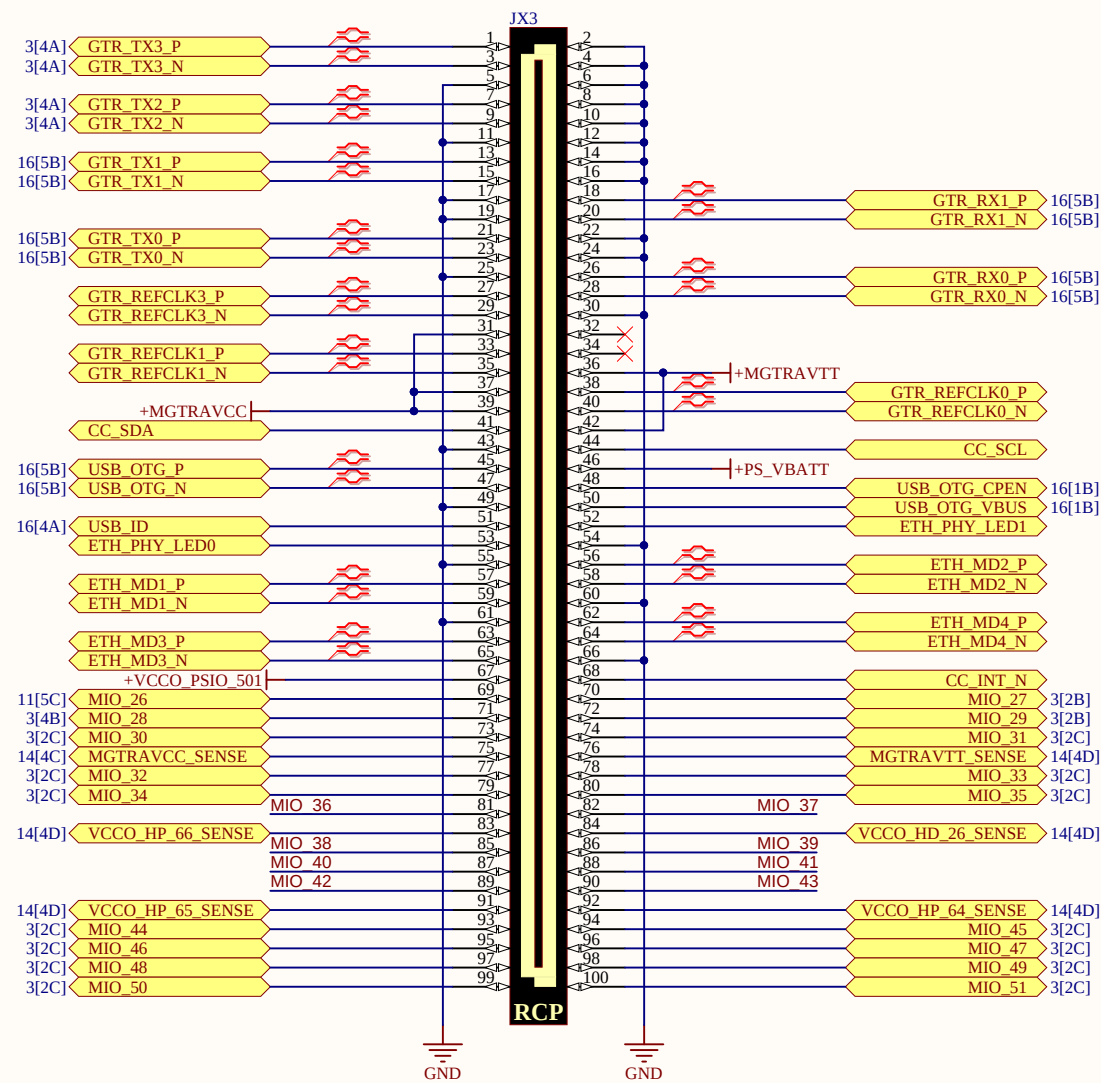
JX1, JX2 CONNECTORS

Layout Notes:
1) NO PIN SWAPPING ALLOWED.
2) Differential pairs: Route at 100 ohms unless otherwise noted.



JX3 CONNECTOR

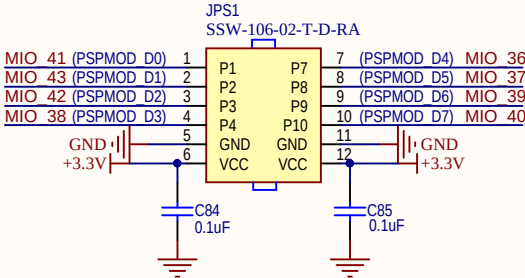
JX3 SOM CONNECTOR



PS PMOD

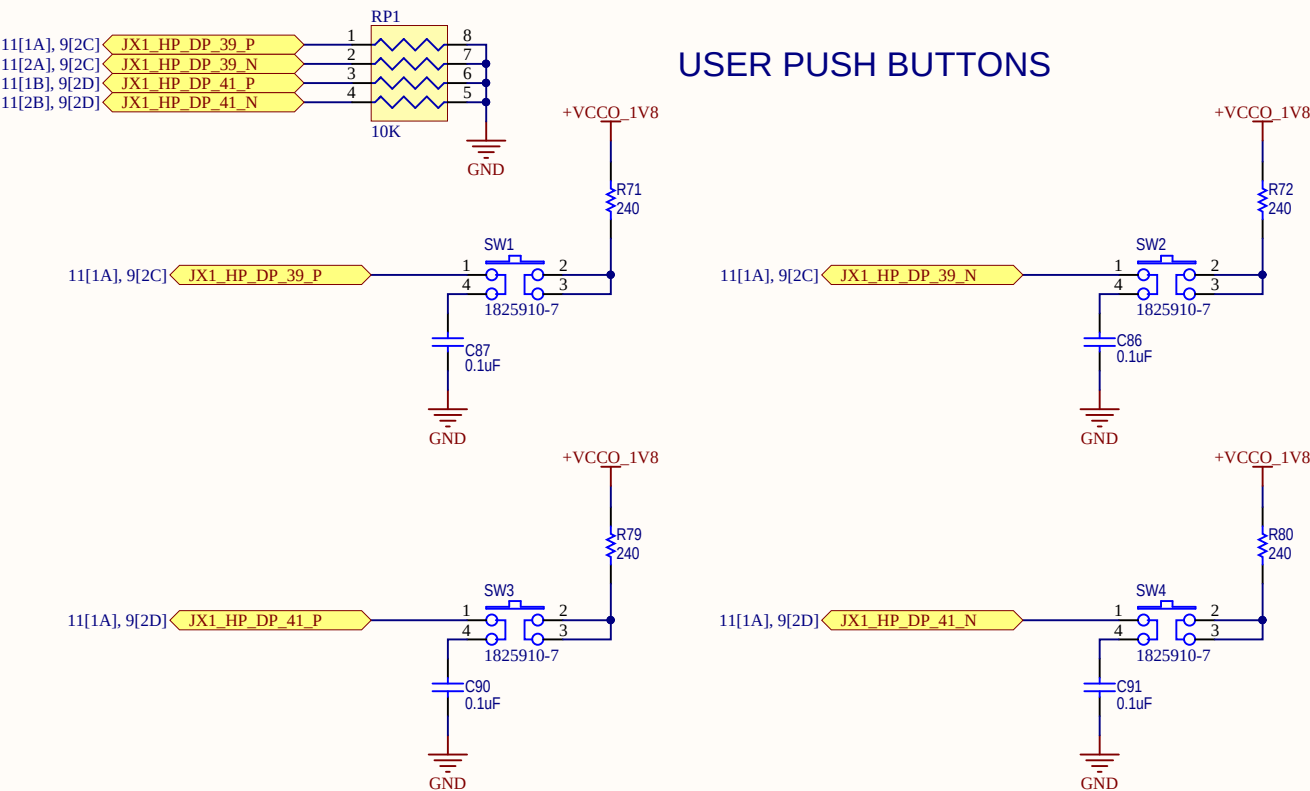
Layout Note:
ALL PMOD signals
routed at 50 ohm SE.

PS PMOD Interface

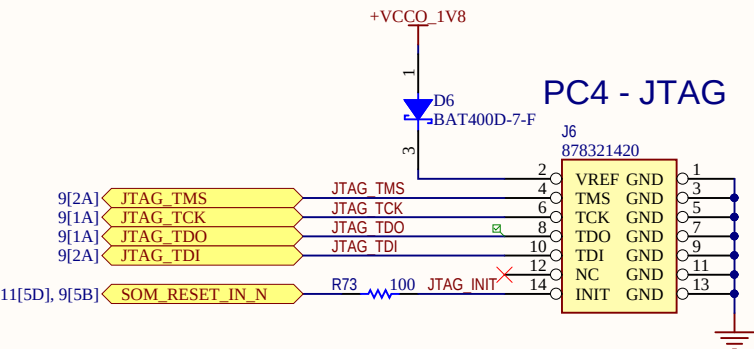


SWITCHES & JTAGS

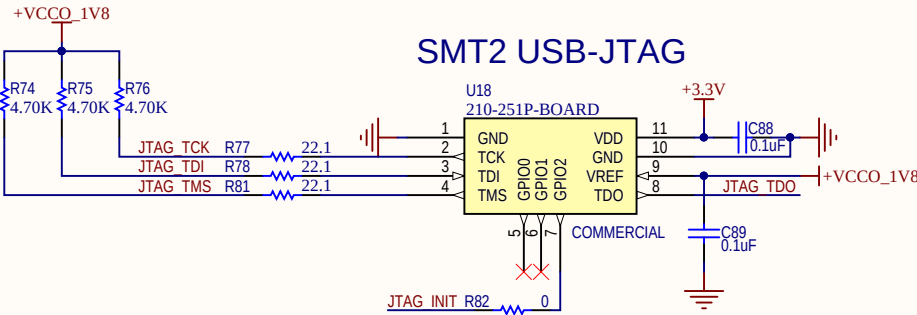
USER PUSH BUTTONS



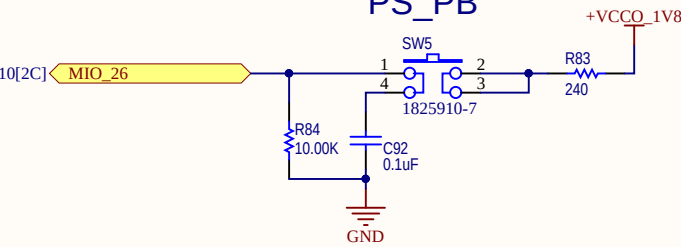
PC4 - JTAG



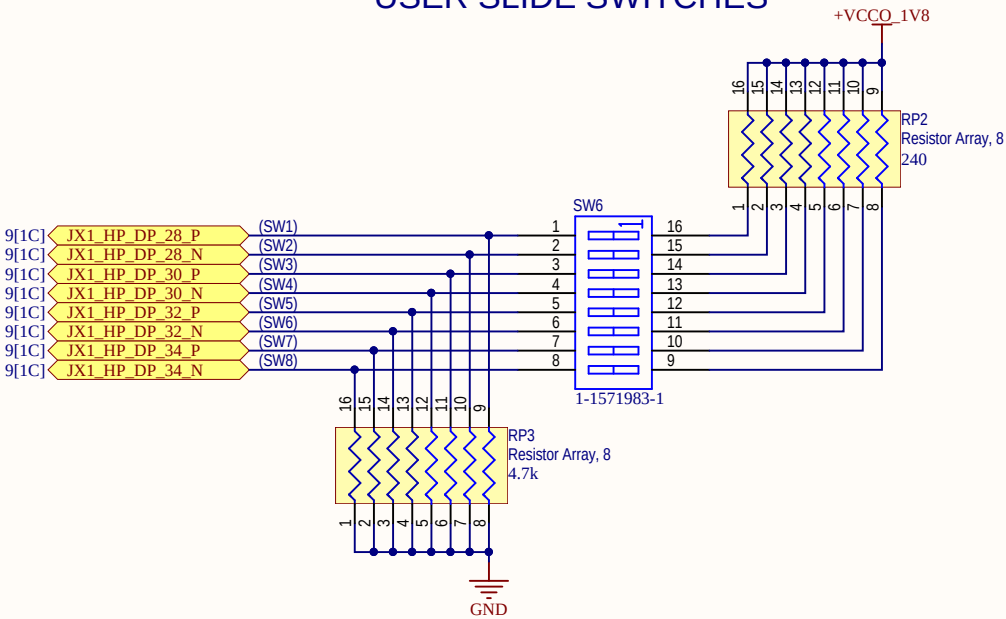
SMT2 USB-JTAG



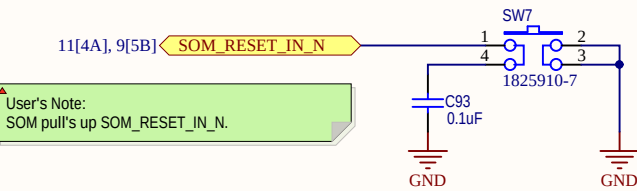
PS_PB



USER SLIDE SWITCHES

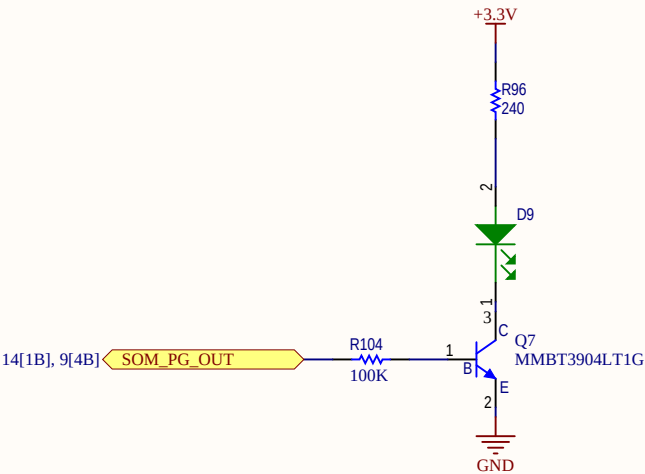


SOM_RST_N



LED INDICATORS

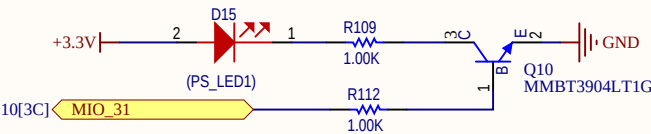
PG MODULE



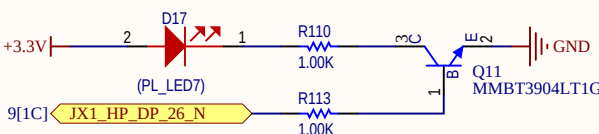
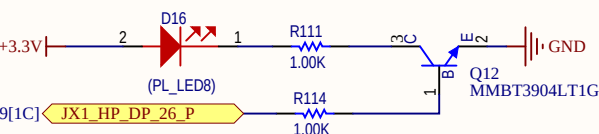
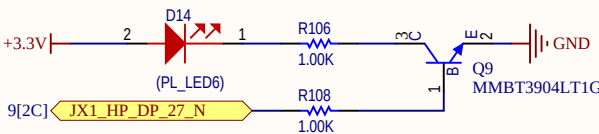
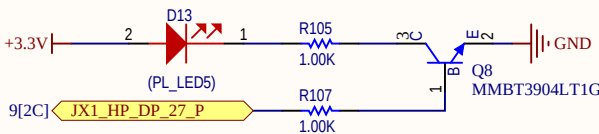
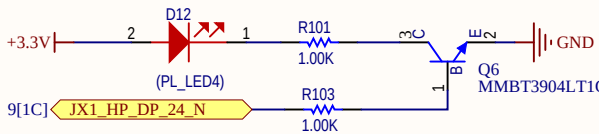
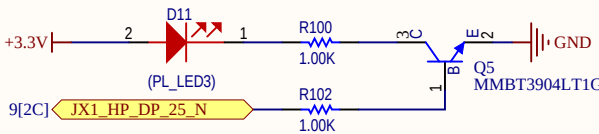
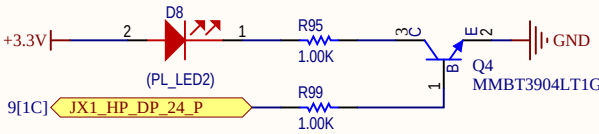
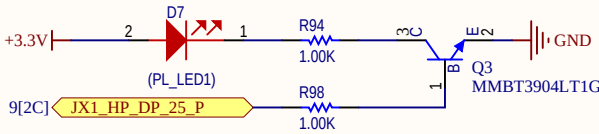
VIN_HDR_LED



USER LEDS: 1 PS

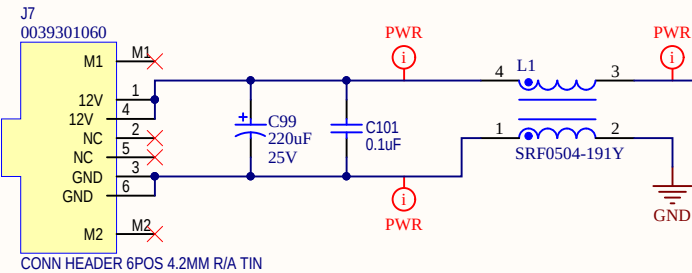


USER LEDS: 8 PL



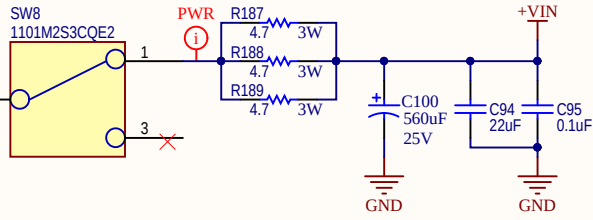
POWER INPUT

POWER JACK

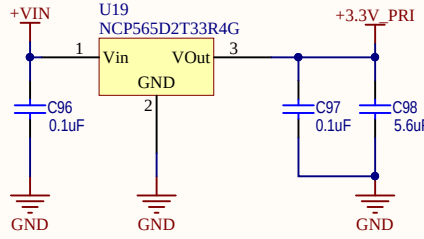


NOT ATX COMPATIBLE

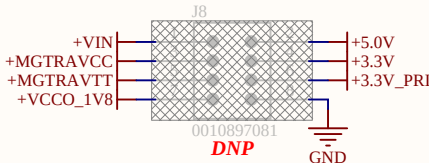
MAIN POWER SWITCH



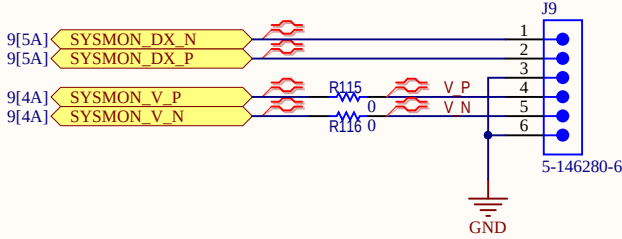
+3.3V PRIMARY REG



VOLTAGE MONITOR HEADER

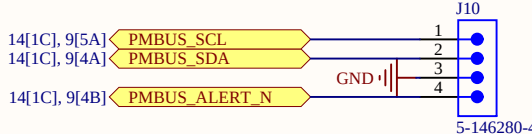


SYSMON HEADER

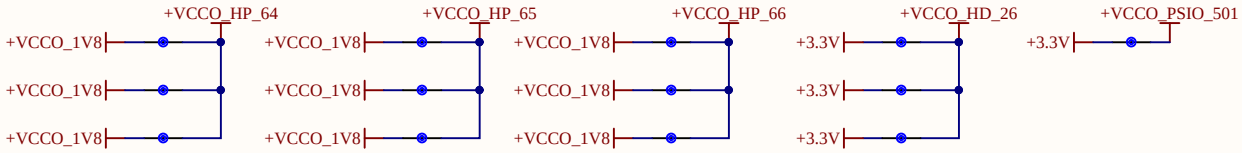
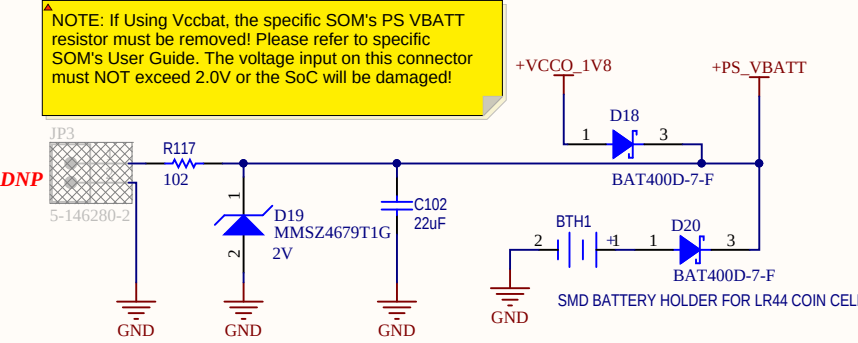


Layout Note:
Net Ties at 0.5mm each.
Tie as close as possible to
each JX pin.

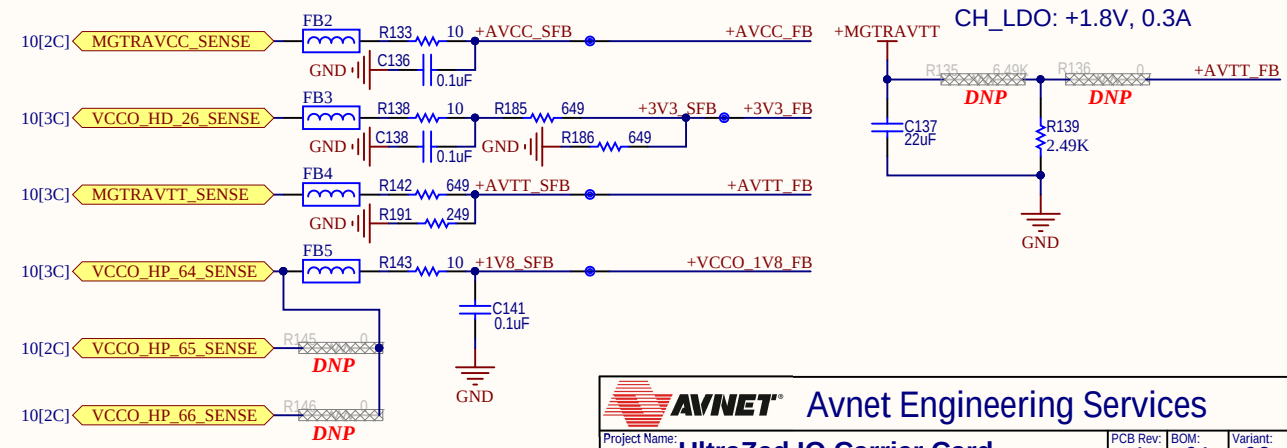
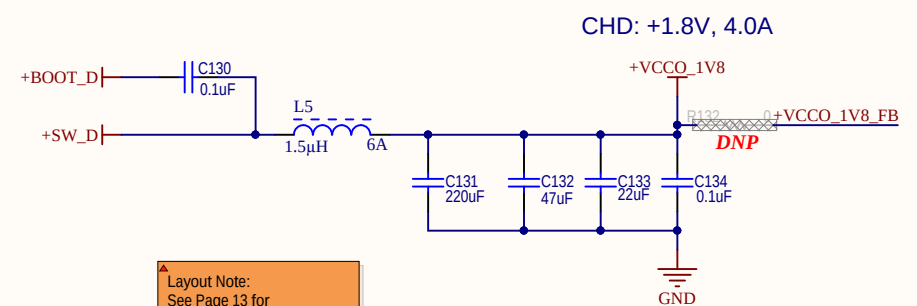
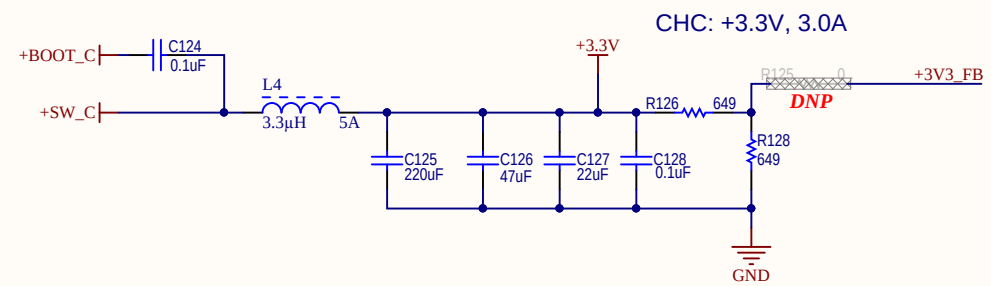
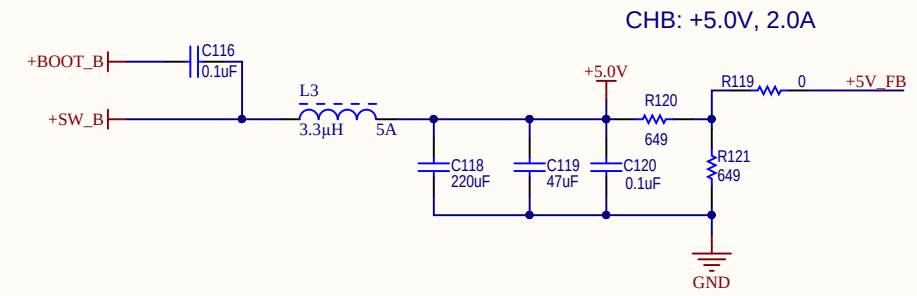
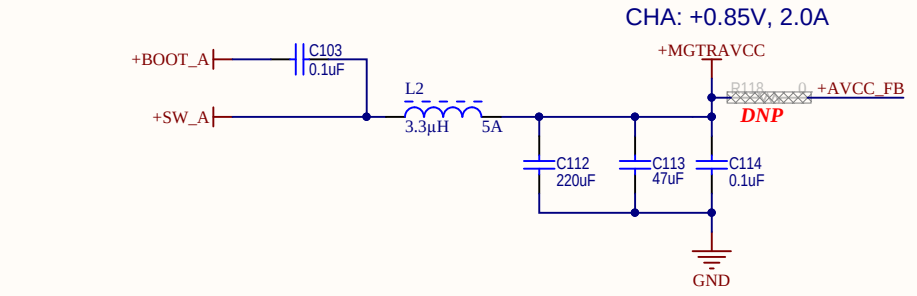
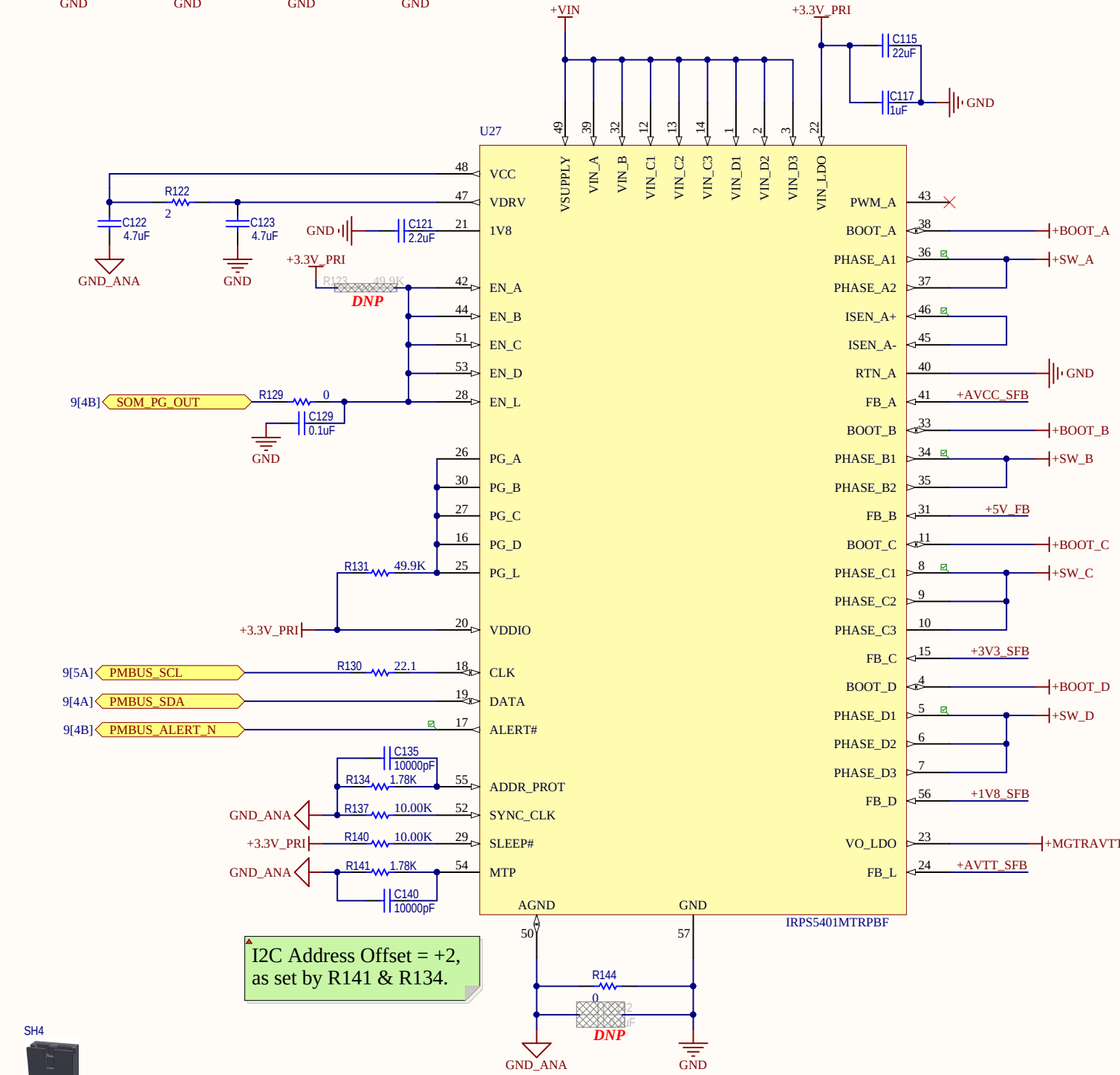
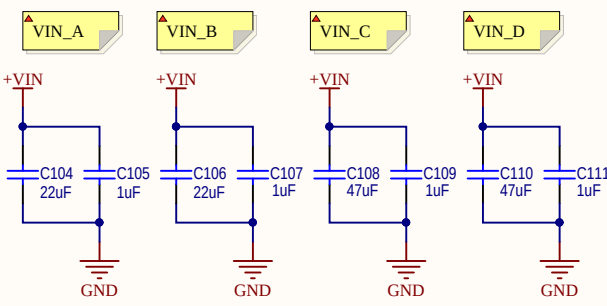
PMBus HEADER



+PS_VBATT_TEST



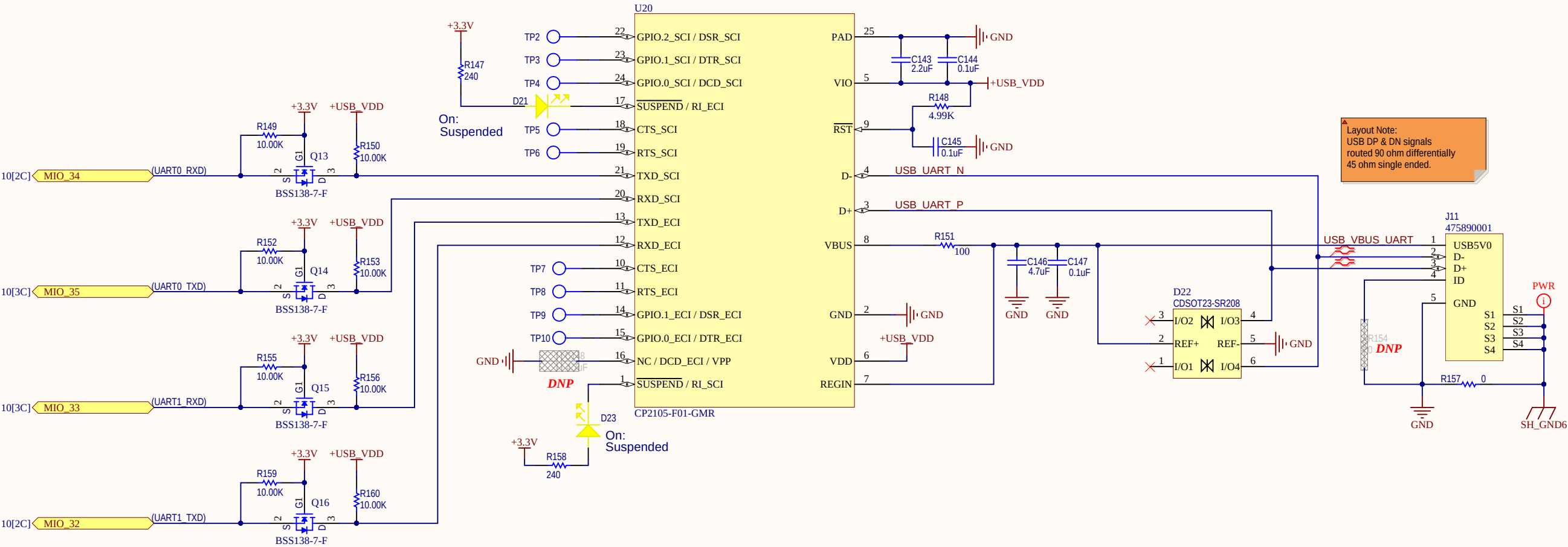
IRPS POWER SUPPLY



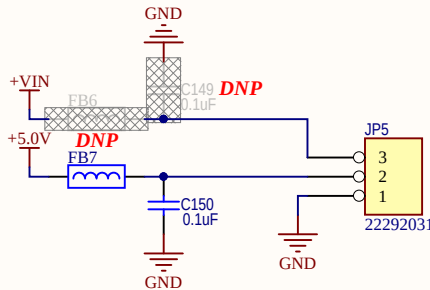
Avnet Engineering Services			
Project Name:	UltraZed IO Carrier Card	PCB Rev:	BOM:
Doc Num:	SCH-US1CAR	Date:	11/9/2016
Sheet Title:	14 - POWER2.SchDoc	Size:	B
Variant:	02	Time:	1:51:55 PM
Sheet:	14 of 17		

UARTS & FAN

DUAL USB UART

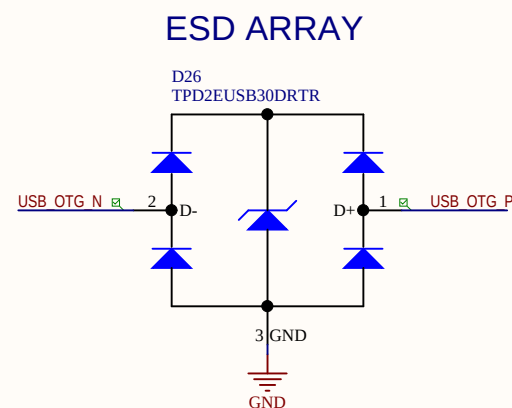
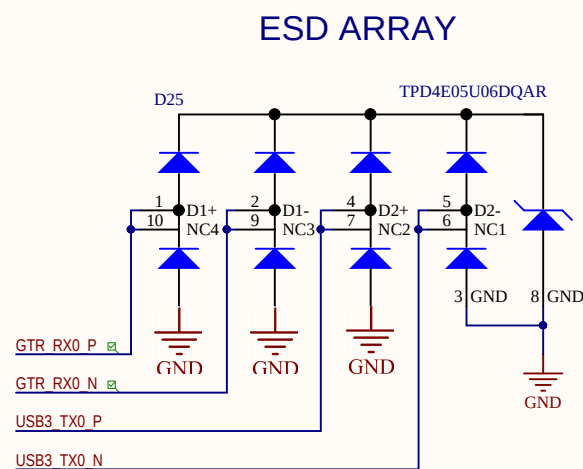
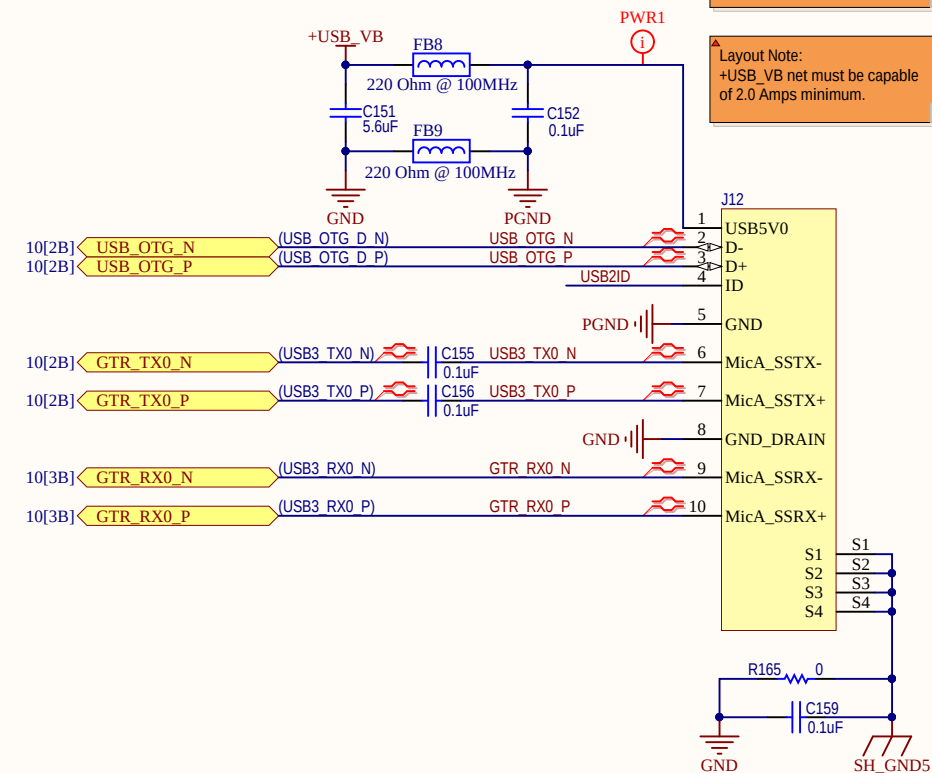
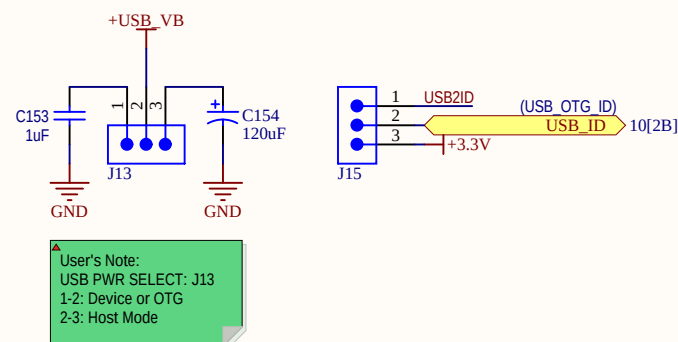
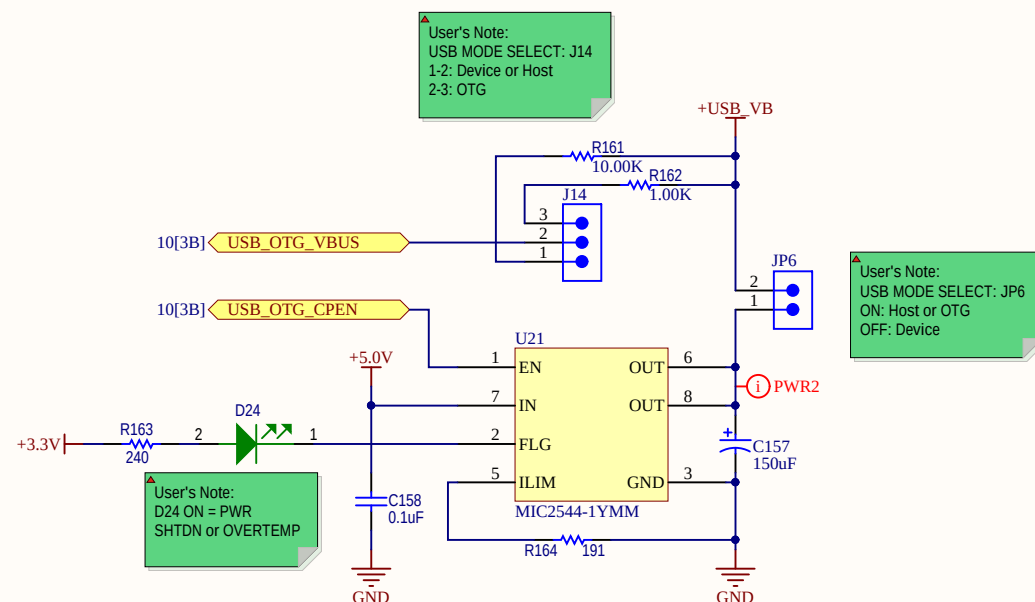


FAN HEADER



User's Note:
TXD and RXD are swizzled
on this interface to create
null modem connections.

USB 2.0/3.0 Interface



Assembly: Mechanicals:

Label1
BD-XXXX-XXXXX-G
Label, Product



PCB

Label2
BD-XXXX-XXXXX-G
Label, Serial Number

XXX-XXX-PCB-X

PCB PN (In Copper)

ESD1

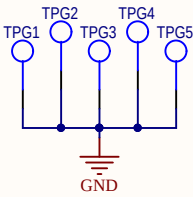


ESD Bag

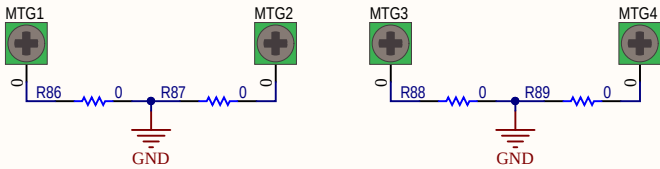
Label ESD1



Label, ESD



SOM Mounting Holes:



Edge stand-off mounting holes:

