

X-MLCC-05058

ML Starter Kit Carrier Card

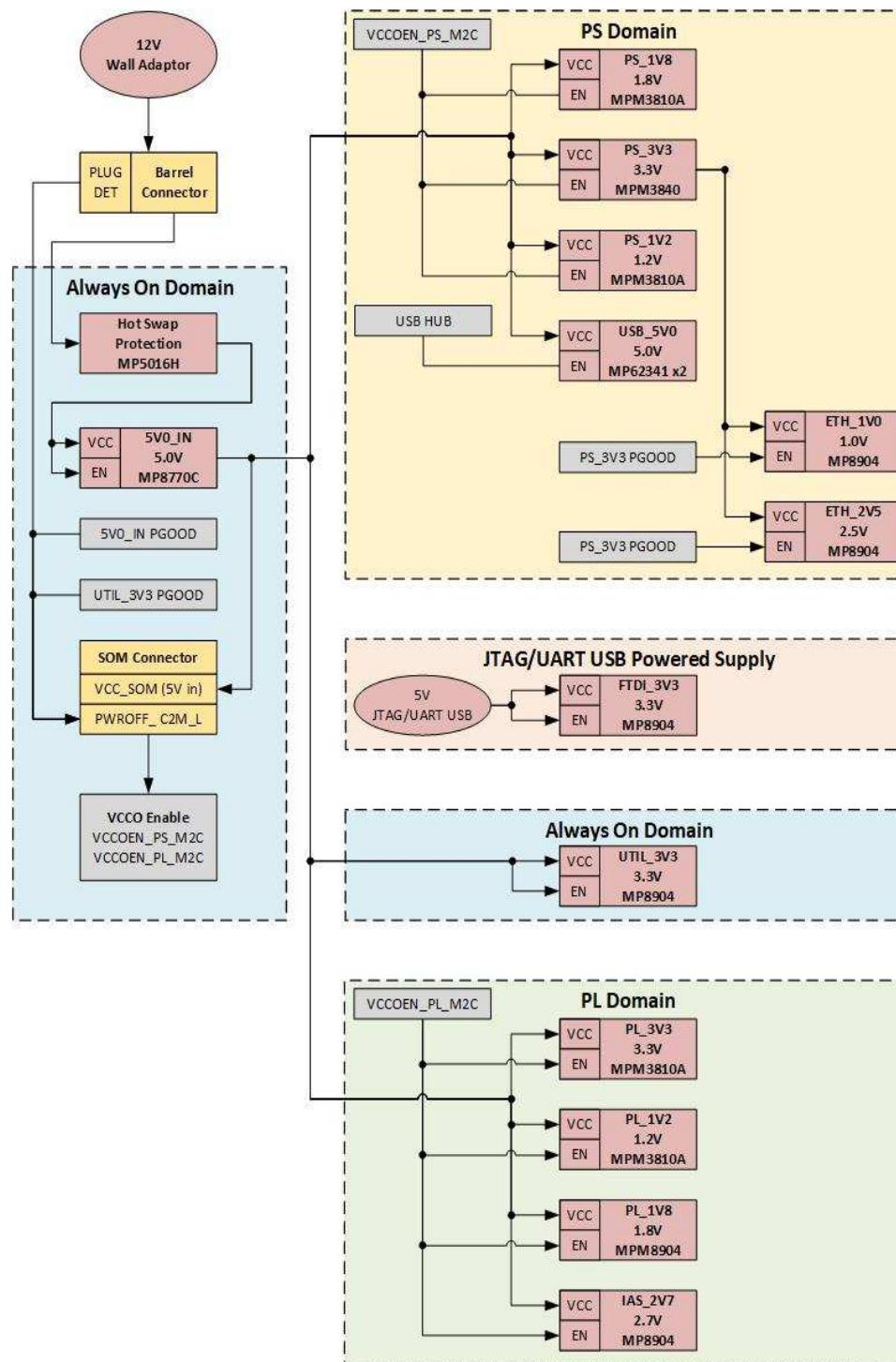
NOTICE: These schematics are made available for users who are working with this specific Xilinx board and should not be considered an optimal board design reference. This board was designed for evaluation purposes with components that are potentially more complex and costly than would be used in an end customer system. Users are encouraged to leverage the Xilinx design guidelines as the optimal starting point for new board designs.

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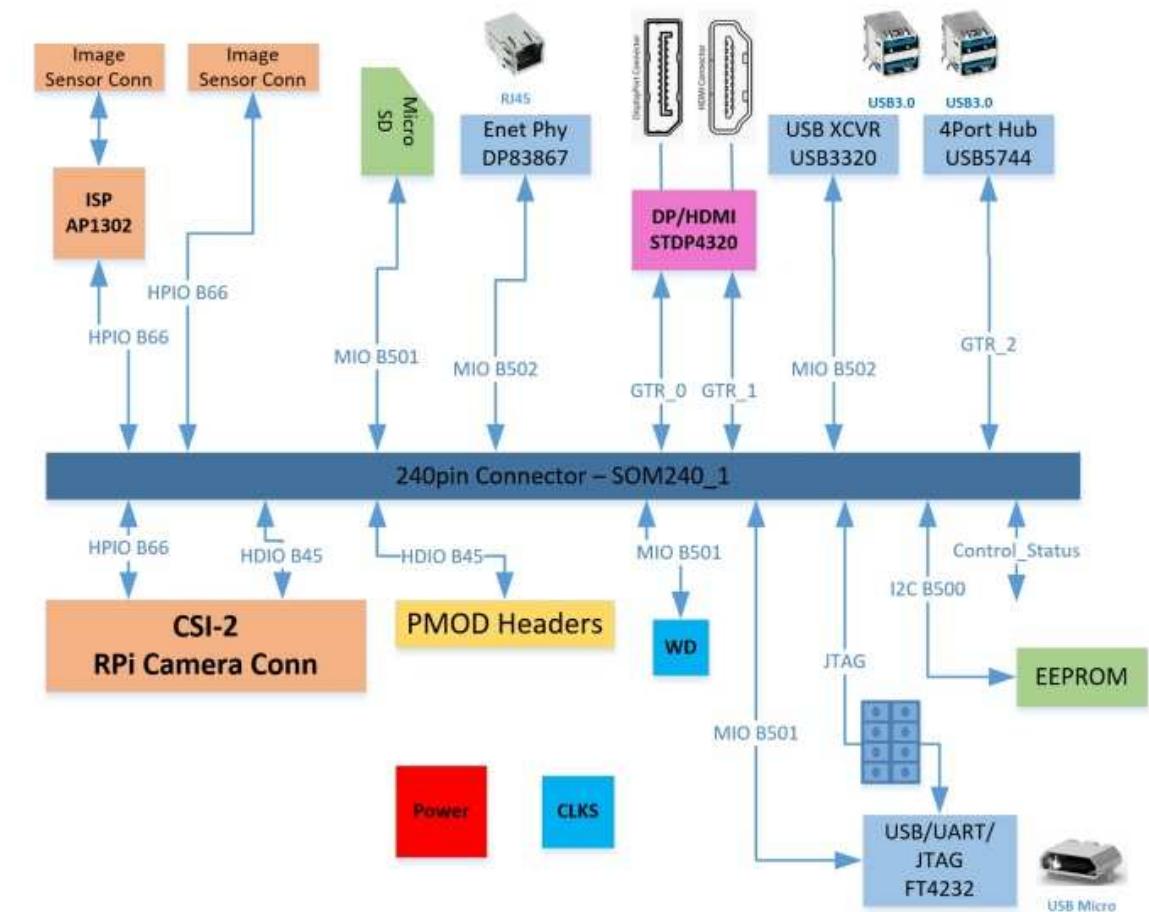
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| | | |
|--|---|---|
|  XILINX 2100 Logic Drive San Jose, CA 95124 | SKIT | |
| Title: | ML Starter Kit Carrier Card 01 - Title Page | |
| Size | Date Modified: B Thursday, April 21, 2022 | Document Number: 038-05058-01 |
| Engineer: | RH | Rev B05 |

POWER BLOCK DIAGRAM



PERIPHERAL BLOCK DIAGRAM

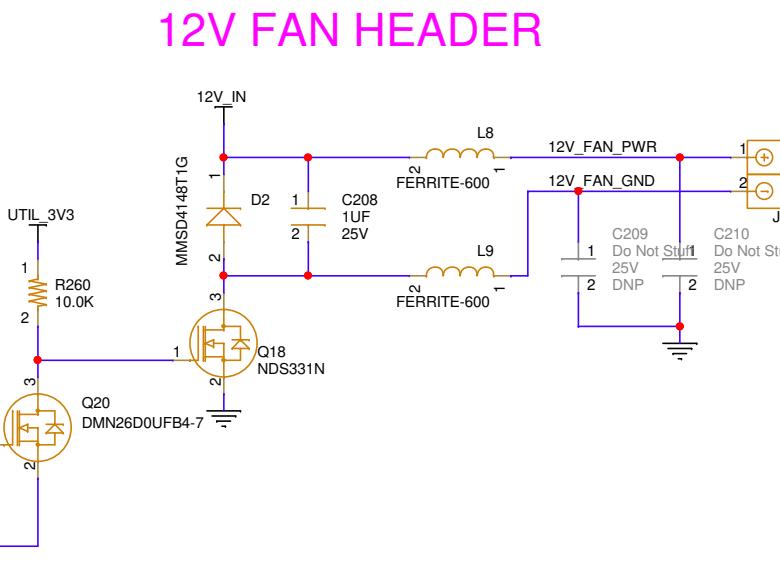
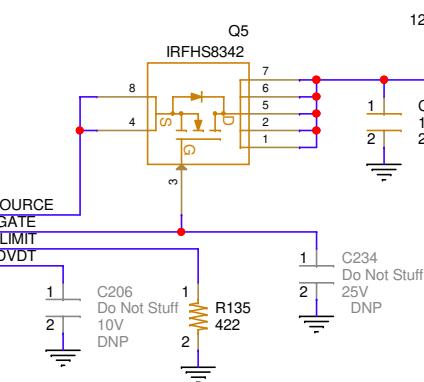
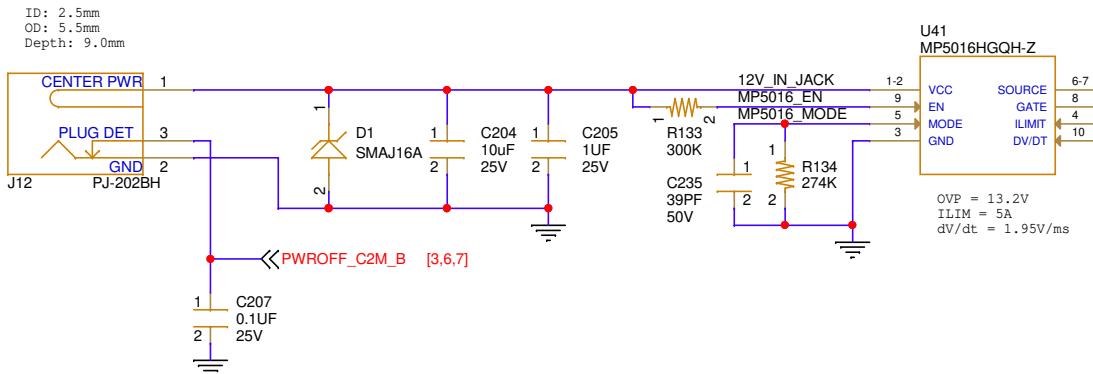

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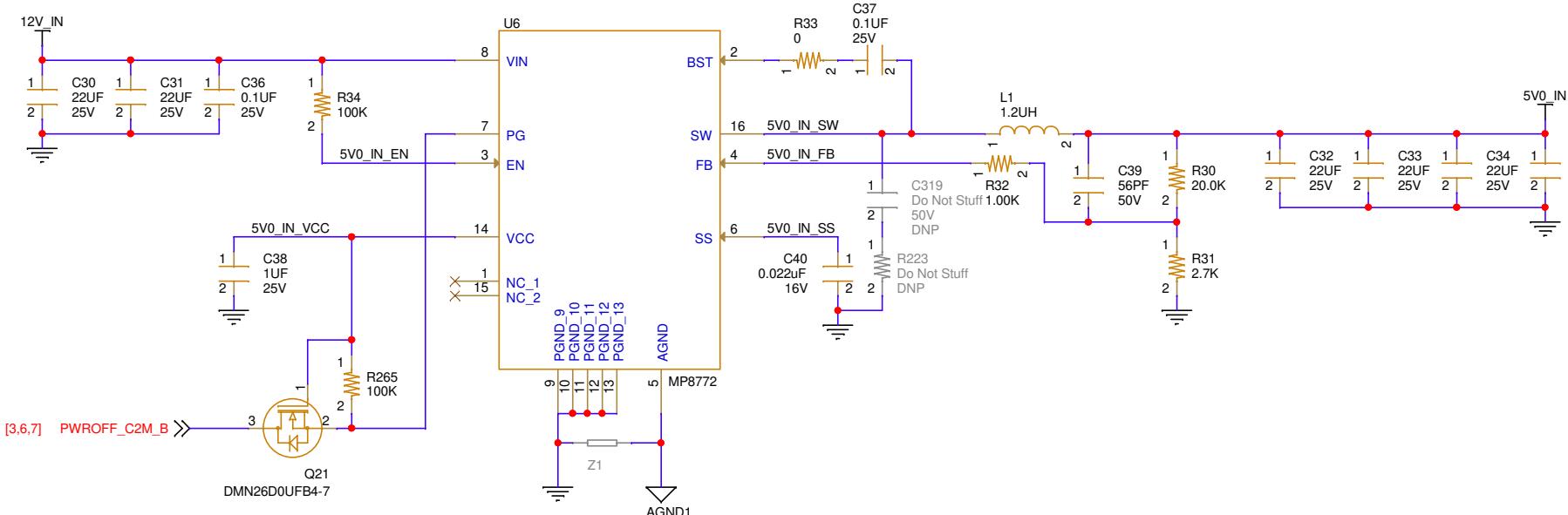
SKIT

 Title: **ML Starter Kit Carrier Card**
02 - Block Diagram

| | | | |
|-----------|--------------------------|---------------------|------------|
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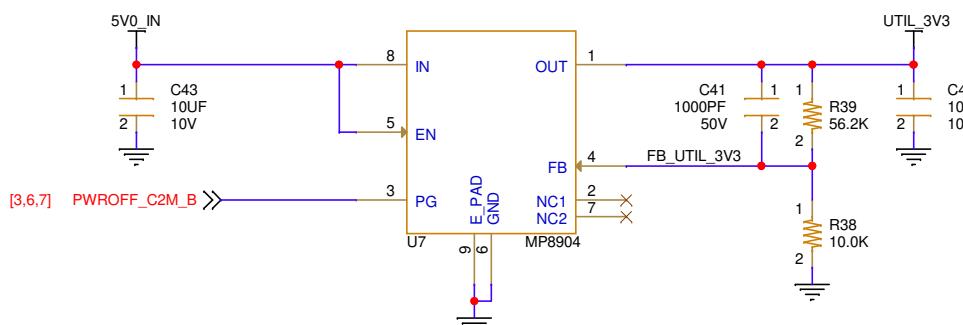


5V0_IN ALWAYS ON REGULATOR



SOM 5V0 CURRENT MONITOR

UTIL 3V3 ALWAYS ON REGULATOR



POWER TEST POINTS

GROUND LOOPS



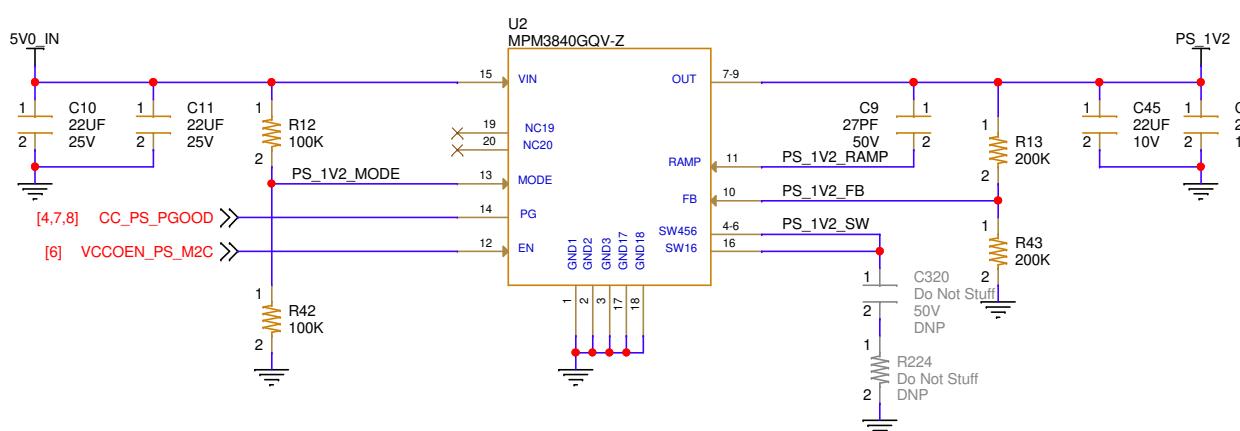
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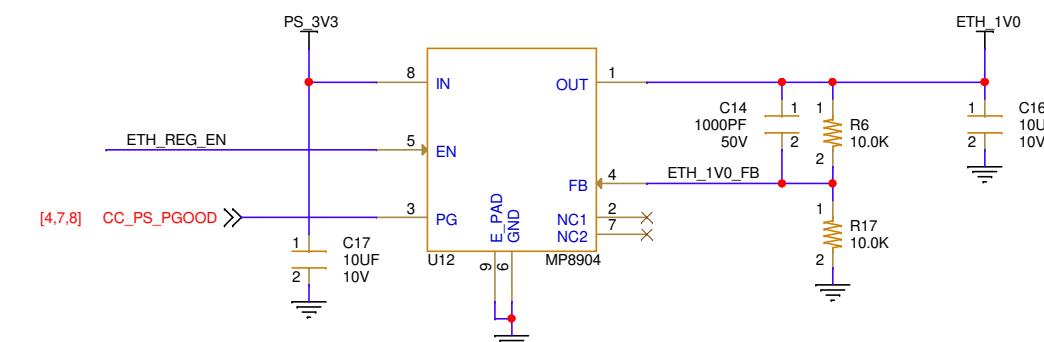
Title: ML Starter Kit Carrier Card
03 - Always On Pwr. Fan Header

| | | | |
|------------------|--|---|-------------------|
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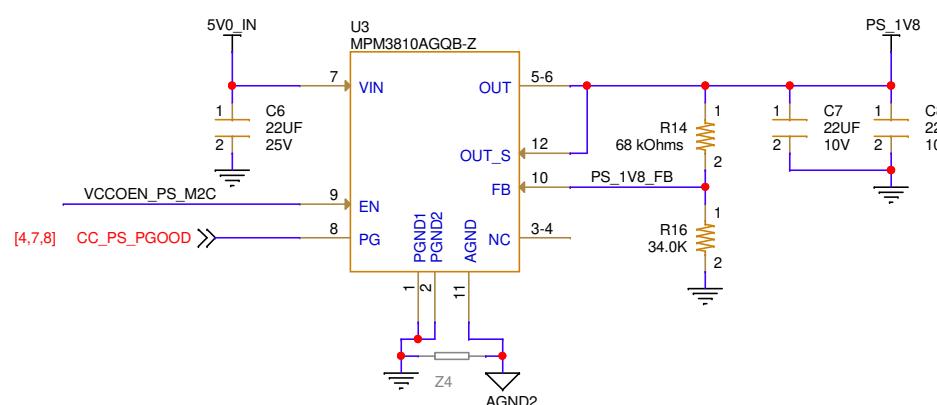
PS_1V2 REGULATOR



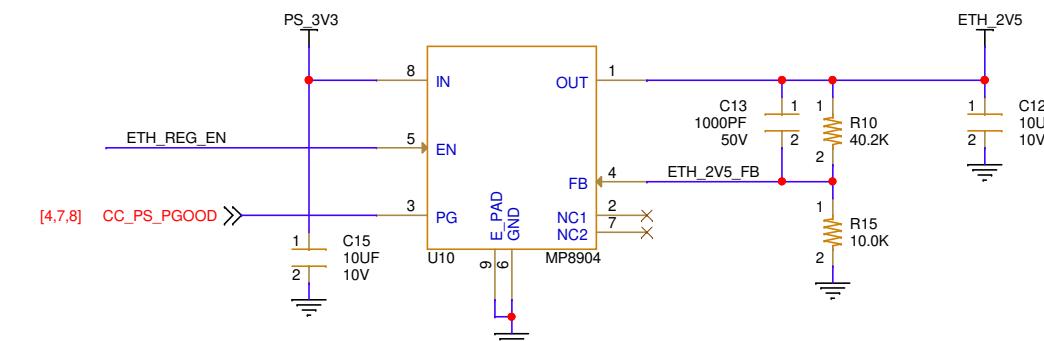
ETH_1V0 REGULATOR



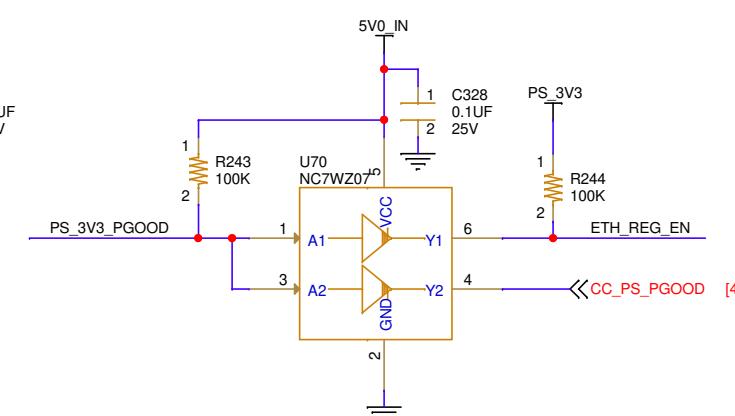
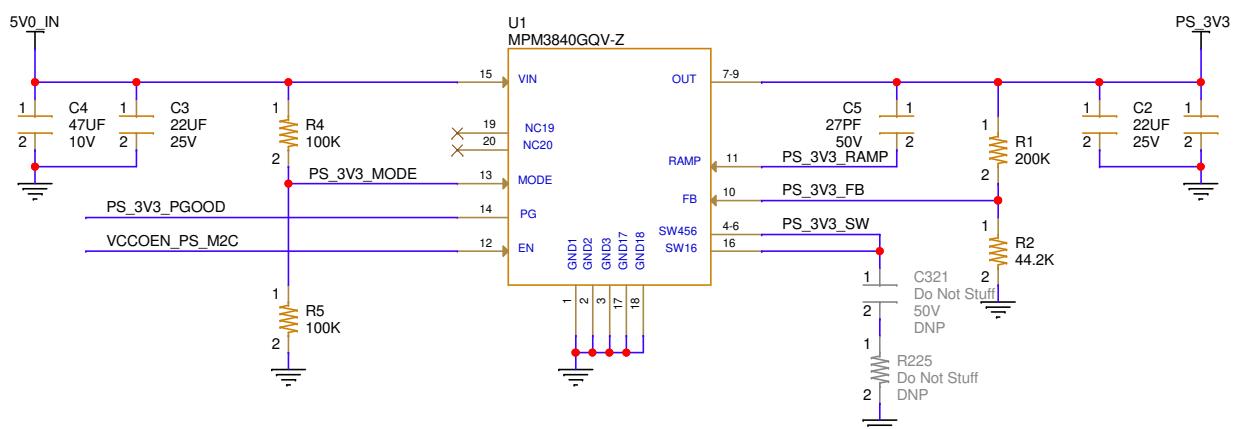
PS_1V8 REGULATOR



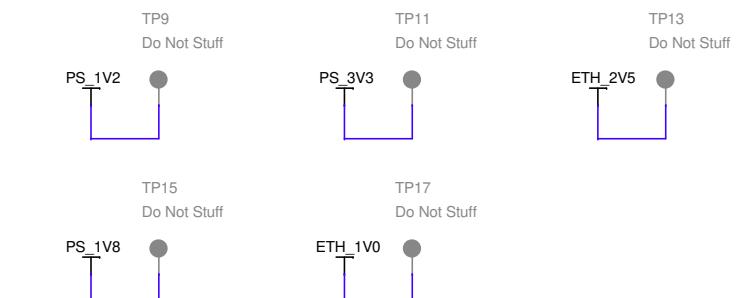
ETH_2V5 REGULATOR



PS_3V3 REGULATOR



POWER TEST POINTS



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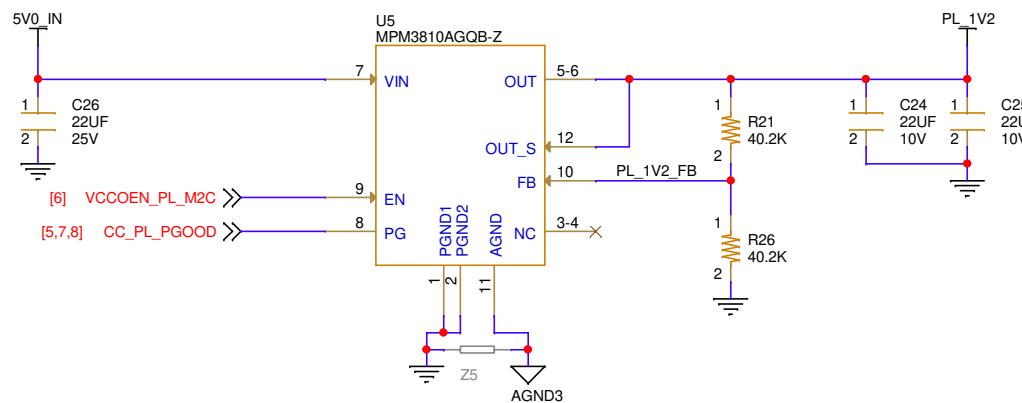
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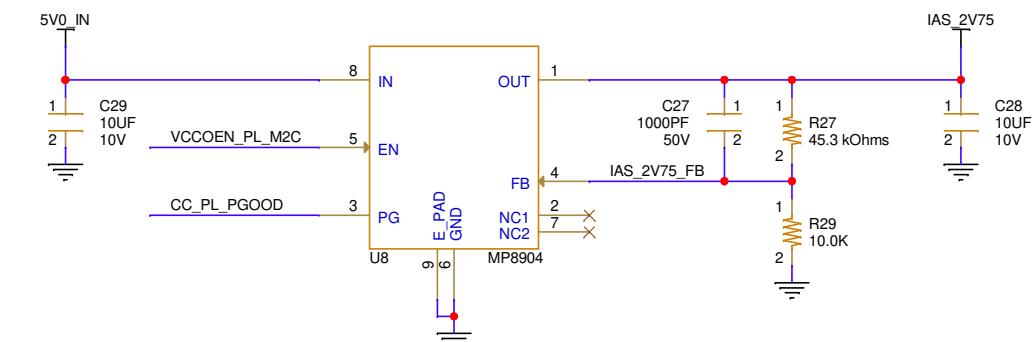
Title: ML Starter Kit Carrier Card
04 - PS Power

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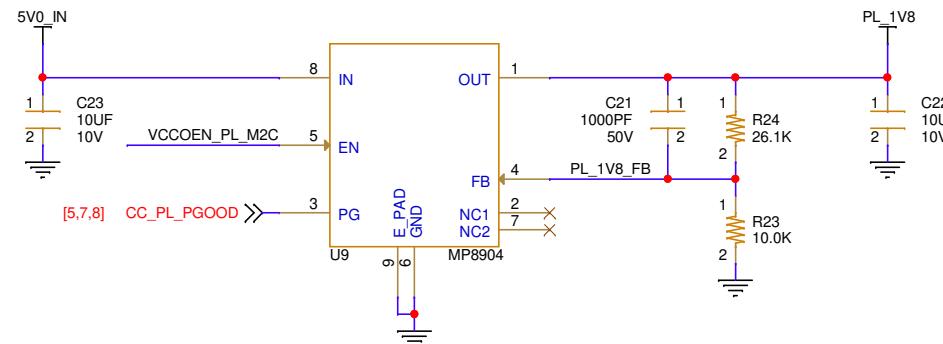
PL_1V2 REGULATOR



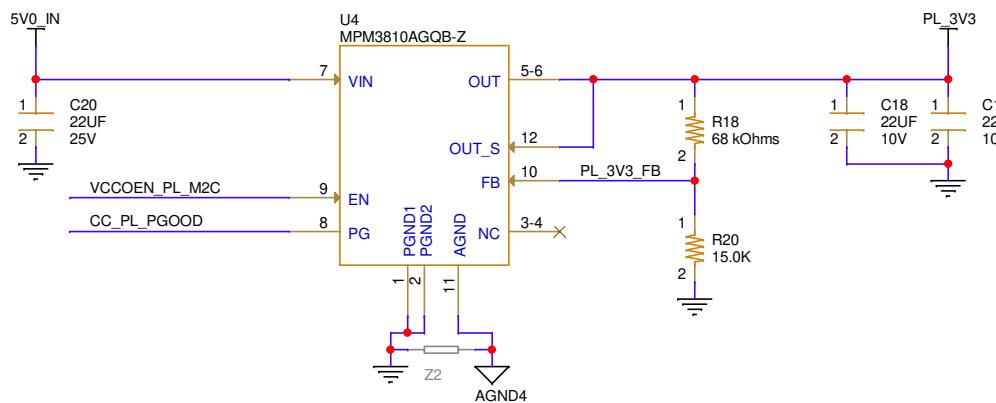
IAS_2V75 REGULATOR



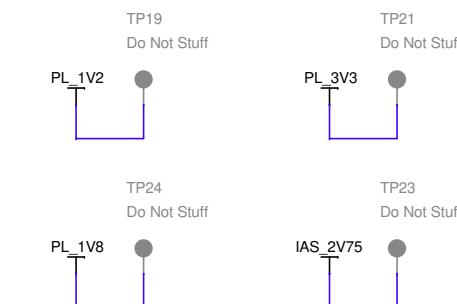
PL_1V8 REGULATOR



PL_3V3 REGULATOR



POWER TEST POINTS



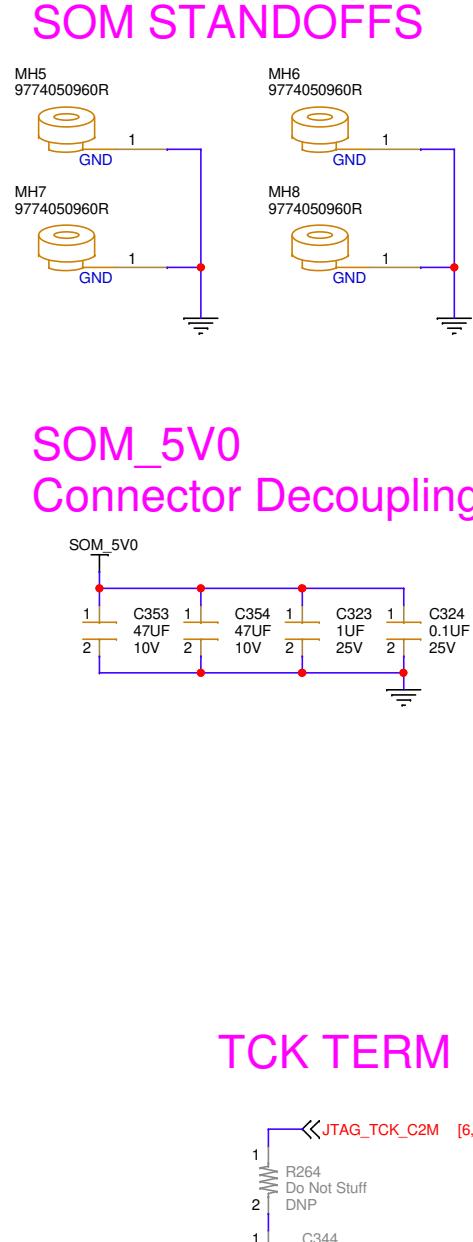
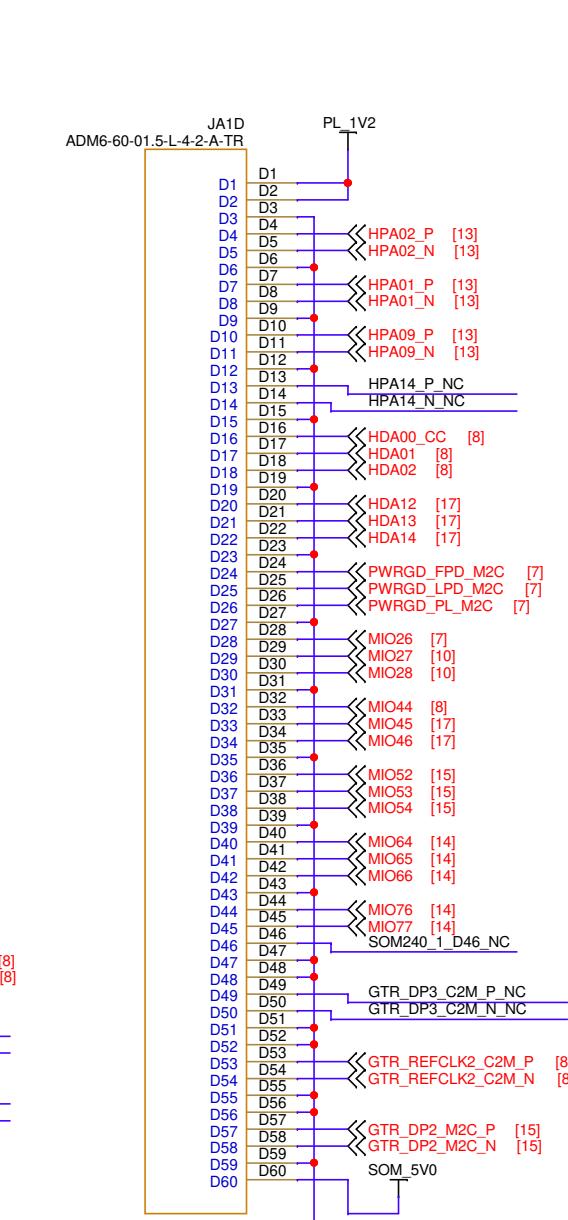
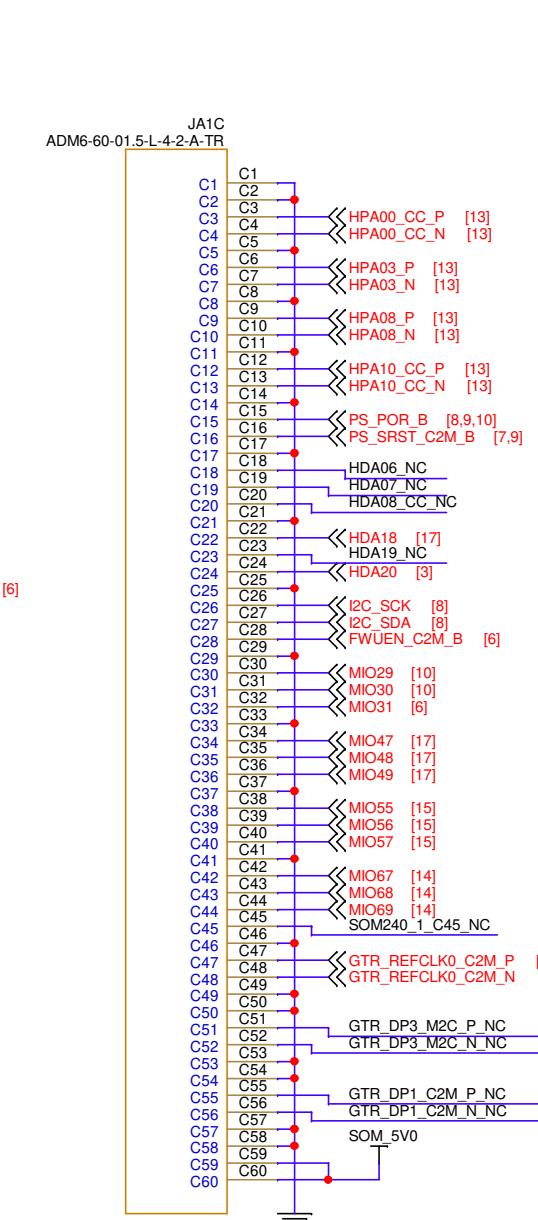
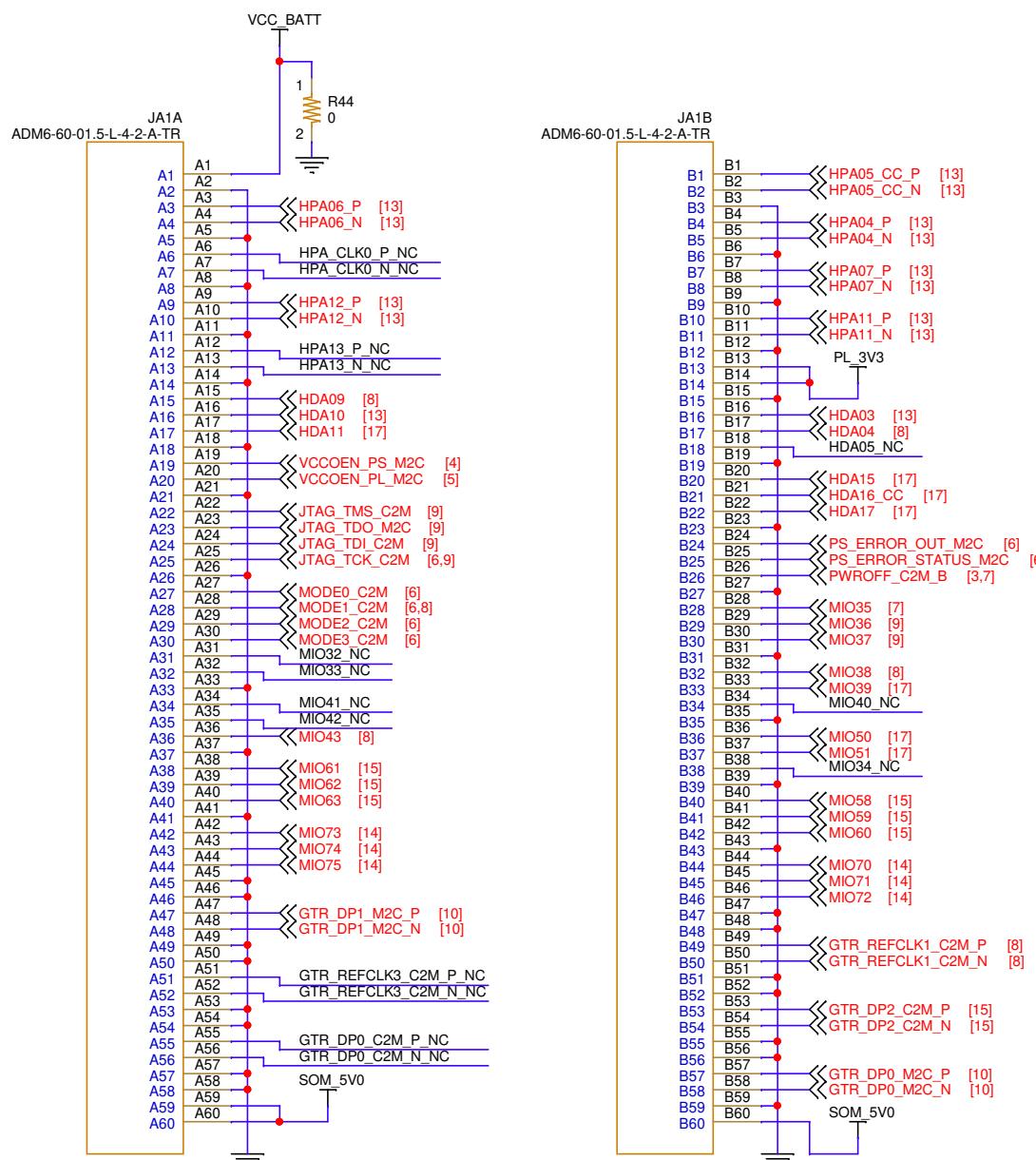
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Title: ML Starter Kit Carrier Card
05 - PL Power

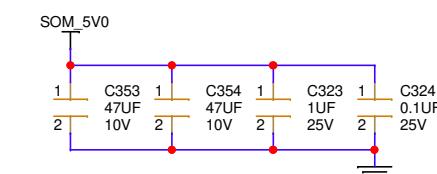
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SOM240_1

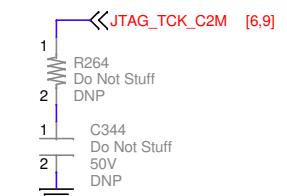


SOM STANOFFS

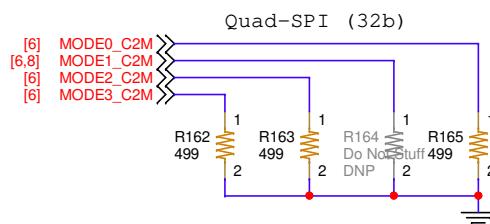
SOM_5V0 Connector Decoupling



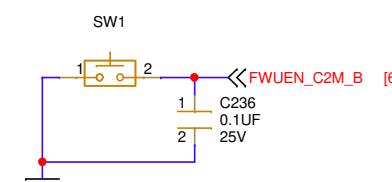
TCK TERM



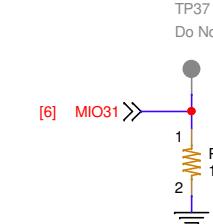
MODE PINS



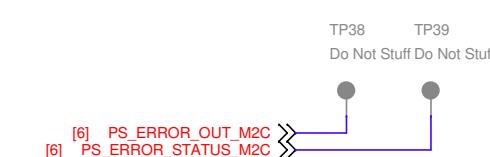
FWUEN BUTTON



SHUTDOWN



PS_ERROR_OUT/STATUS TEST POINTS



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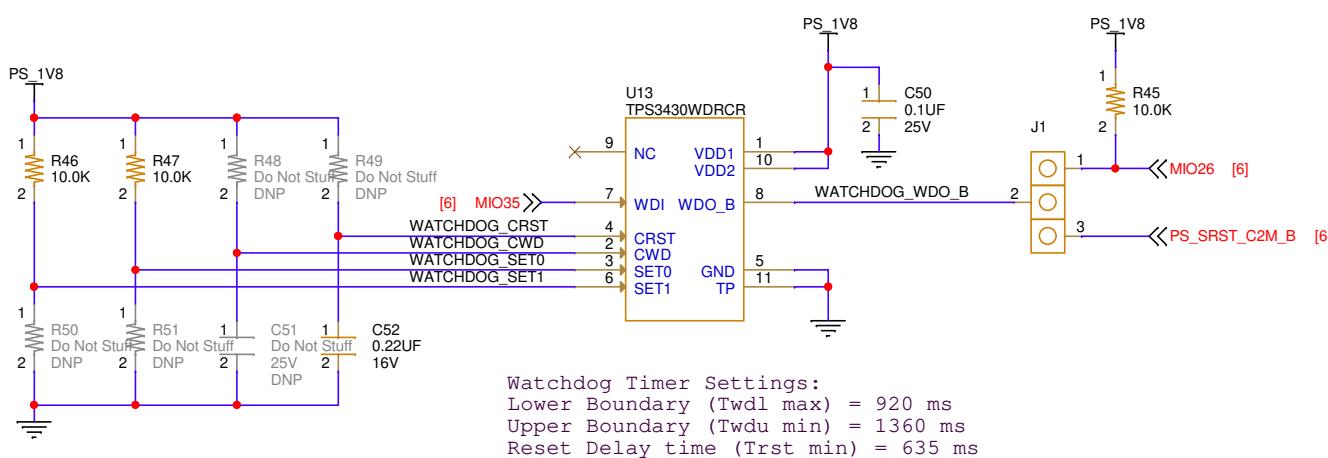
SKIT

Title: ML Starter Kit Carrier Card
06 - SOM240_1 Connector

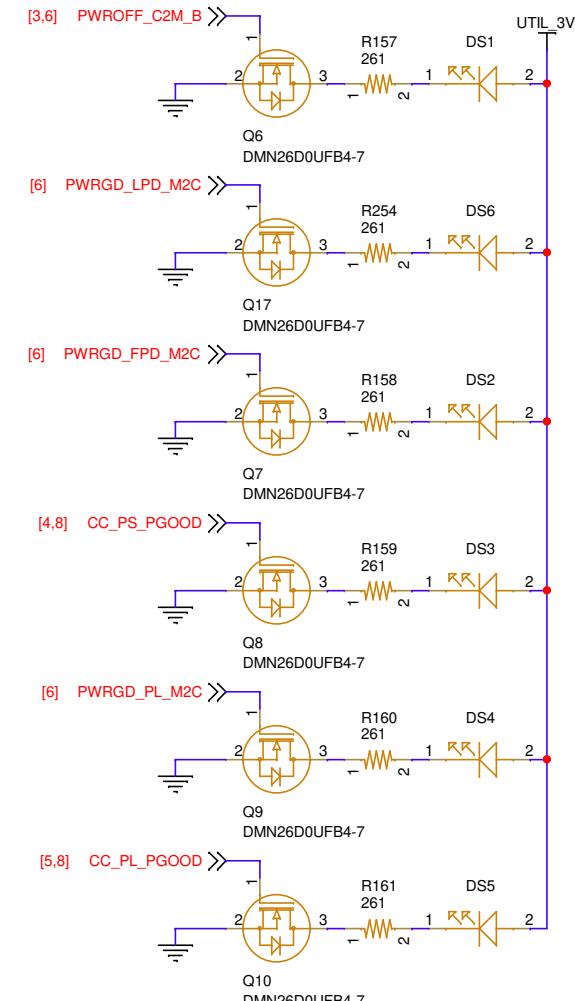
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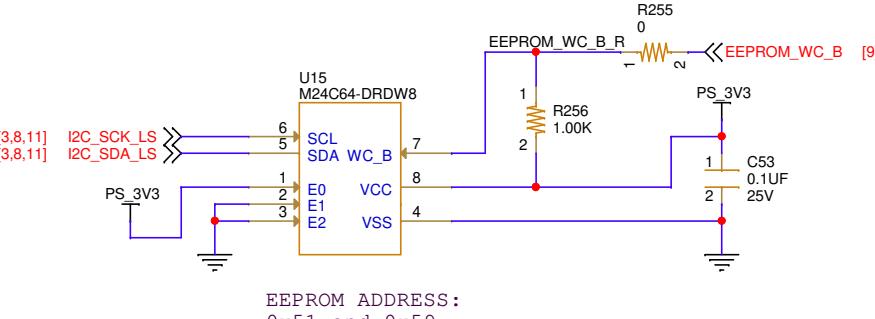
WATCHDOG TIMER



POWER STATUS LEDs



EEPROM



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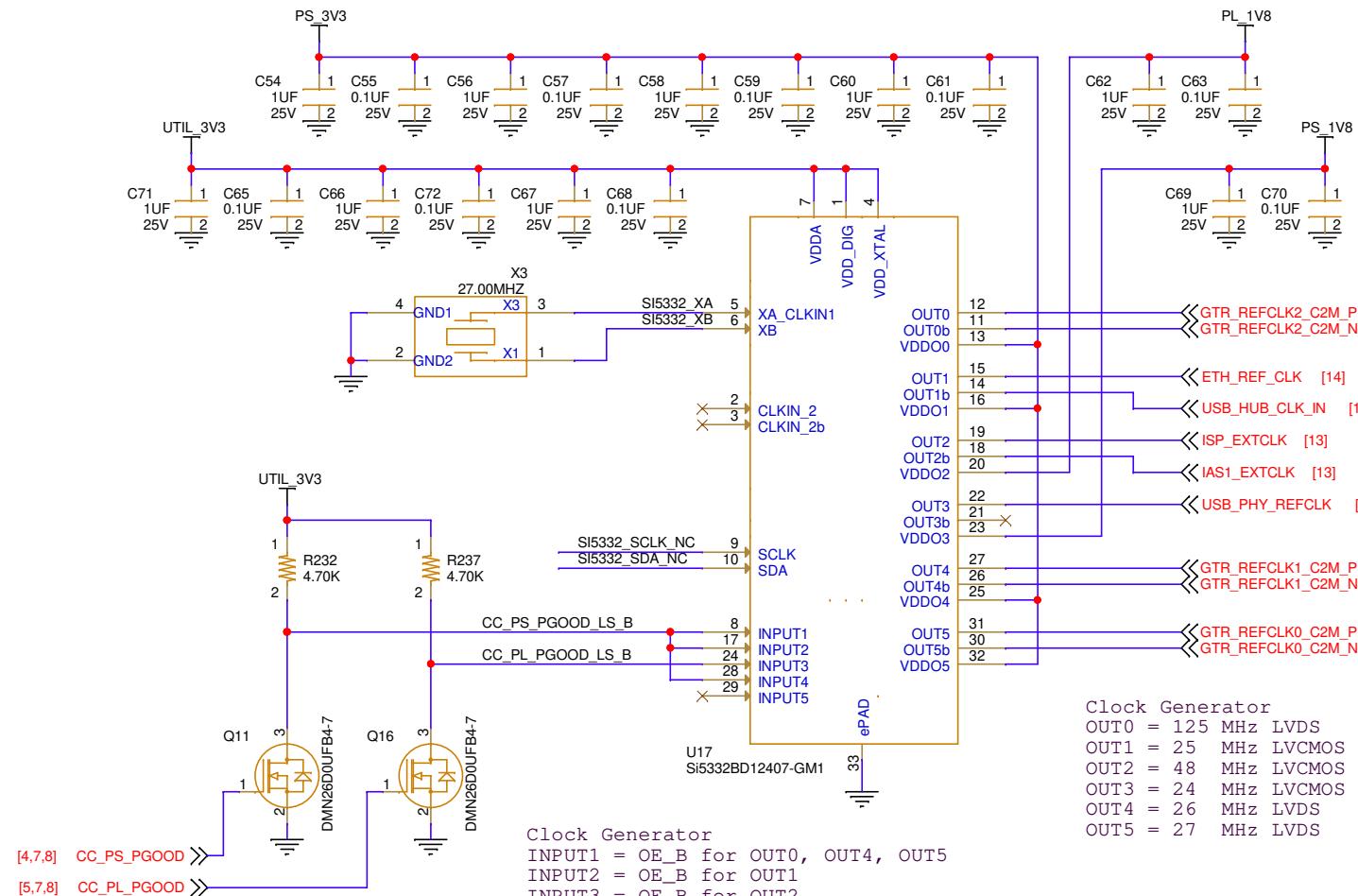
2100 Logic Drive
 San Jose, CA 95124

SKIT

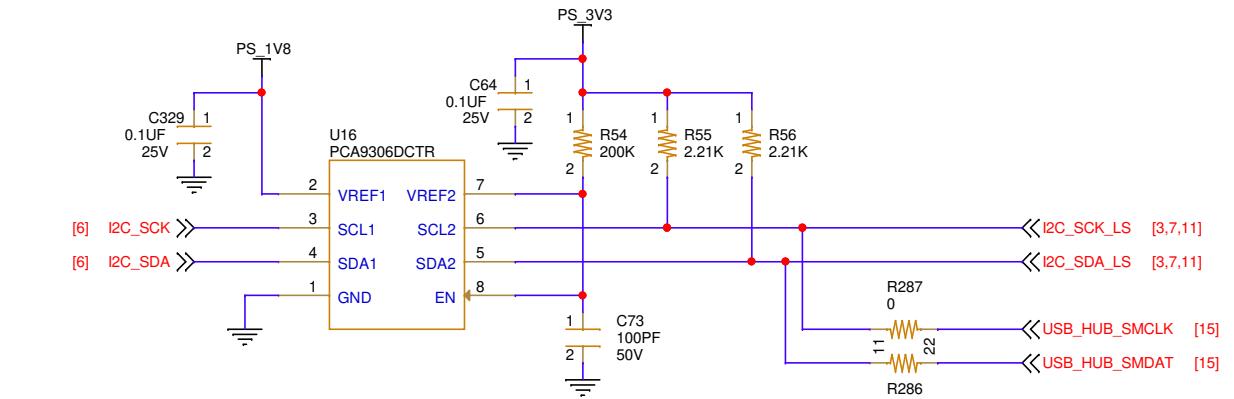
Title: ML Starter Kit Carrier Card
 07 - EEPROM, WD, LEDs

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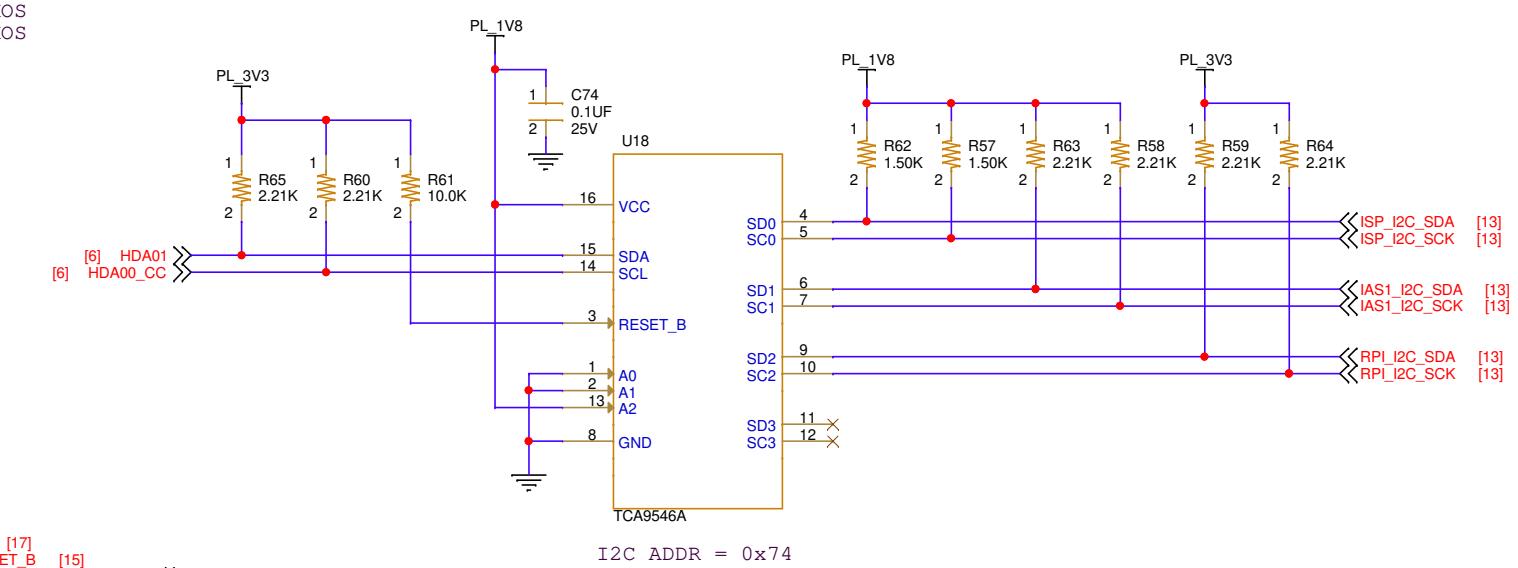
CLOCK GENERATOR



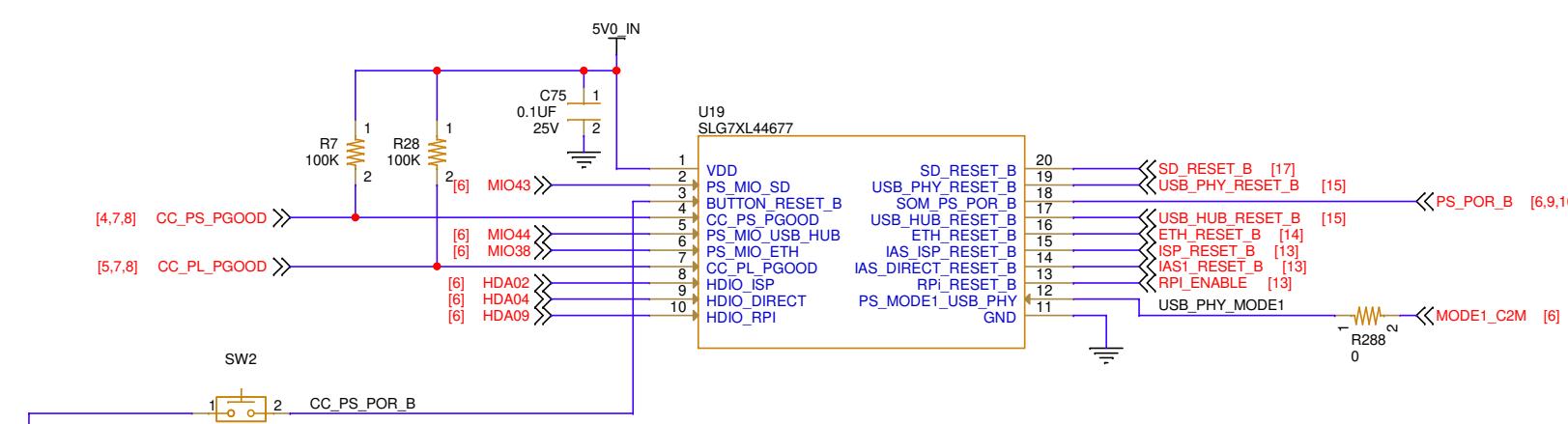
MIO I2C LEVEL SHIFTER



HDA I2C SWITCH



RESET LOGIC



RESET BUTTON

XILINX

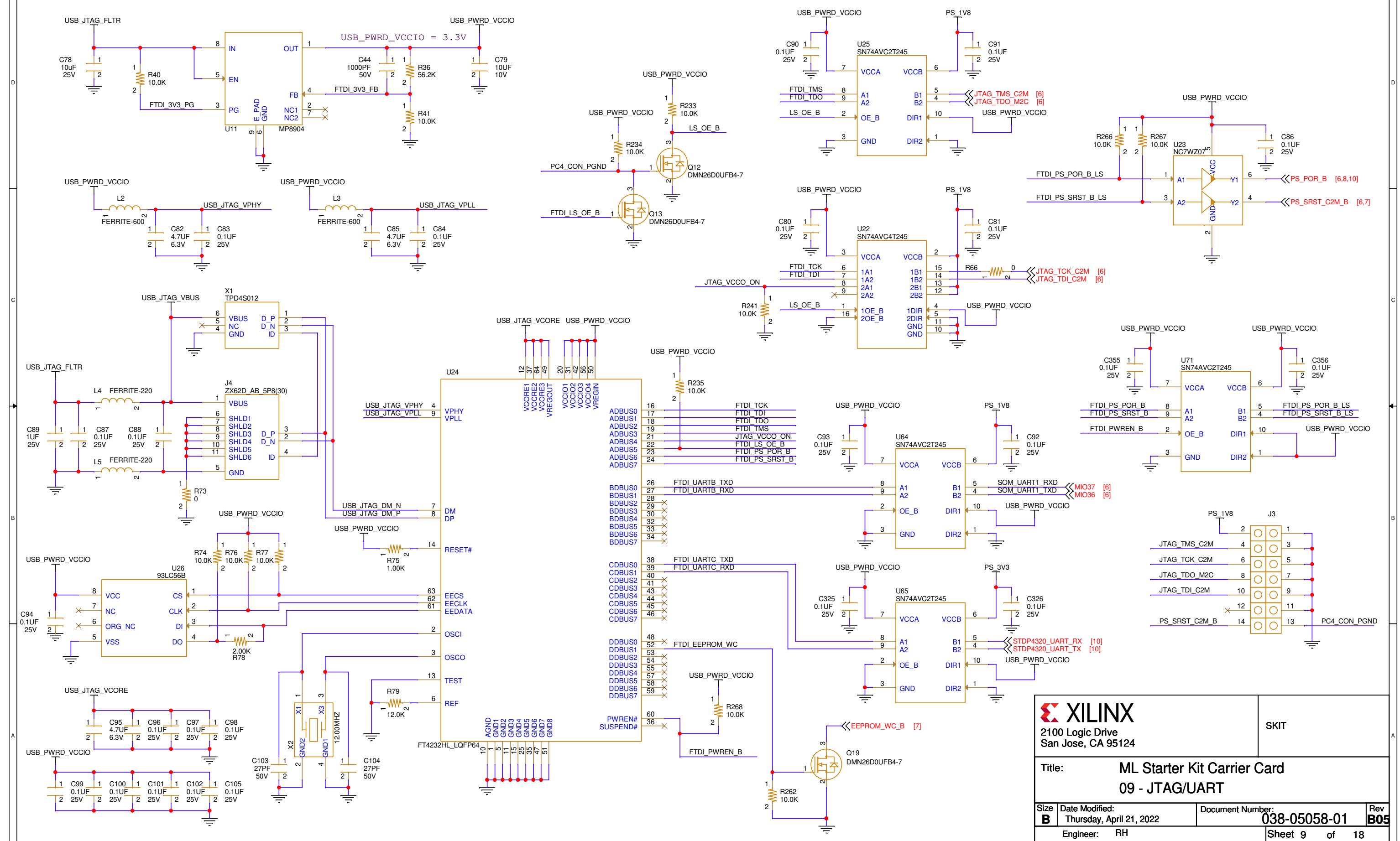
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Title: ML Starter Kit Carrier Card
08 - Clock Gen, I2C, Reset

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FTDI JTAG/UART



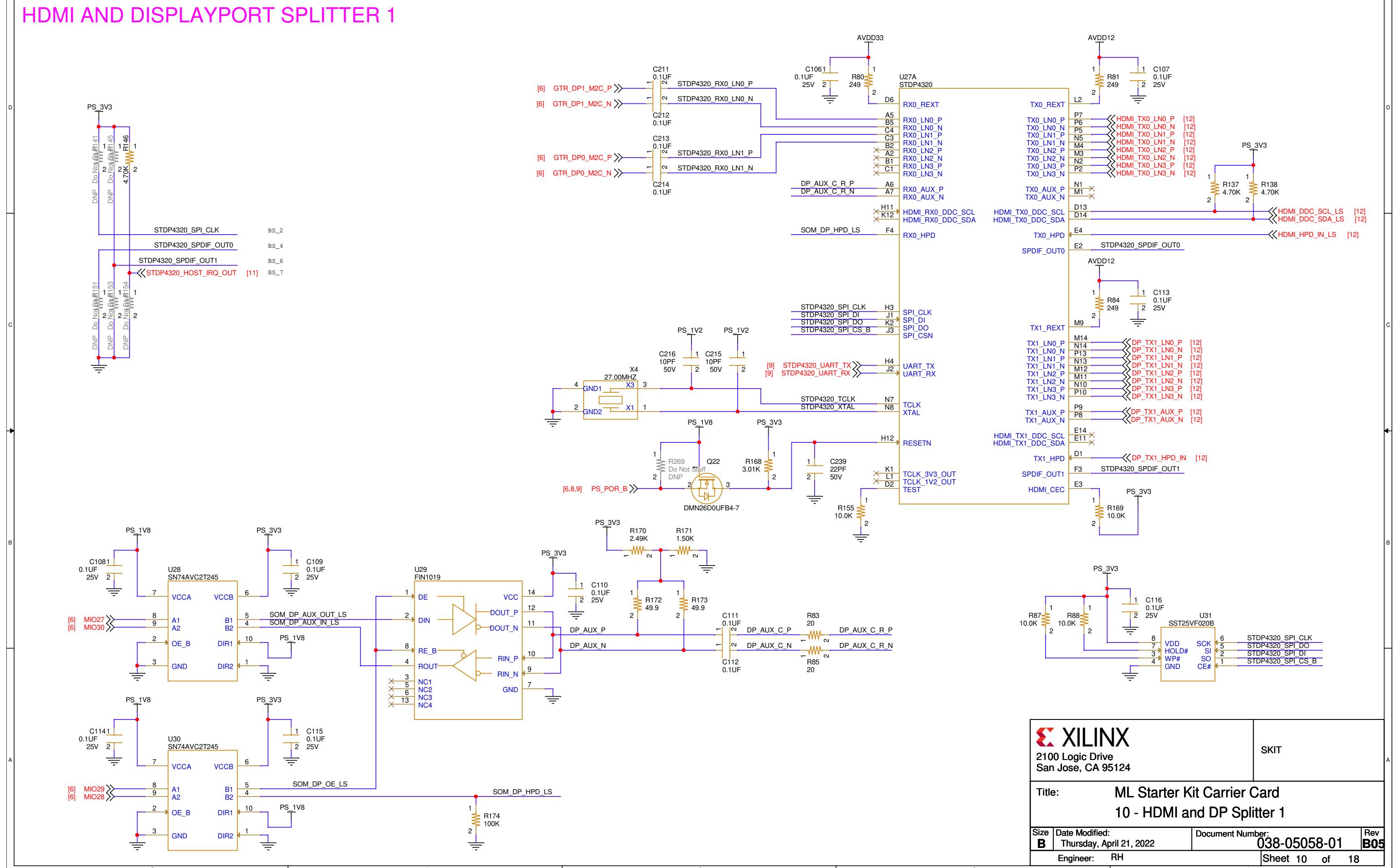
XILINX

XILINX
2100 Logic Drive
San Jose, CA 95124

Title: ML Starter Kit Carrier Card
09 - JTAG/UART

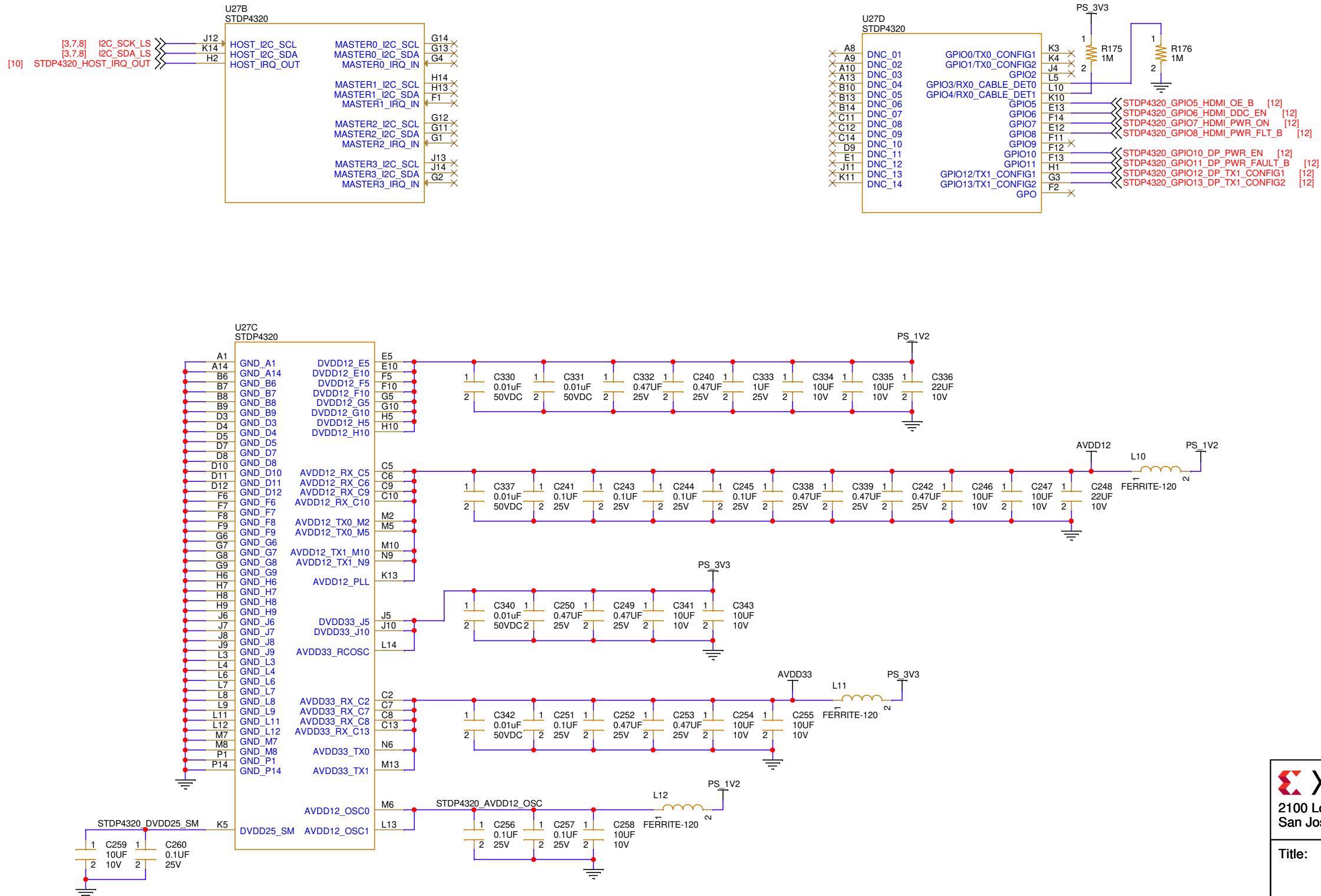
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HDMI AND DISPLAYPORT SPLITTER 1



HDMI AND DISPLAYPORT SPLITTER 2

I2C ADDR = 0x73



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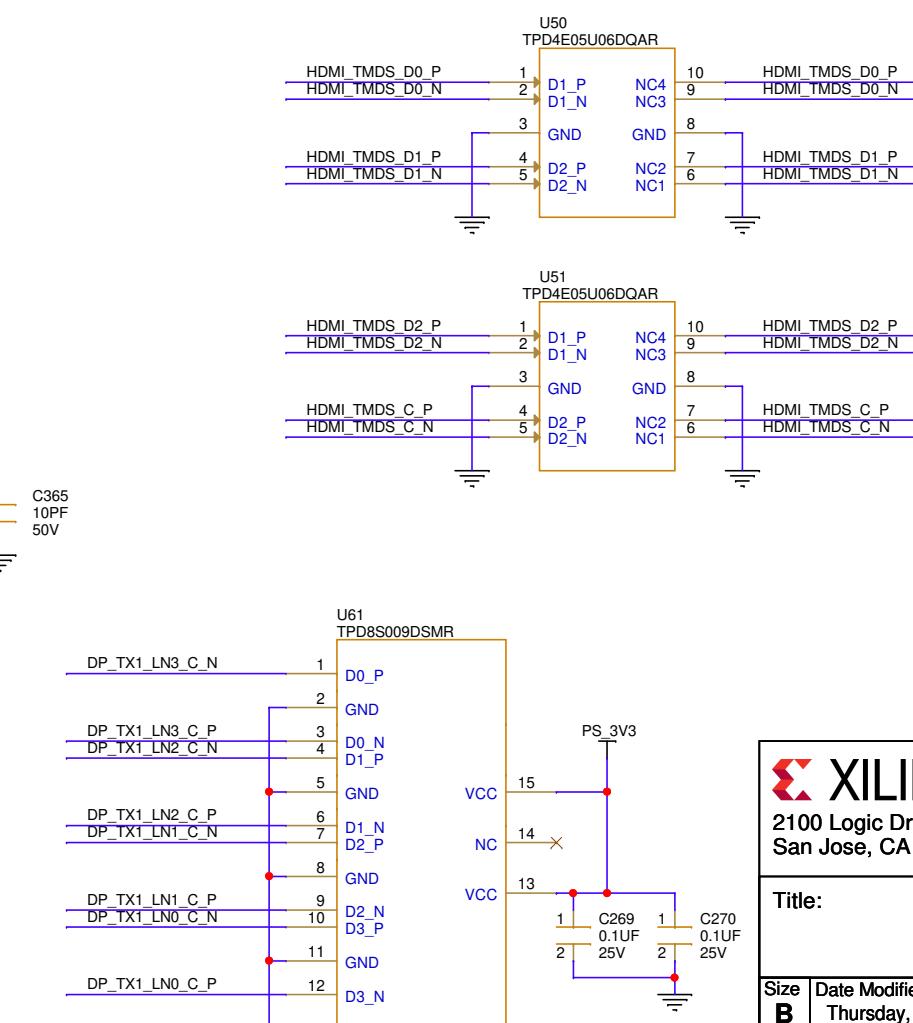
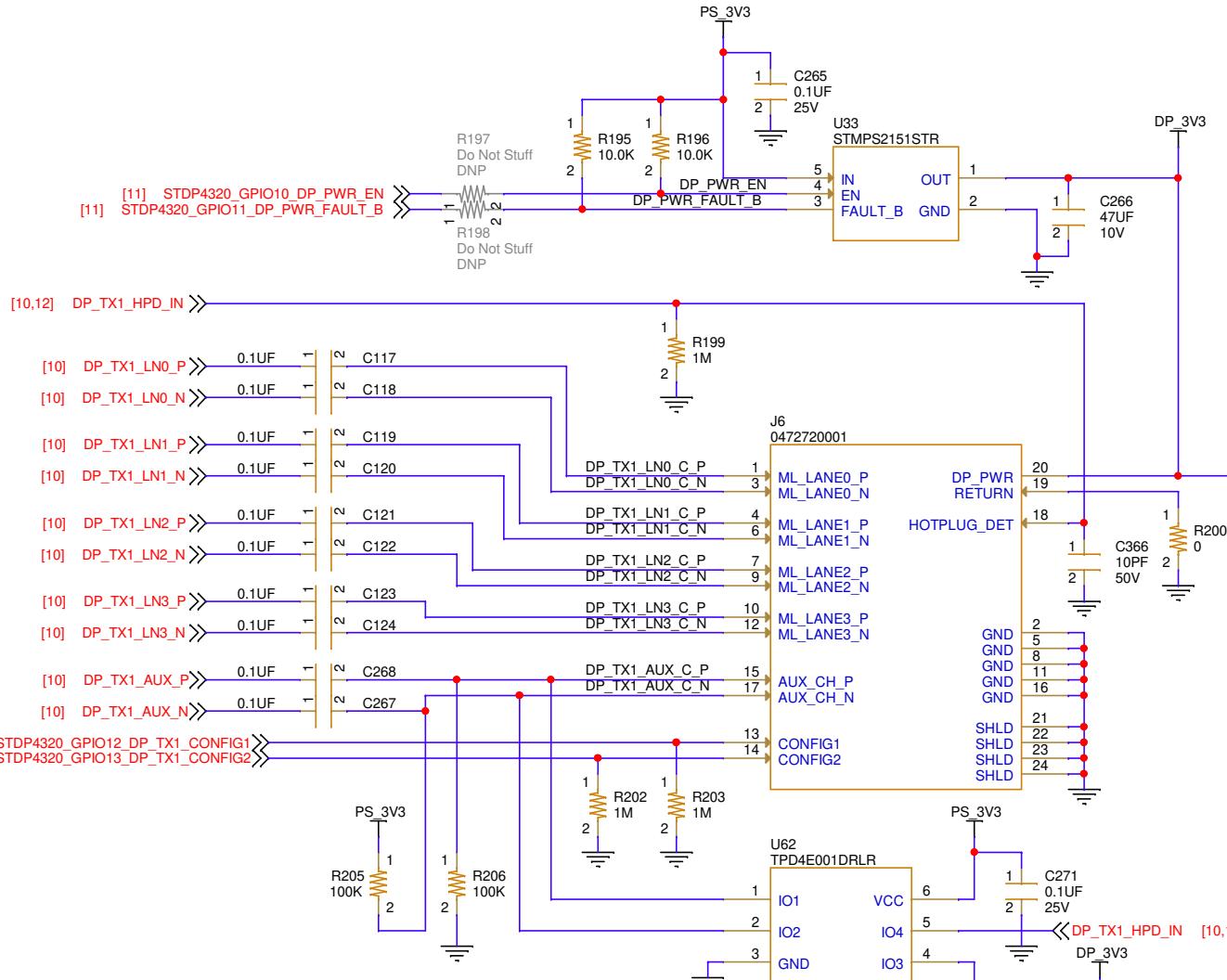
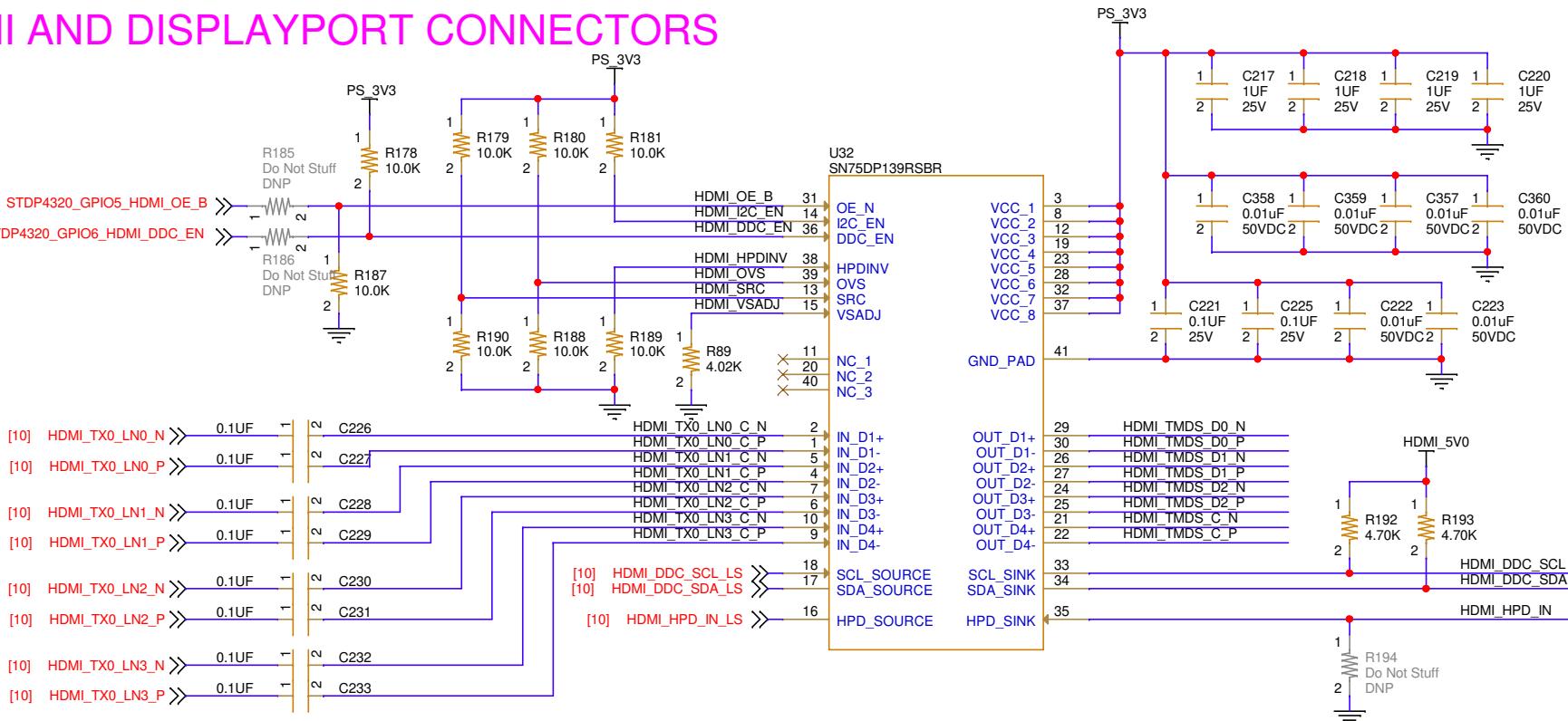
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Title: ML Starter Kit Carrier Card
11 - HDMI and DP Splitter 2

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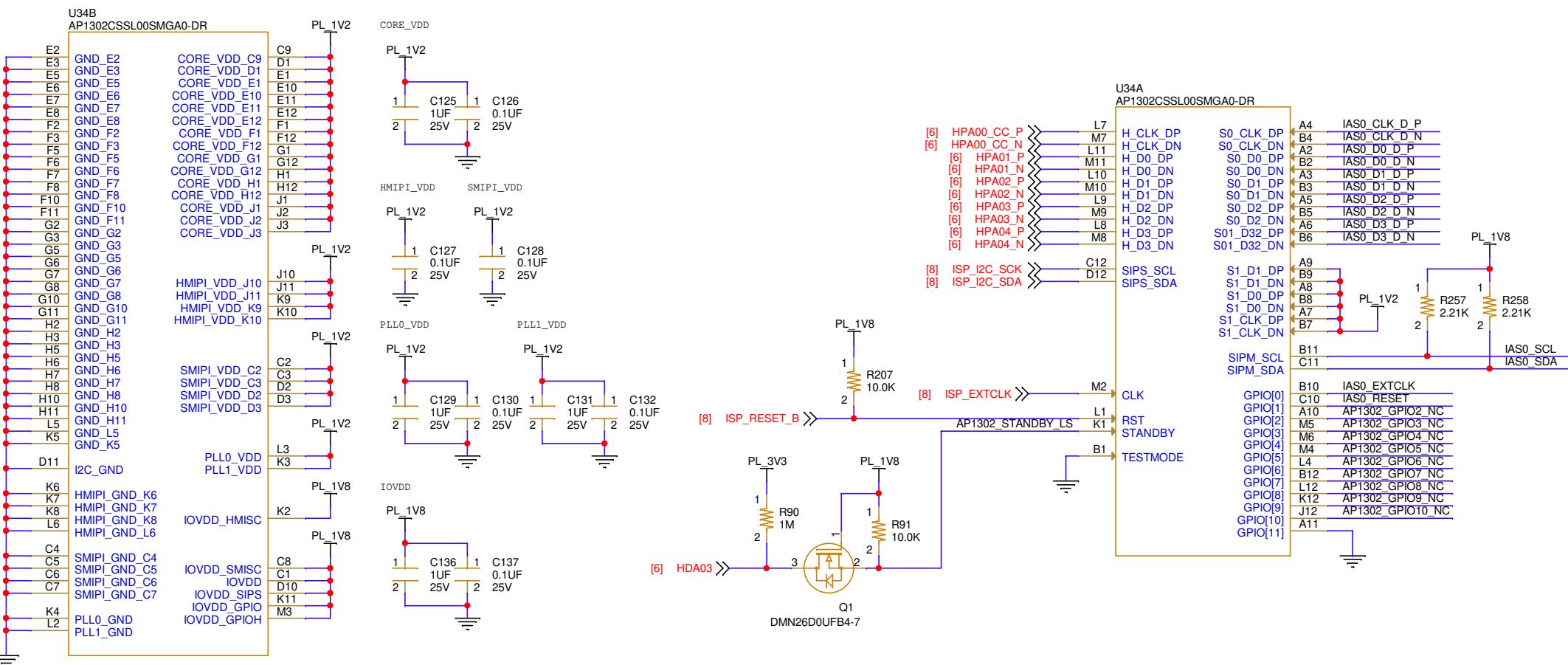
HDMI AND DISPLAYPORT CONNECTORS



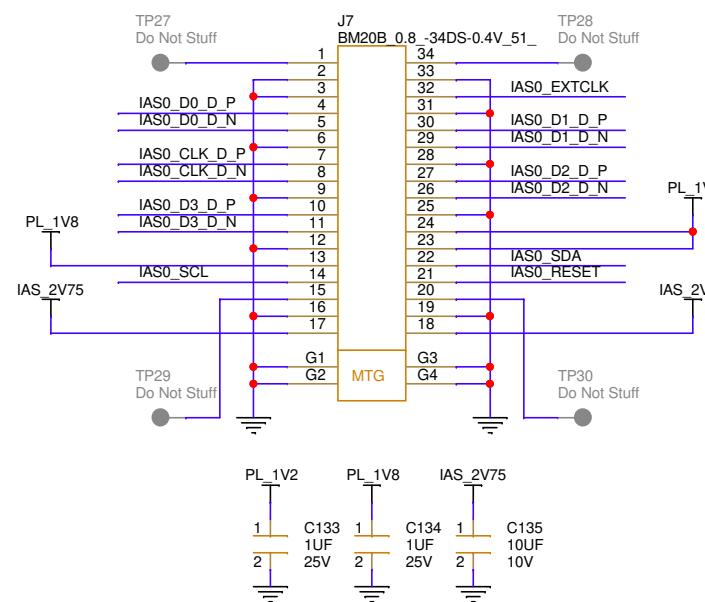
Title: ML Starter Kit Carrier Card
12 - HDMI and DP Connectors

| | | | |
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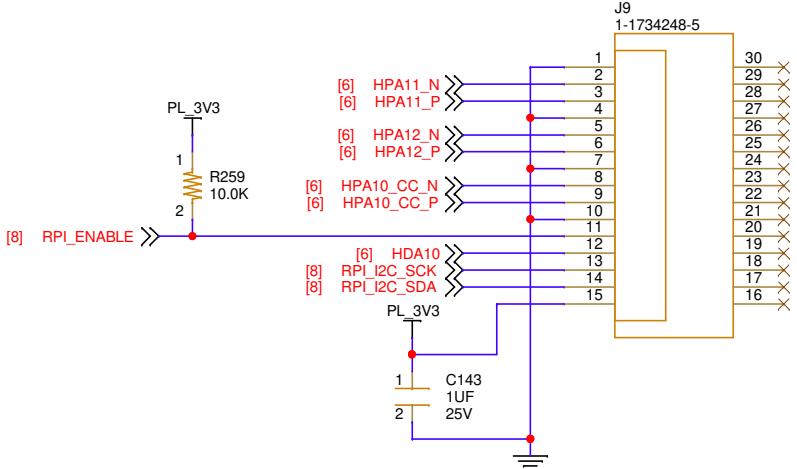
IMAGE CO-PROCESSOR FOR IAS 0 CONNECTOR



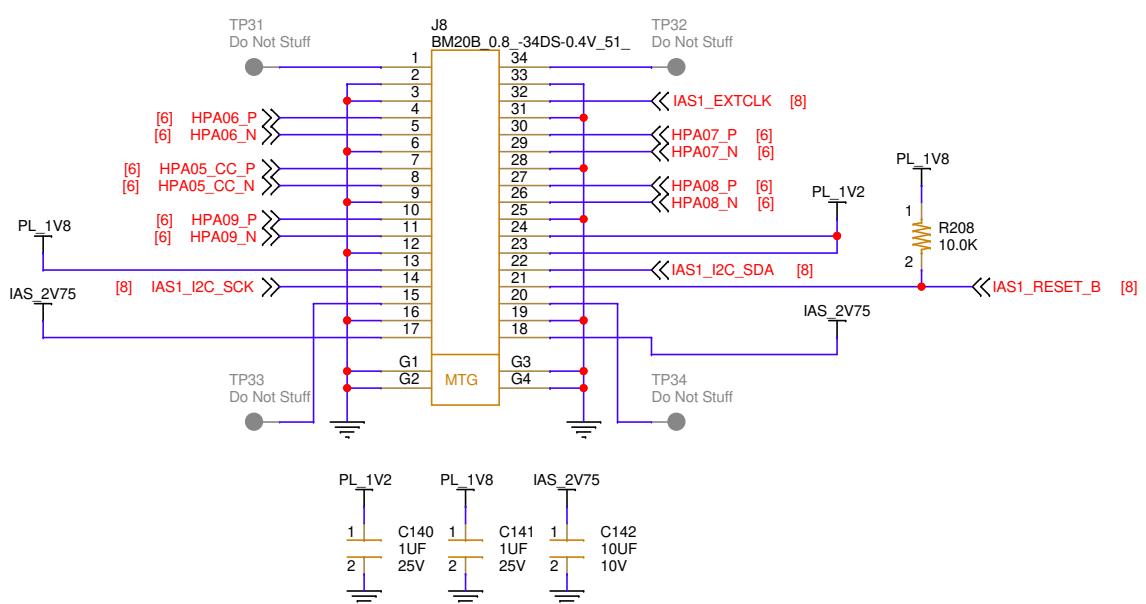
IAS 0 CONNECTOR



RASPBERRY PI CONNECTOR



IAS 1 CONNECTOR



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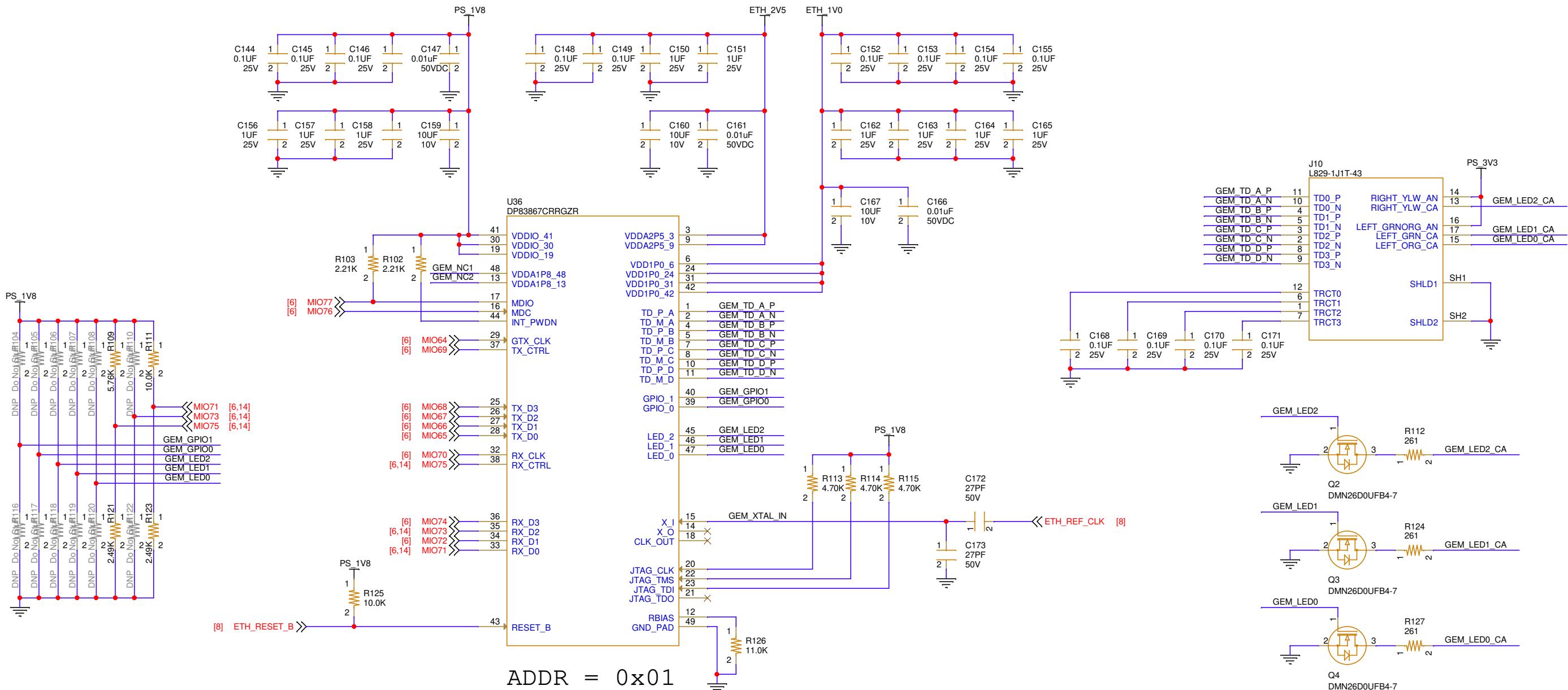
2100 Logic Drive
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SKIT

Title: ML Starter Kit Carrier Card
13 - ISP, IAS, and RPi

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GIGABIT ETHERNET



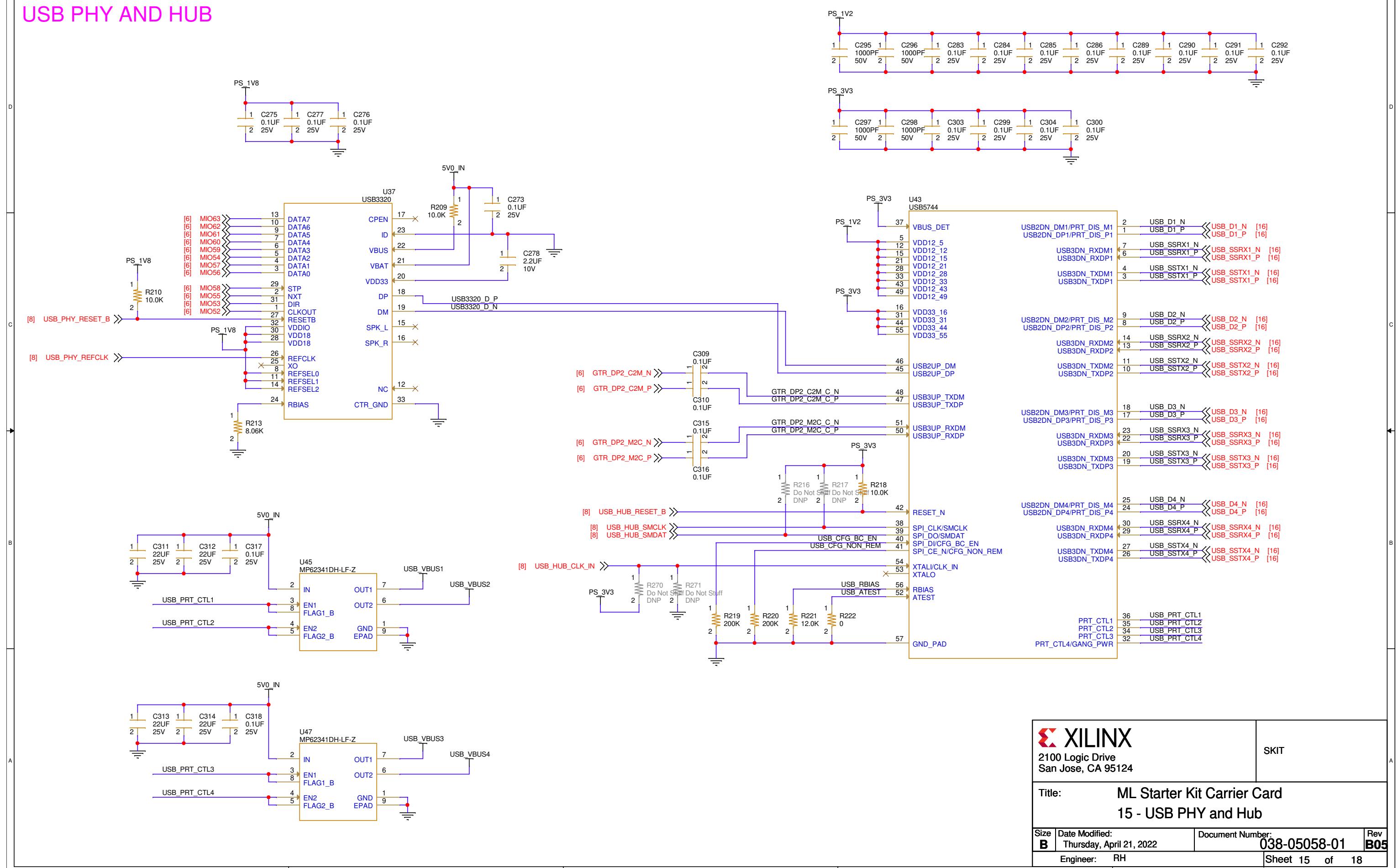
ADDR = 0x01

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Title: ML Starter Kit Carrier Card
14 - Ethernet

| | | | |
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USB PHY AND HUB



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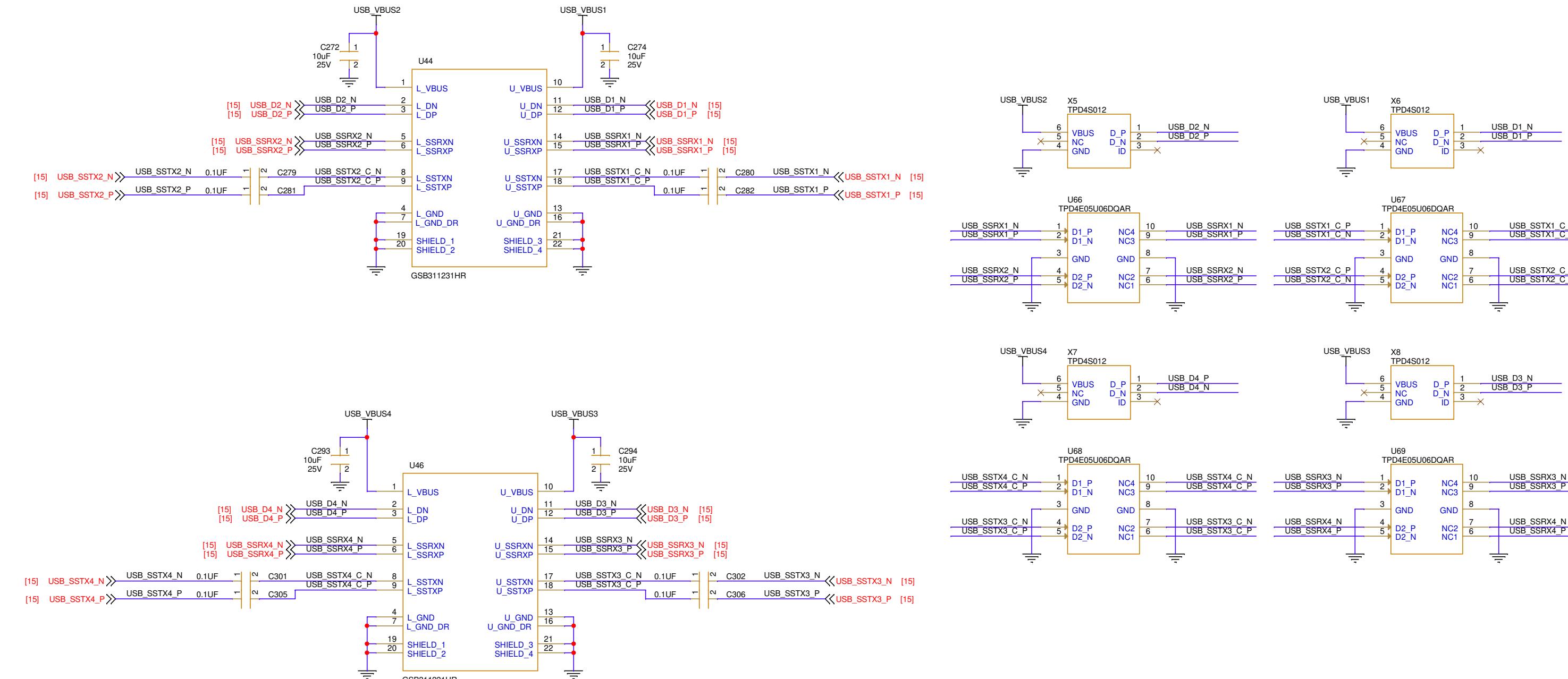
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SKIT

Title: ML Starter Kit Carrier Card
15 - USB PHY and Hub

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USB CONNECTORS



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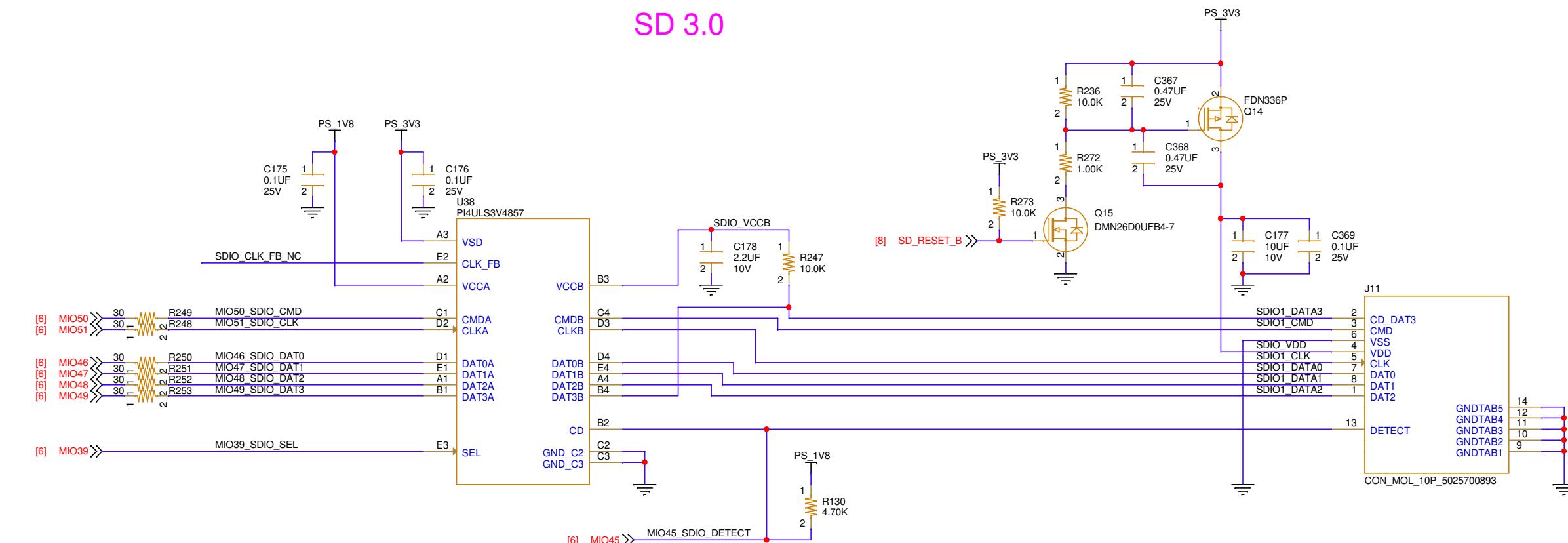
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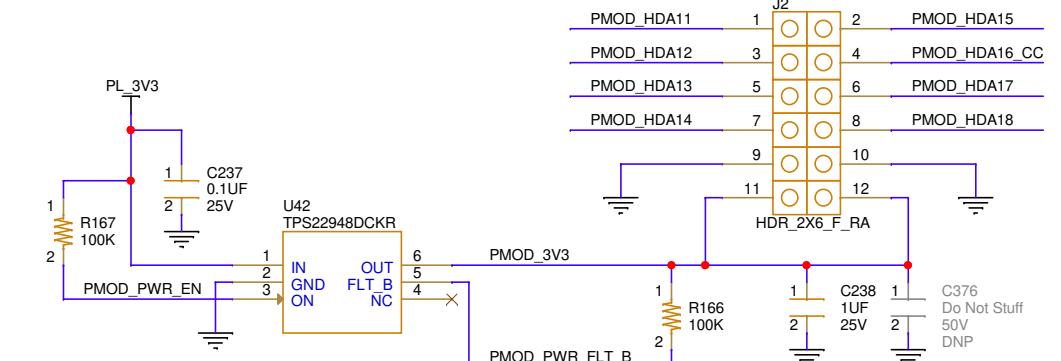
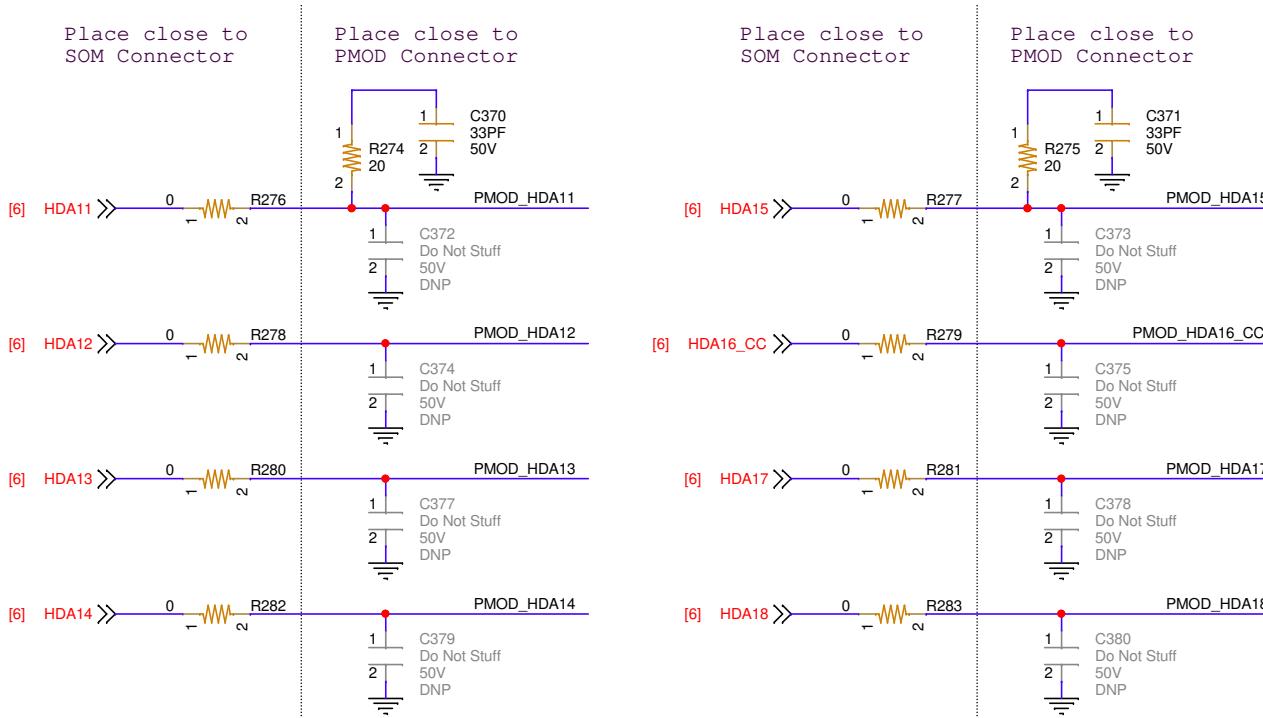
Title: **ML Starter Kit Carrier Card**
16 - USB Connectors

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SD 3.0



PMOD



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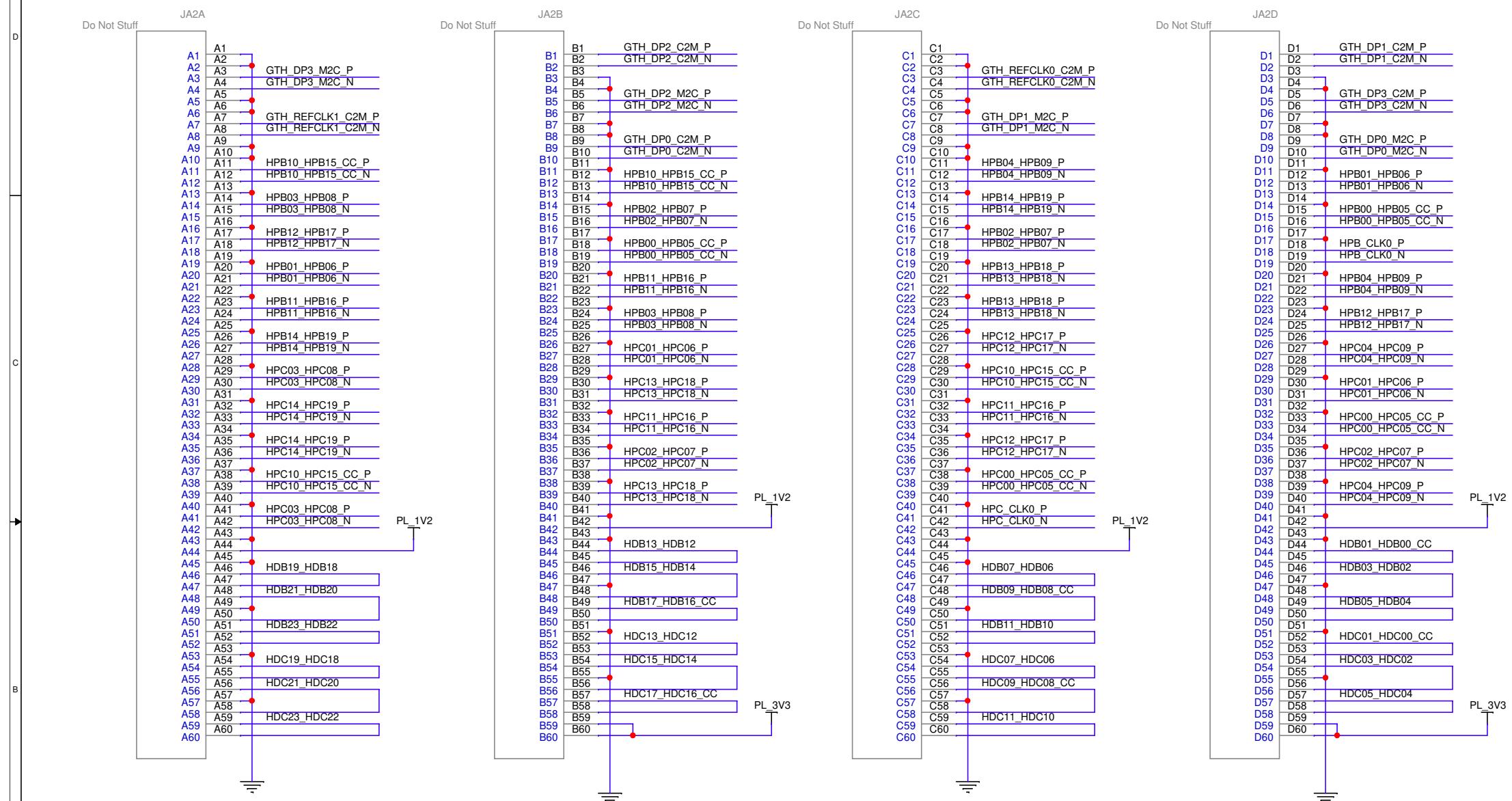
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SKIT

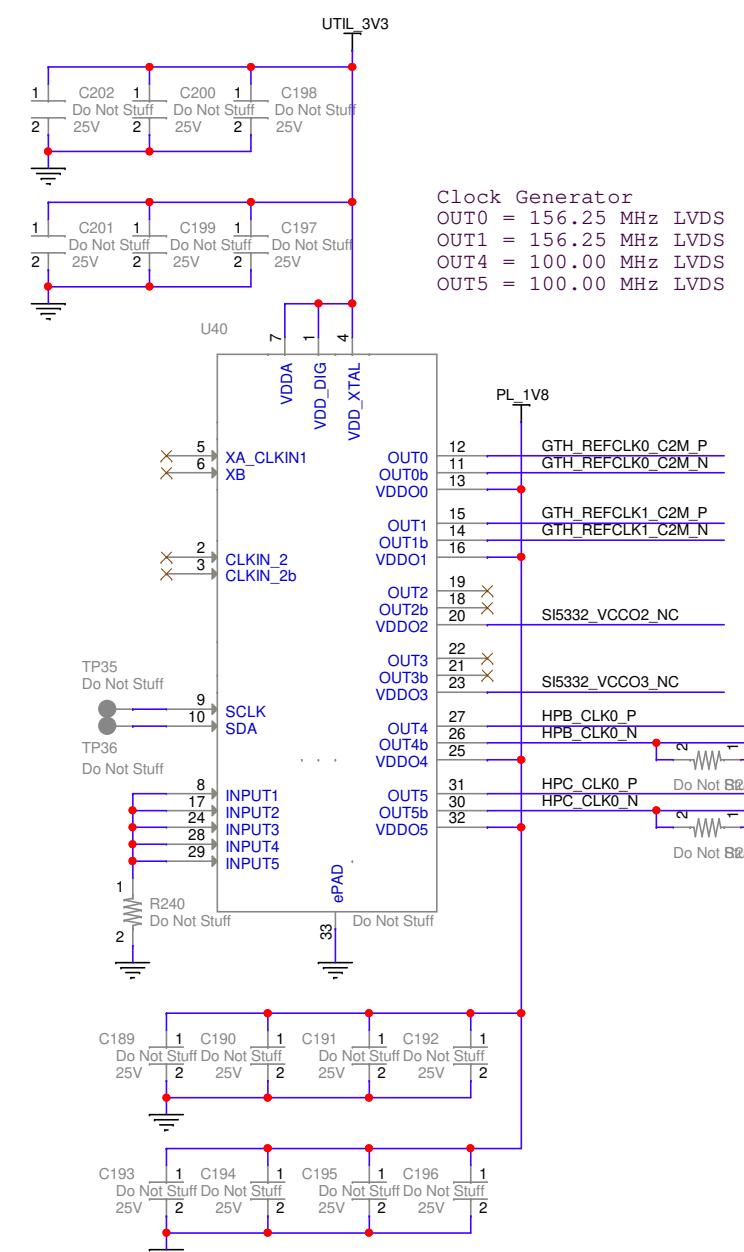
Title: ML Starter Kit Carrier Card
17 - SD Card, PMOD

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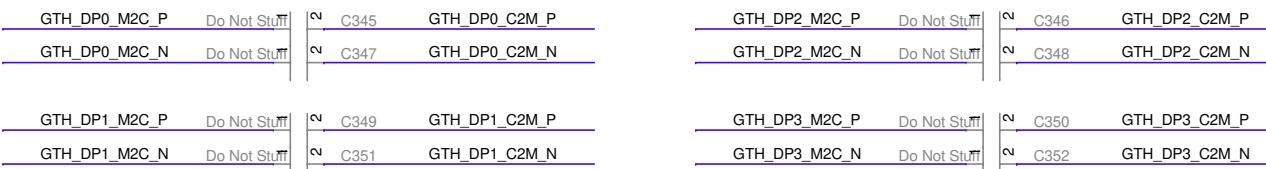
SOM240_2 CONNECTOR



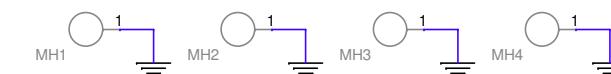
CLOCK GENERATOR FOR LOOPBACK TEST



GTH AC COUPLING



FOUR CORNER MOUNTING HOLES


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 Title: ML Starter Kit Carrier Card
18 - SOM240_2 Loopback, MH

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