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Revisions & Change Log			
Rev	Description	Date	Approved
X1	Initial Draft	Oct 18	Chung
X2	Feedbacks Implemented	Oct 22	Chung
X3	Feedbacks from Chung Implemented	Oct 23	Chung
X4	Components changed as per the feedbacks	Oct 24	Chung
X5	RF and Bluetooth headers added	Oct 28	Chung
X6	Arduino connections added	Nov 1	Chung
X7	Net review and fix	Nov 3	Chung
A	Release to production, prototype build	Nov 8	Chung
A1	openSDA reset capacitor fix	Nov 22	del Rey
B	Release to production, production build	Jan 20	Chung
C	Release to production, production build	Feb 06	Chung
D	Fixing I2C swap to headers	Feb 26	Chung
D1	Enhancing USB PWR input filter for robustness	Mar 18	Chung
E	Swapping J2.2 connection to PTC12 Fix Eth Link status when 2 FRDMs are connecter to each other	Jul 11	Chung
E1	Updating J13 Ethernet connector part	Sep 03	Chung
E2	Depopulating J14	Sep 10	Chung
E3	Depopulating C55, populating R75	Oct 14	Chung

# FREEDOM K64F

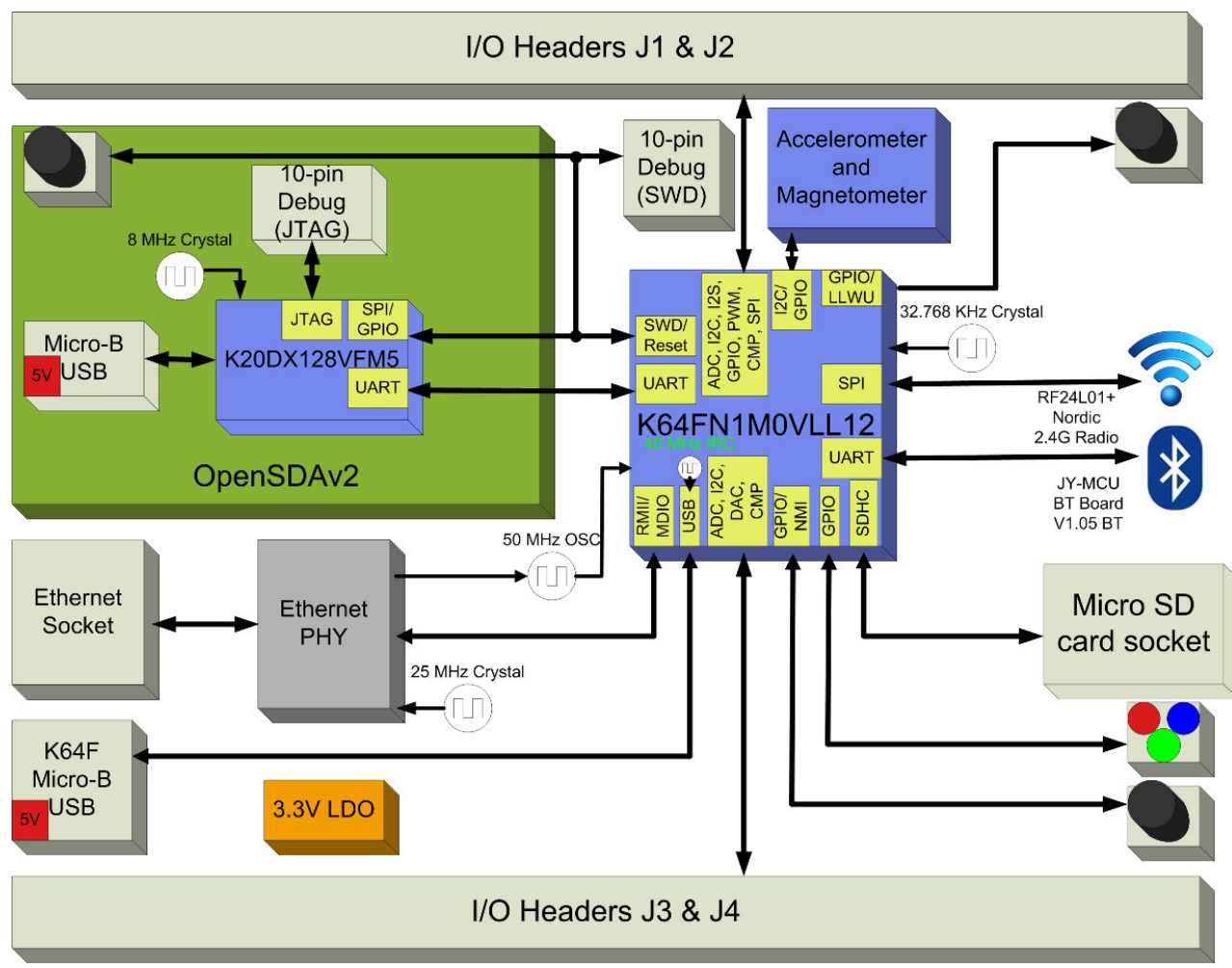
		<b>Automotive, Industrial &amp; Multi-Market Solutions Group</b> 6501 William Cannon Drive West Austin, TX 78735-6598	
ICAP Classification: FCP: FLUQ: PUB: X			
Designer: Rafael del Rey	Drawing Title: <b>FRDM-K64F</b>		
Drawn by: Sudasha(LnT)	Page Title: <b>TITLE PAGE</b>		
Approved: Chung	Size C	Document Number SCH-28163   PDF: SPF-28163	Rev E3
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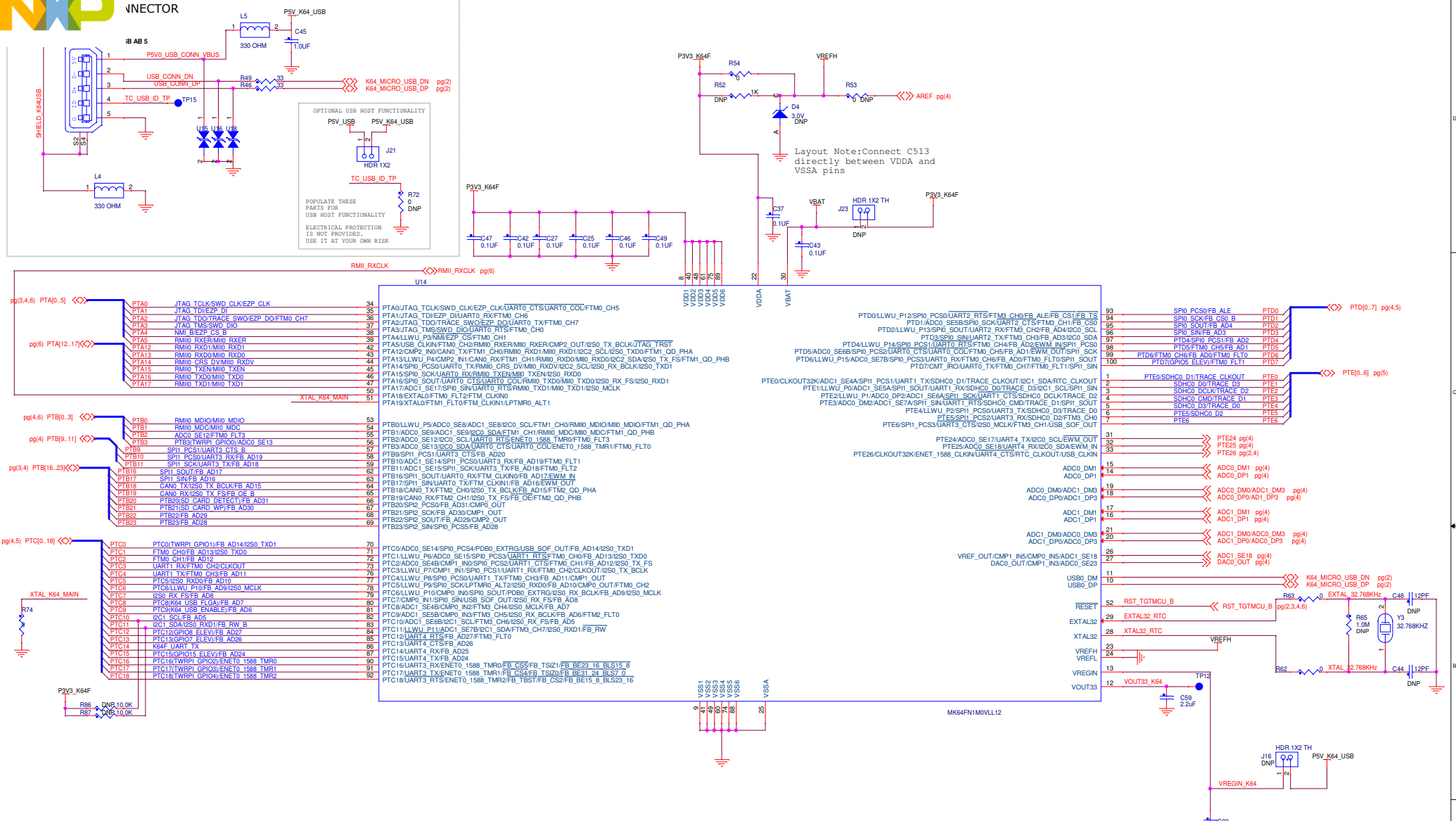


specified:  
 ohms, most are 1%, 1/10 Watt. Otherwise are 5%, 1/8 Watt.  
 uF, some are 10% or 20%

All polarized capacitors are tantalum

- Interrupted lines coded with the same letter or letter combinations are electrically connected.
- Device type number is for reference only. The number varies with the manufacturer.
- Special signal usage:  
 \_B Denotes - Active-Low Signal  
 <> or [] Denotes - Vectored Signals
- Interpret diagram in accordance with American National Standards Institute specifications, current revision, with the exception of logic block symbology.





OPTIONAL USB HOST FUNCTIONALITY  
 PSV\_USB PSV\_K64\_USB  
 J21 HDR 1X2  
 TC\_USB\_ID\_TP R72 0 DNP

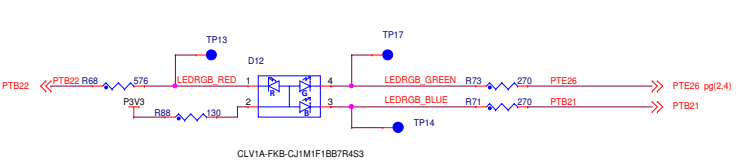
POPULATE THESE PARTS FOR USB HOST FUNCTIONALITY  
 ELECTRICAL PROTECTION IS NOT PROVIDED.  
 USE IT AT YOUR OWN RISK

PTD0[7-] pg(4,5)  
 PTE0[0-6] pg(5)

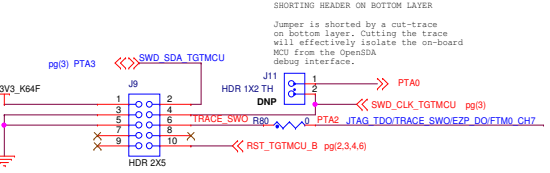
ADC0\_DM0 ADC1\_DM1 ADC2\_DM2 ADC3\_DM3  
 ADC0\_DP0 ADC1\_DP1 ADC2\_DP2 ADC3\_DP3

USBD0\_DP0  
 VREF\_OUT/CMP1\_IN/CMP0\_IN/ADC1\_SE18 DAC0\_OUT/CMP1\_IN/ADC0\_SE23

### RGB LED FEATURE



### SWD CONNECTOR

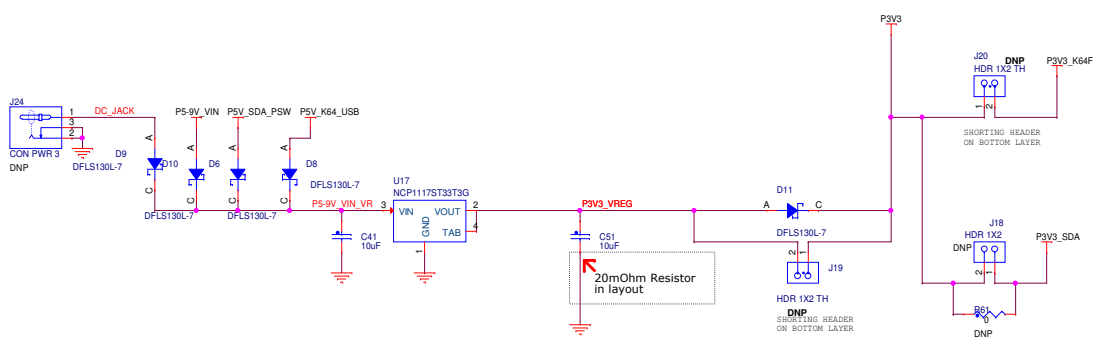


SHORTING HEADER ON BOTTOM LAYER  
 Jumper is shorted by a cut-trace on bottom layer. Cutting the trace will effectively isolate the on-board MCU from the OpenSDA debug interface.

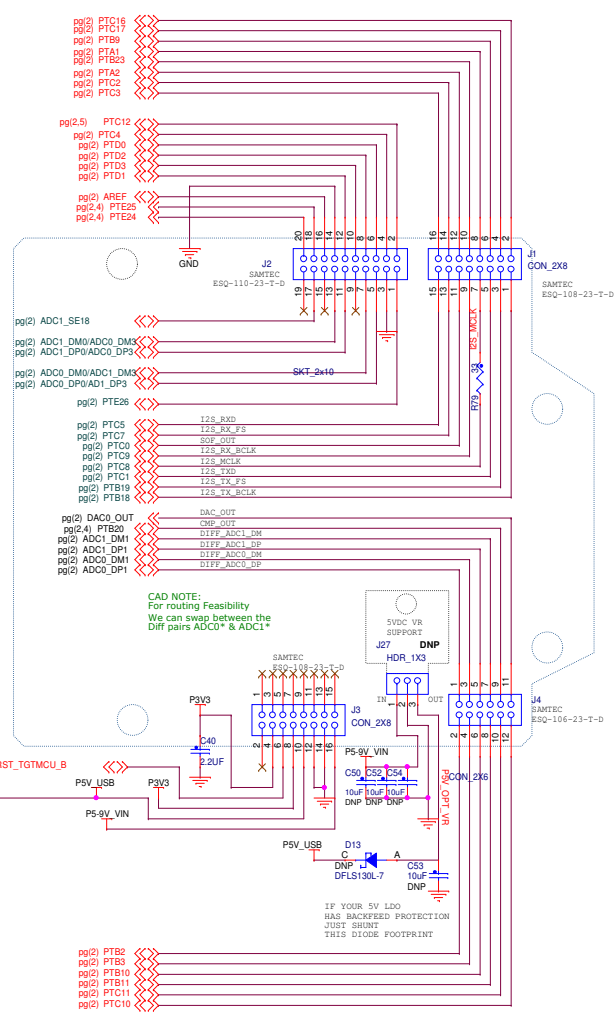


ICAP Classification:	FCP:	FIUC:	PUBI: X
<b>FRDM-K64F</b>			
<b>K64F MCU</b>			
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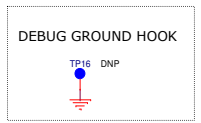
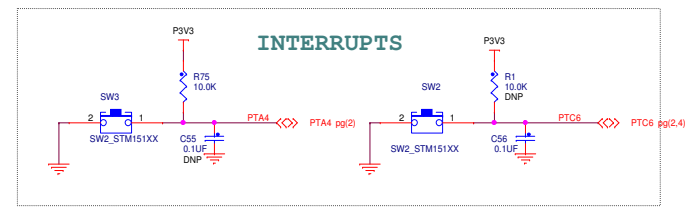
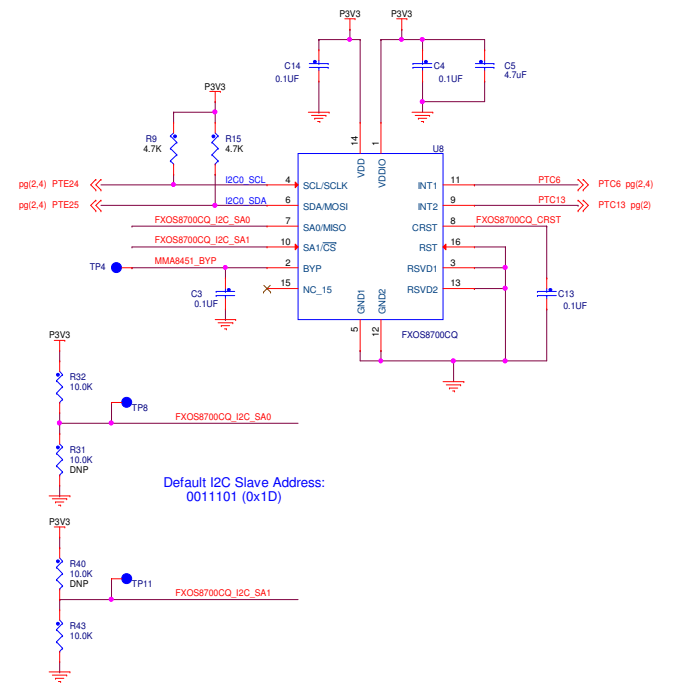




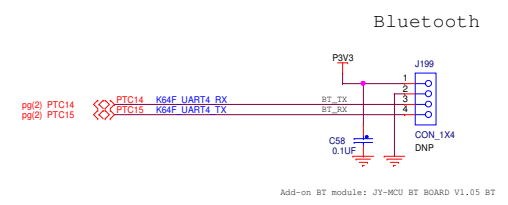
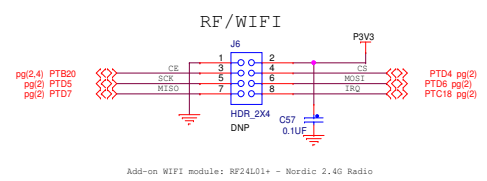
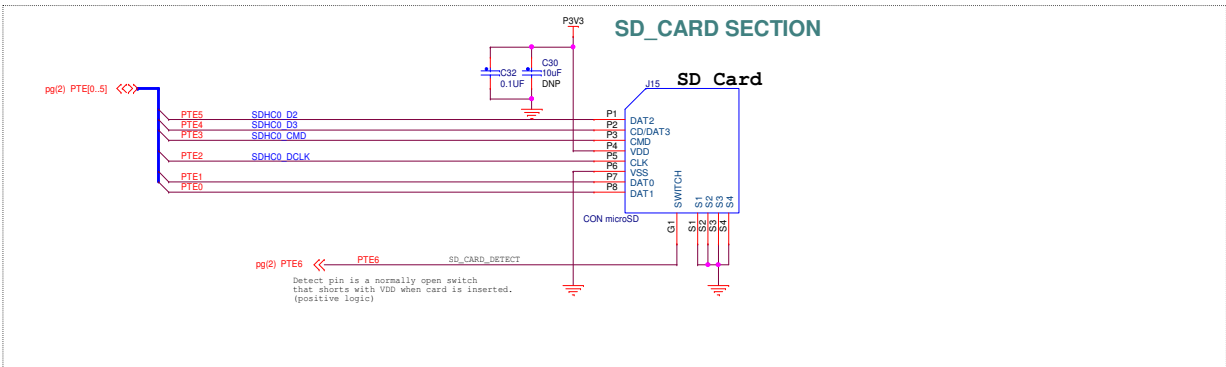
**ARDUINO COMPATIBLE HEADERS**



**I2C INERTIAL SENSOR  
(ACCELEROMETER AND MAGNETOMETER)**

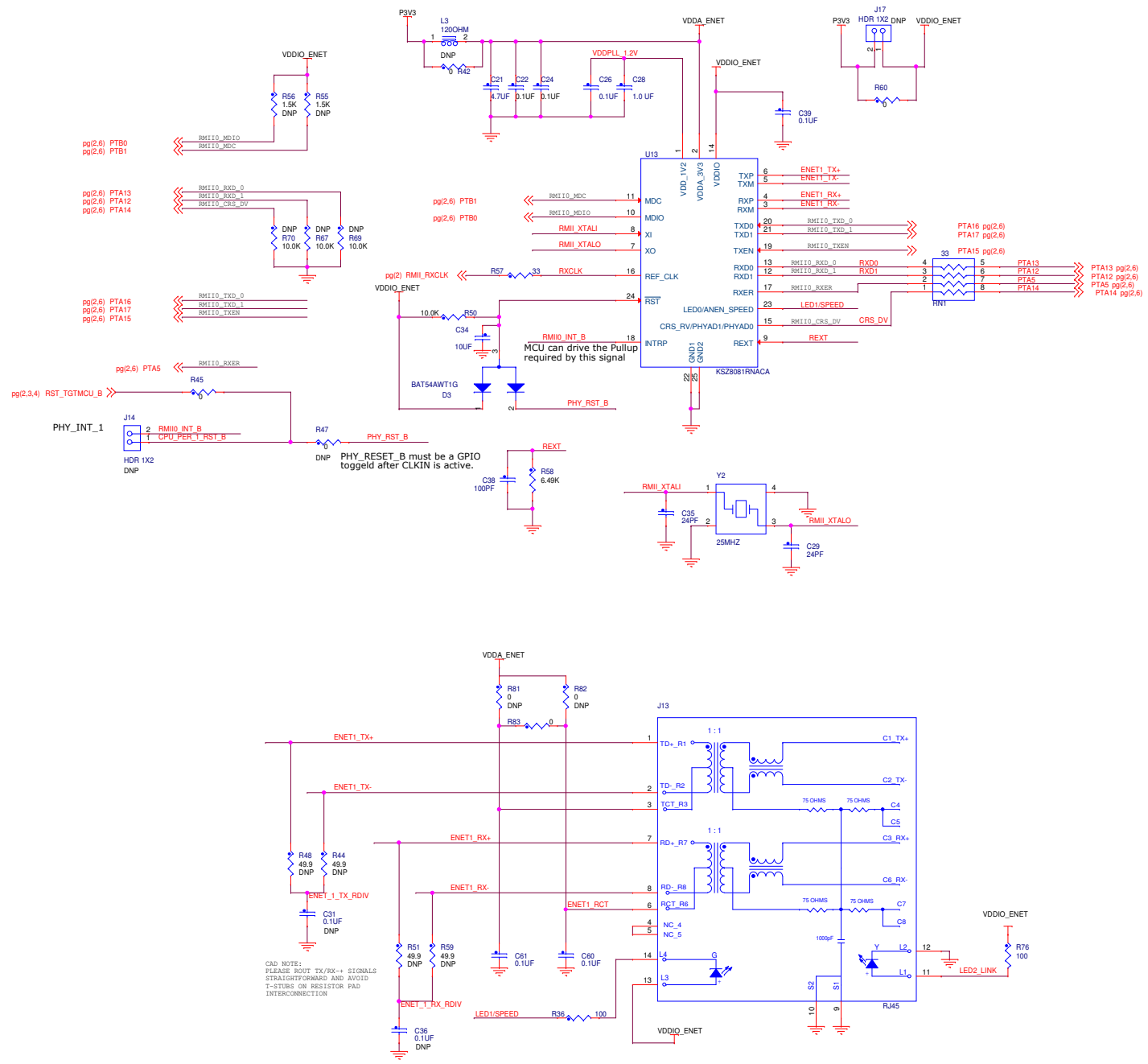


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LAYOUT NOTES:  
 1. The TRD+/TRD- pairs should be routed with a 100ohm differential impedance and a 50ohm single ended (characteristic) impedance.  
 2. The trace lengths within a TRD+/TRD- differential pair should be matched.  
 3. The distance between each TRD+/TRD- differential pair should be 50mils or more.



ICAP Classification:	FCP: FUC: PUB: X
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