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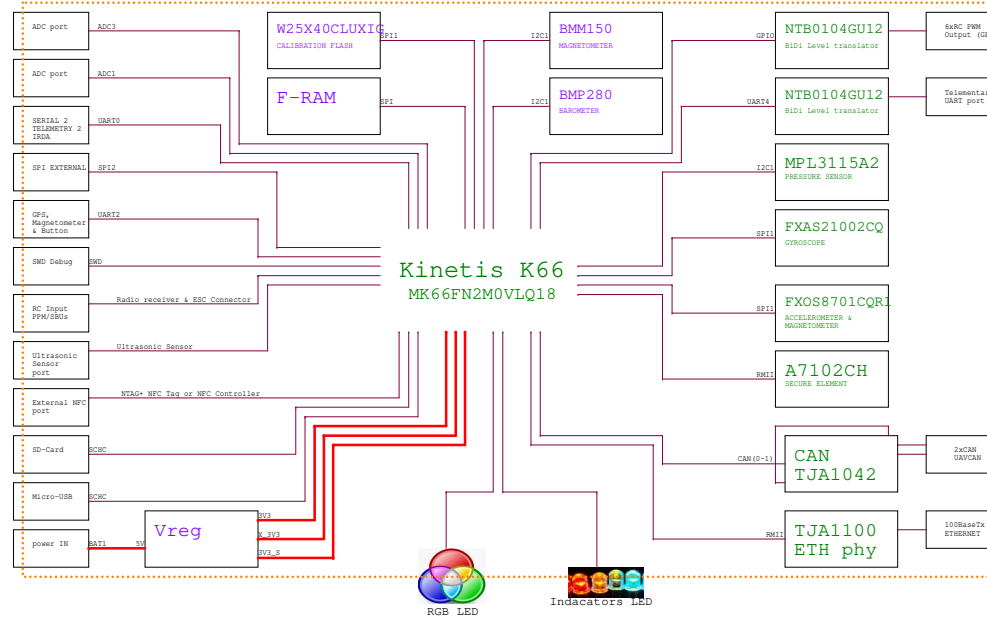
Revisions			
Rev	Description	Date	Approved
X1	First Release	14FEB18	JAIN GALLOWAY
X2	Project Rename & A7102CH IC	SEP18	JAIN GALLOWAY
B	Reference Designator are sync with NXP_NXPllite 3.0RC18	23OCT18	JAIN GALLOWAY
BX1		11NOV18	JAIN GALLOWAY
BX2			JAIN GALLOWAY
BX3			JAIN GALLOWAY
BX4			JAIN GALLOWAY
BX5	-Added J28 for external sensors -Added PX4FMU baro sensor	14NOV18	JAIN GALLOWAY
BX6			JAIN GALLOWAY
BX7		23NOV18	JAIN GALLOWAY
BX8	-Added ESD diodes	24NOV18	JAIN GALLOWAY
BX9	- Added MS621FE-FL11E Batery - BMM150 SPI to I2C mode	28NOV18	JAIN GALLOWAY
BX10	- Removed duplicate pullup / down resistors from I2C1_SDA_INTERNAL & I2C1_SCL_INTERNAL - On-Board sensors moved to 'SENSORS' page	03DEC18	JAIN GALLOWAY

RDDRONE-FMUK66

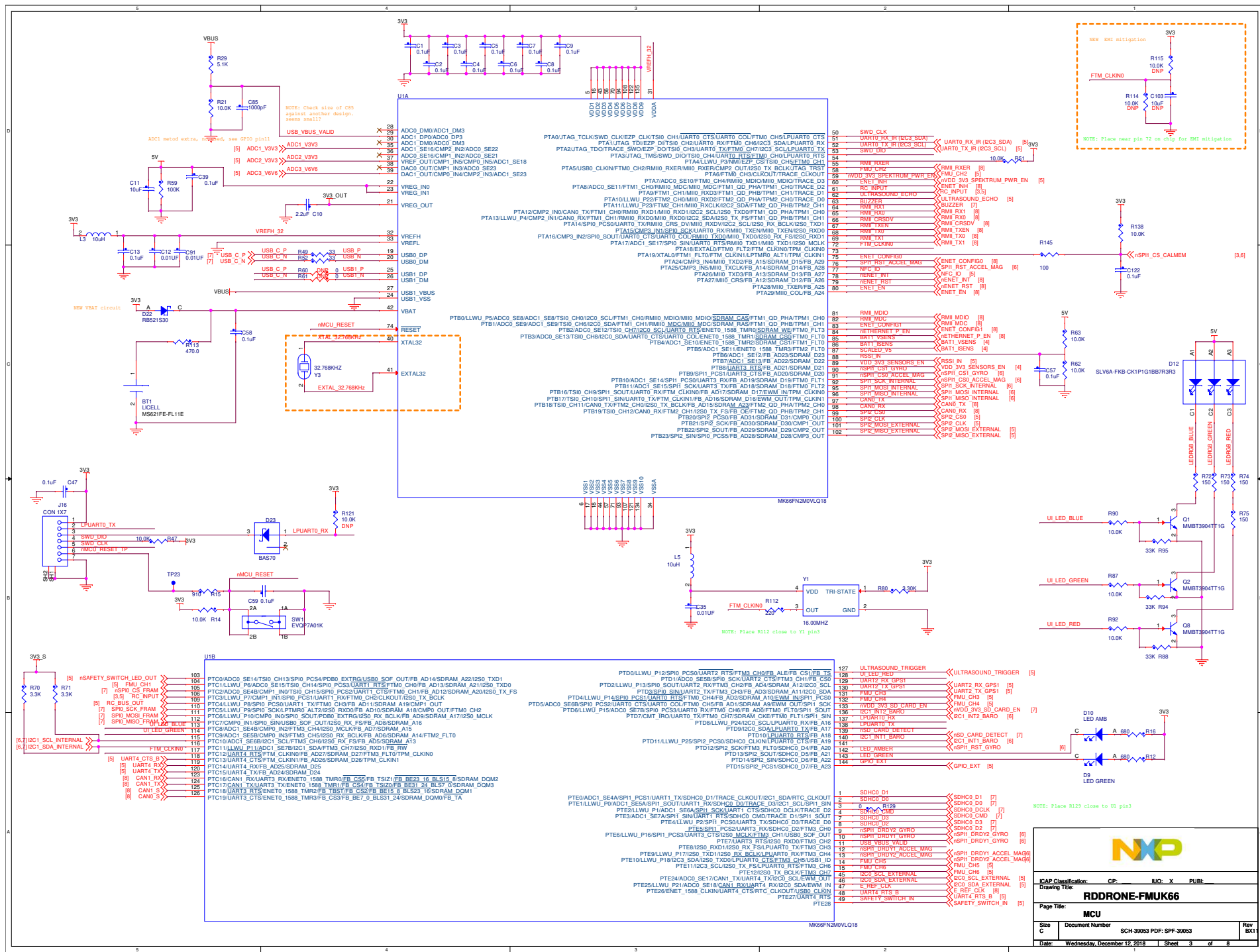
			
ICAP Classification:		CP:	IUC: X PUBL
Drawing Title: RDDRONE-FMUK66			
Page Title: TITLE, TOC & REV			
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REF DES	ASSY OPT	PAGE NAME
R61,R60,R114,R115,C103,R121	DNP	3. MCU
R77	DNP	4. POWER
R45,R128	DNP	5. CONNECTORS
R65,R132,R134,R64,R133,R131	DNP	6. SENSORS
R111,C108,R120	DNP	7. SDCARD & MEMORY

RDDRONE-FMUK66 MODULAR AND FLEXIBLE DRONE DEVELOPMENT PLATFORM



EAP Classification: CP		IUC: X PUBL	
RDDRONE-FMUK66			
Page Title: BLOCK DIAGRAM			
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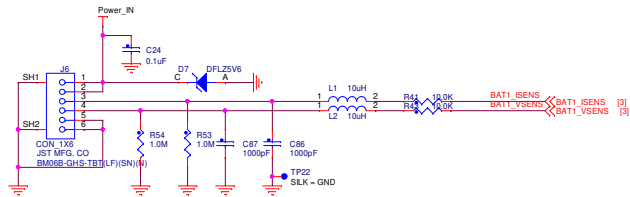
ADP Classification: CP, BUQ, X, PUB

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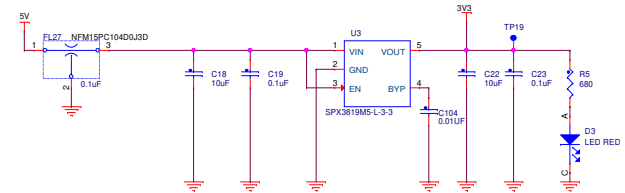
Page Title: **MCU**

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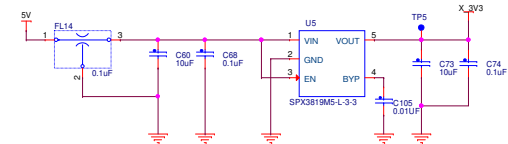
Power_IN



VCC to 3.3V for MCU

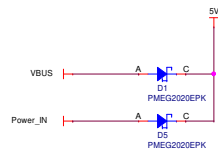
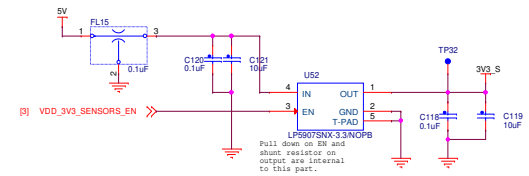


VCC to 3.3V for Ethernet, CAN, FRAM, SDCARD



VCC to 3.3V for Sensors / "Extra low noise"

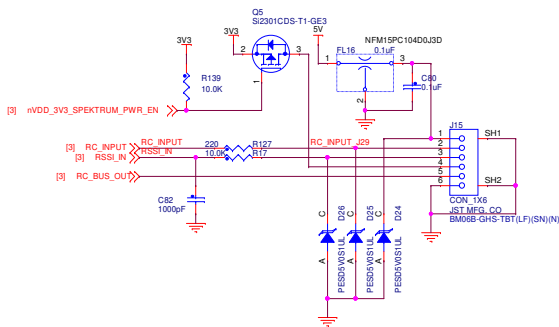
NOTE: Extra Low Noise



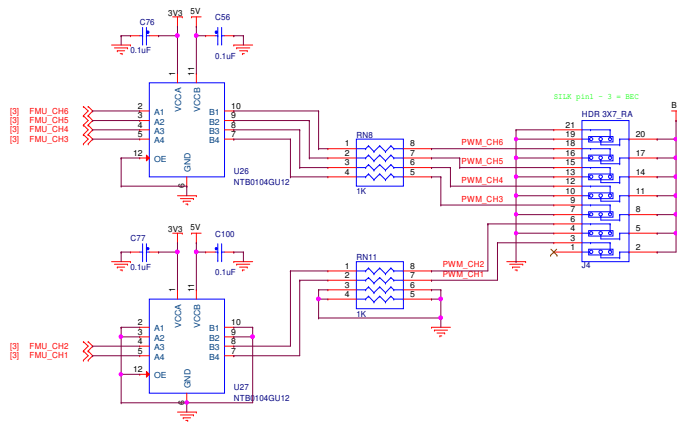
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Drawing Title: RDDRONE-FMUK66			
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Radio receiver & ESC Connector

PPM-RSSI-SBUS-SPEKTRUM
SERIAL4/FrSky



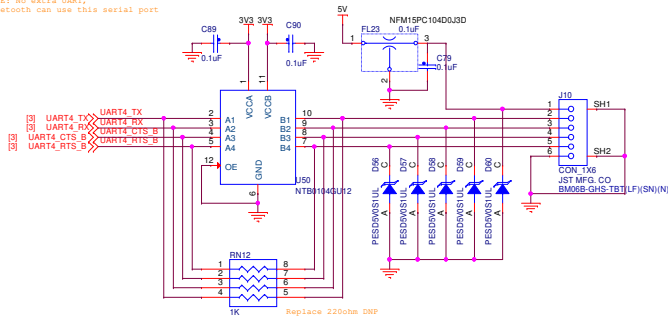
PWM OUT + BEC



NOTE: TX5010QFN20 is used on PX4.
Should we use this?

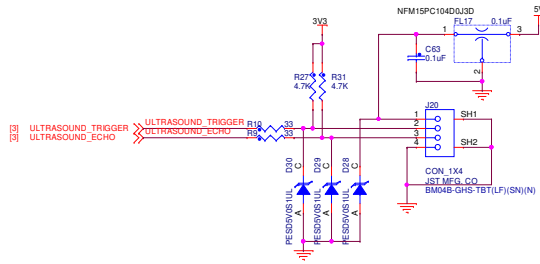
SERIAL 1 / TELEMETRY 1

NOTE: No extra USB.
Bluetooth can use this serial port

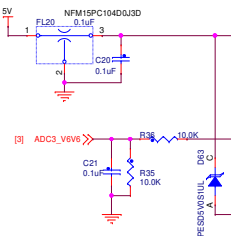


Replace 220ohm DNP

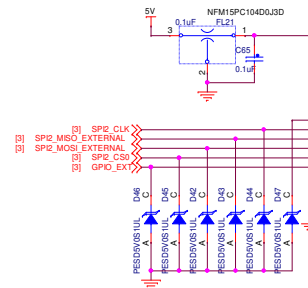
Ultrasonic Sensor



ADC PORT

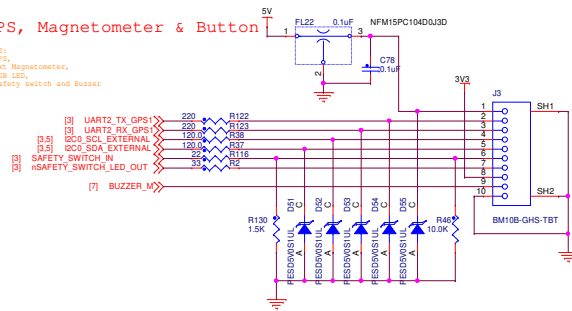


SPI EXTERNAL

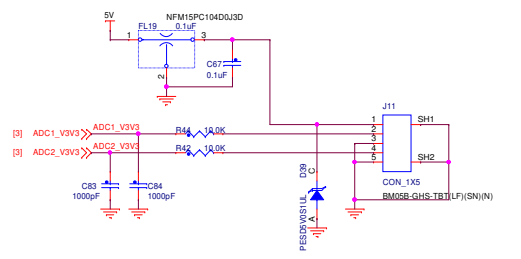
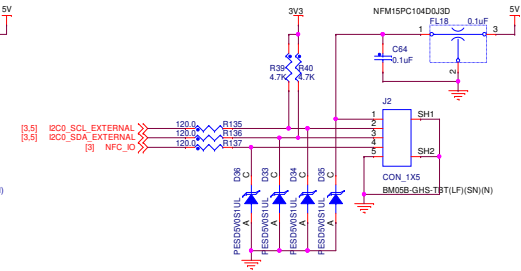


GPS, Magnetometer & Button

NOTE:
- GPS,
- Exc Magnetometer,
- Red LED,
- Safety switch and Buzzer

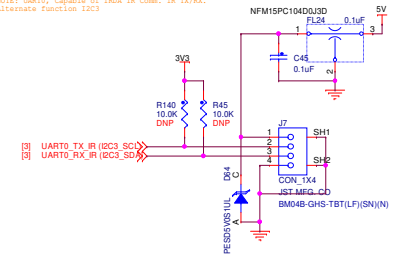


I2C0. Also for NTAG+ NFC Tag or NFC Controller



SERIAL 2 / TELEMETRY 2 / IRDA

NOTE: UART0, Capable of IRDA IR Comm. IR TX/RX.
Alternate function I2C3



ICAP Classification: CP, IUC, X, PUBL

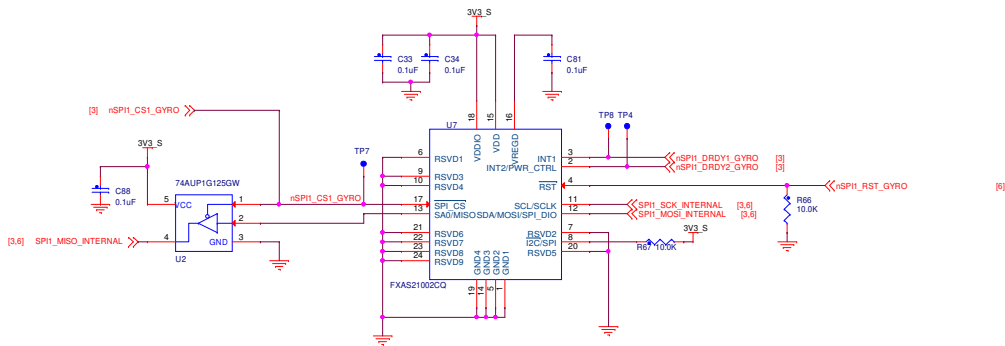
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Page Title: **CONNECTORS**

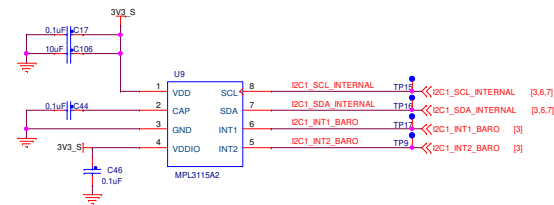
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GYROSCOPE

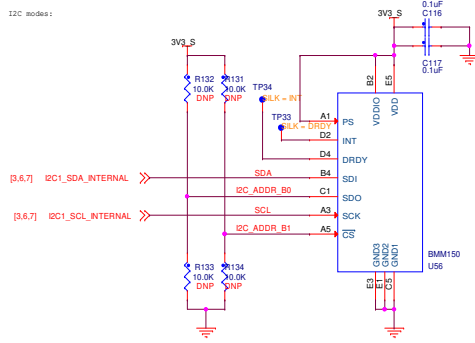


PRESSURE SENSOR

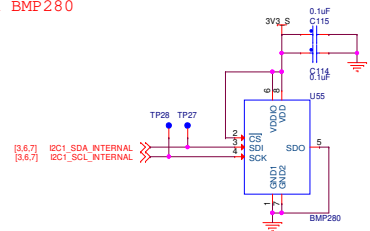


MAGNETOMETER BMM150

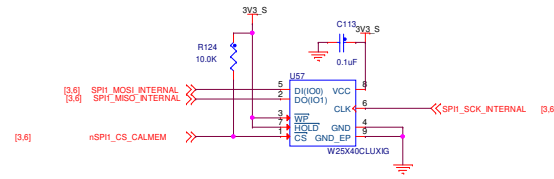
I2C modes:
I2C modes:



BAROMETER BMP280

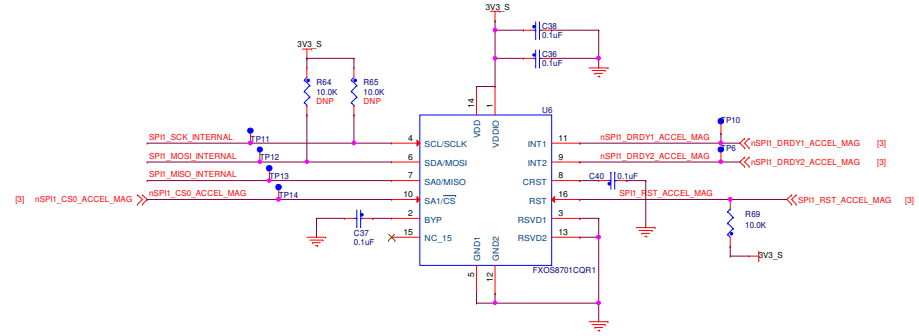


SENSOR MODULE CALIBRATION FLASH



ACCELEROMETER & MAGNETOMETER

NOTE: keep sensors

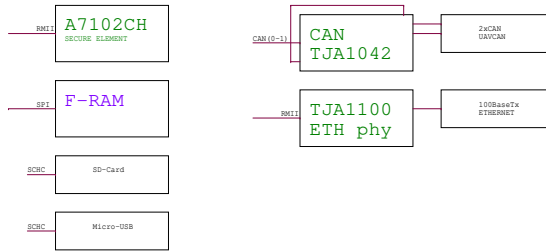
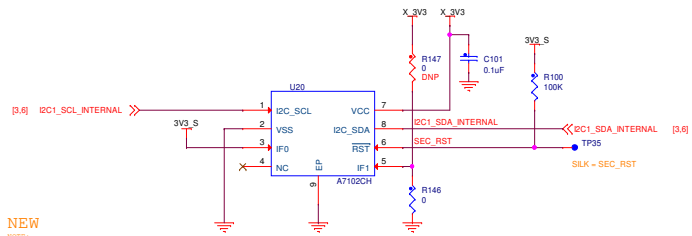


CAP Classification: CP		IUC: X PUBL	
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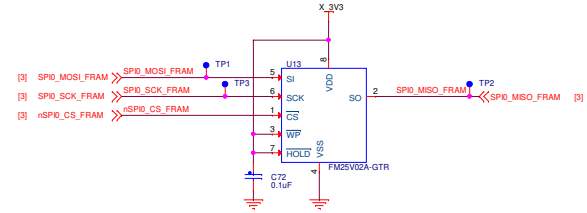
SECURE ELEMENT

NEW

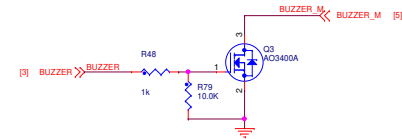
NOTE:
 - 4096bit/s supported
 - I2C Address:
 - I2F1 #1 Address= 0x30/93
 - I2F1 #1 Address= 0x32/93



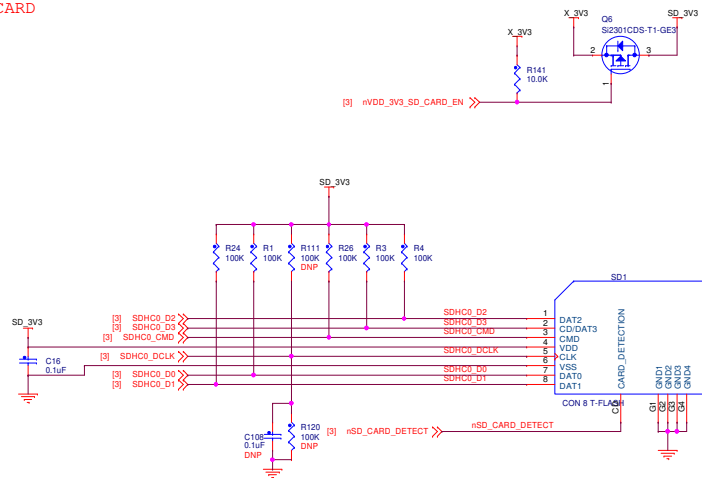
FRAM



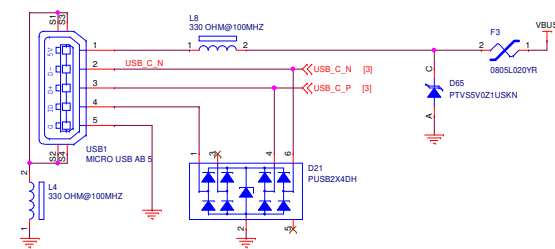
BUZZER



SD CARD



MICRO USB

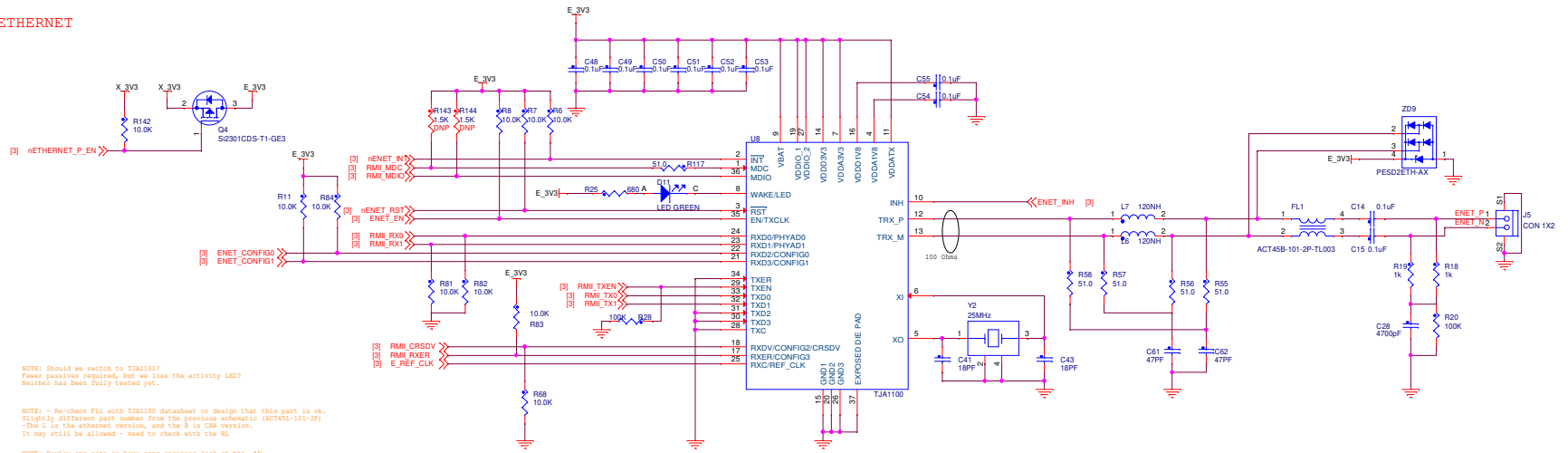


NOTE: Swap pins as needed for optimal layout.



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ETHERNET



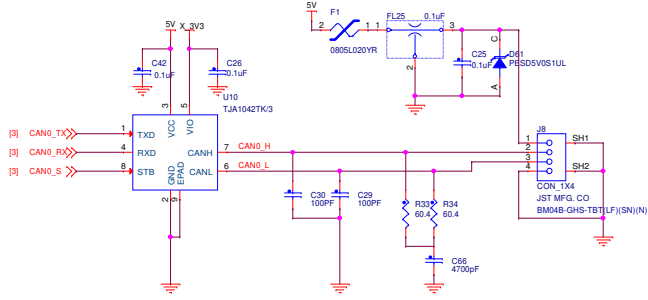
NOTE: Should we switch to TJA1101?
Fewer passives required, but we lose the activity LED?
Neither has been fully tested yet.

NOTE: - Re-check FL1 with TJA1100 datasheet or design that this part is ok.
Slightly different part number from the previous schematic (ACT45-101-29)
-The 1 is the ethernet version, and the 8 is CAN version.
It may still be allowed - need to check with the BU.

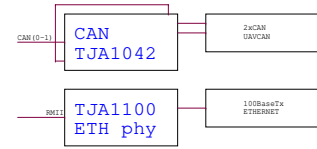
NOTE: Review app note or have apps engineer look at the AN
for TJA1100 shows additional ferrite and filtering for VDD0, VBAT and other signals.
Could add optional components in case they are needed for EMI mitigation...

NOTE: App note for TJA1100 shows optimal protection diode layout

CAN_0 TRANSEIVER



LAYOUT NOTE: Mounting holes 96mil PLATE (top-bottom)



CAN_1 TRANSEIVER

