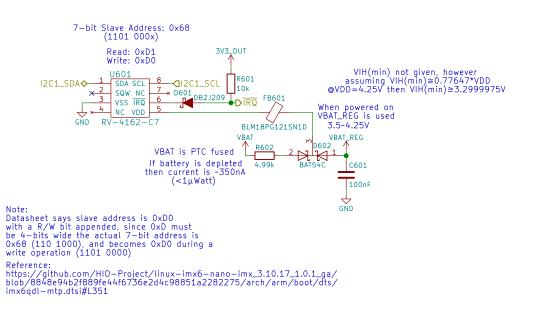
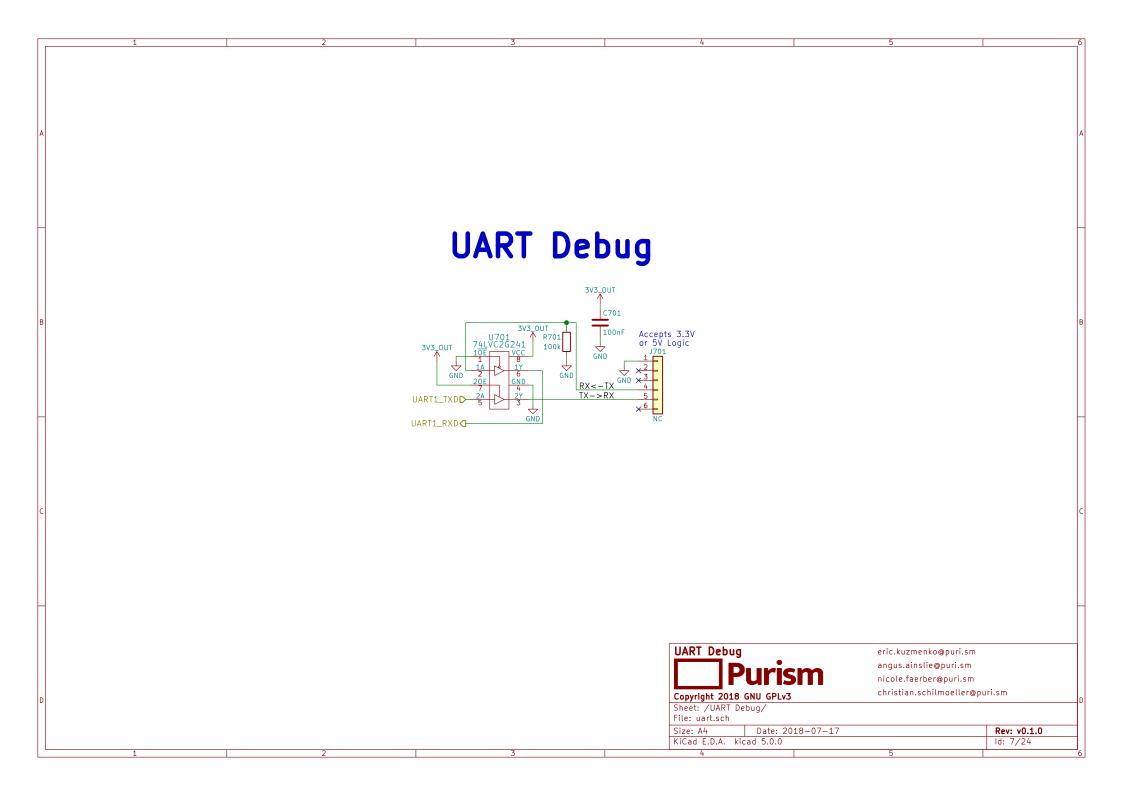
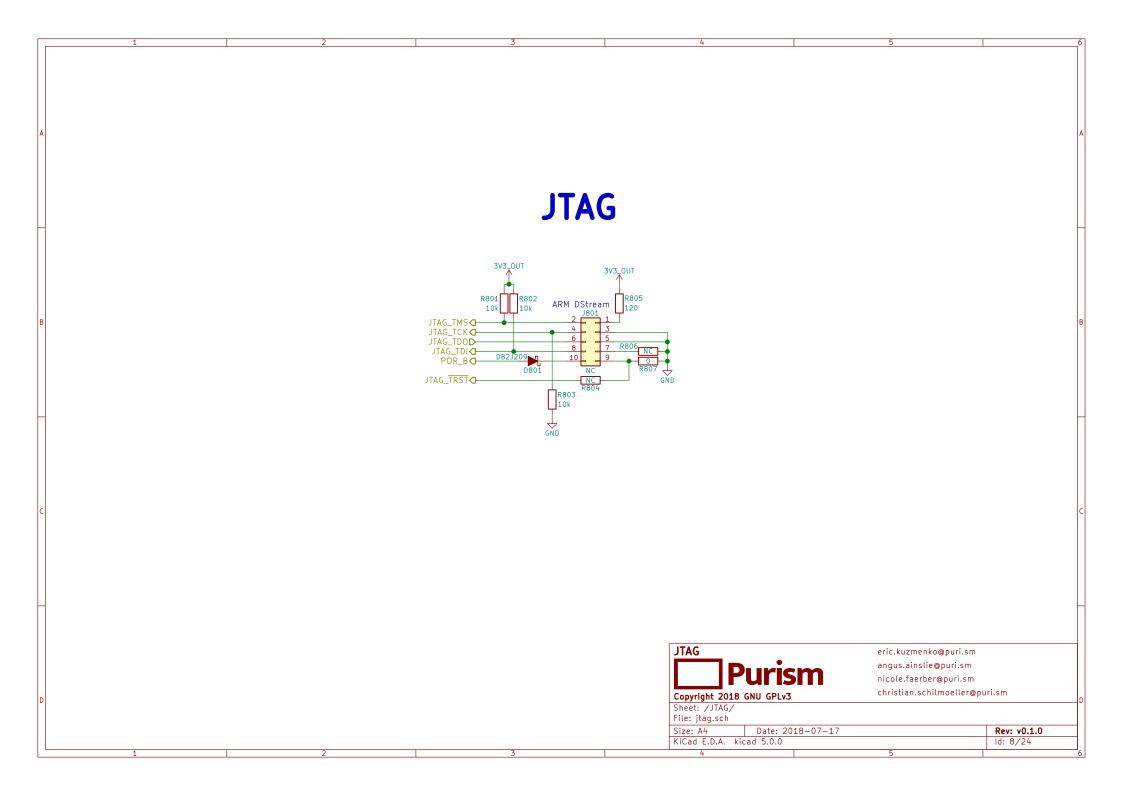


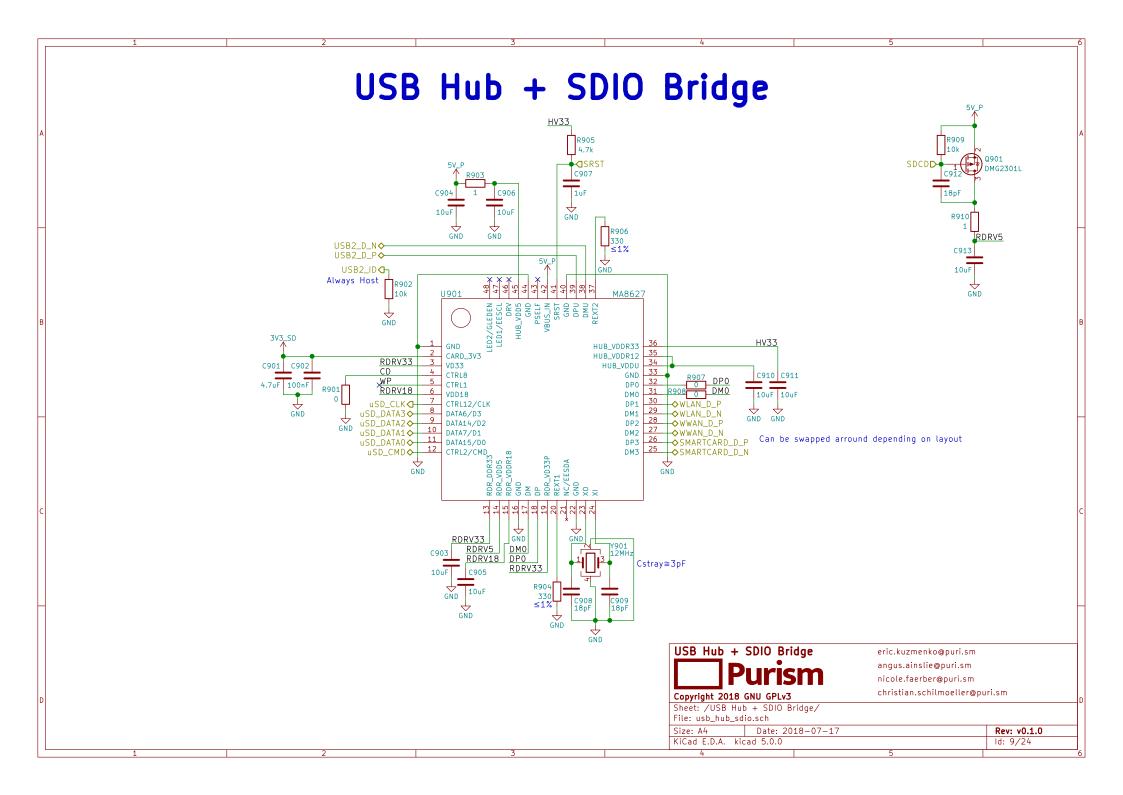
# Real-Time Clock

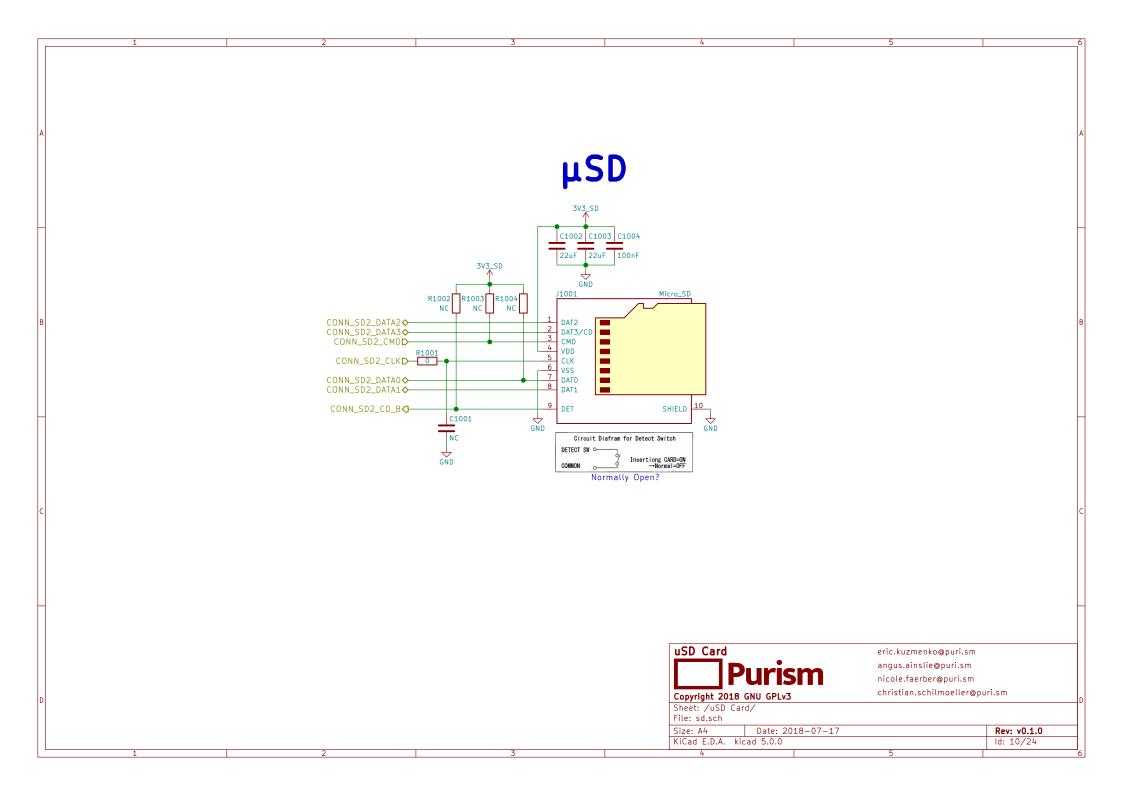


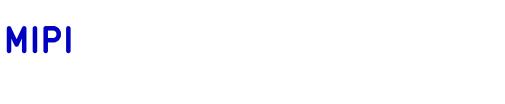






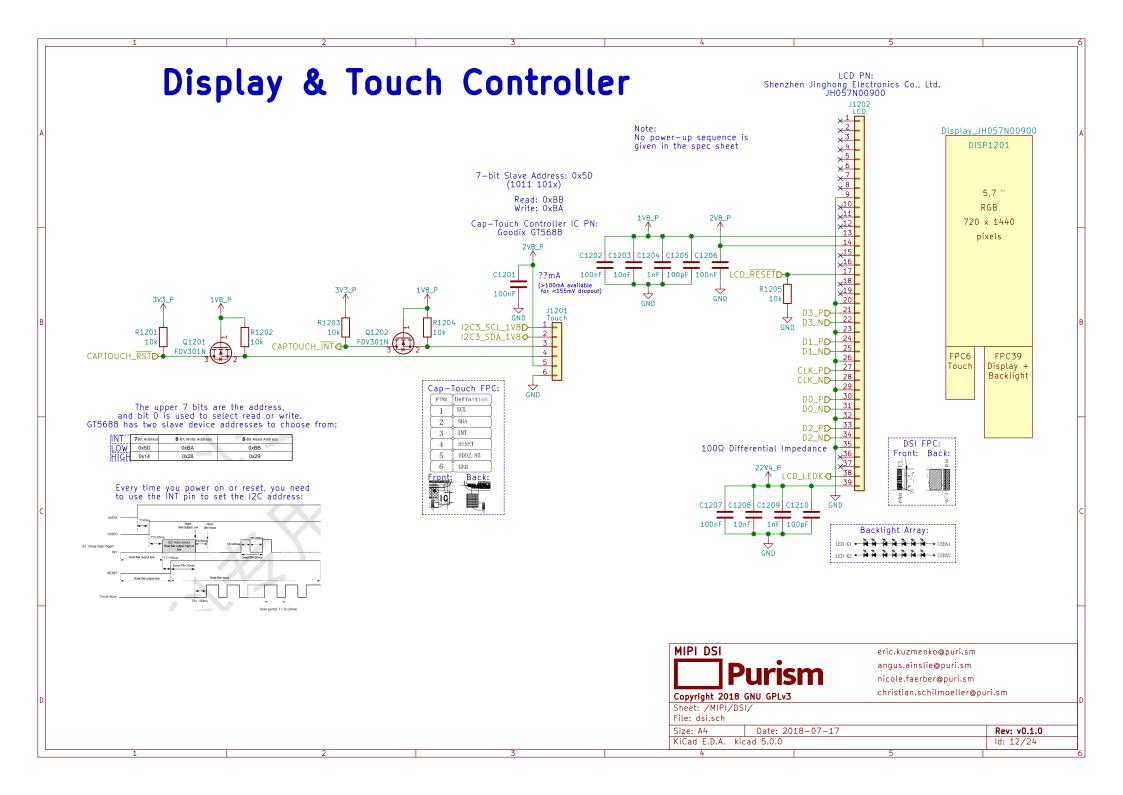


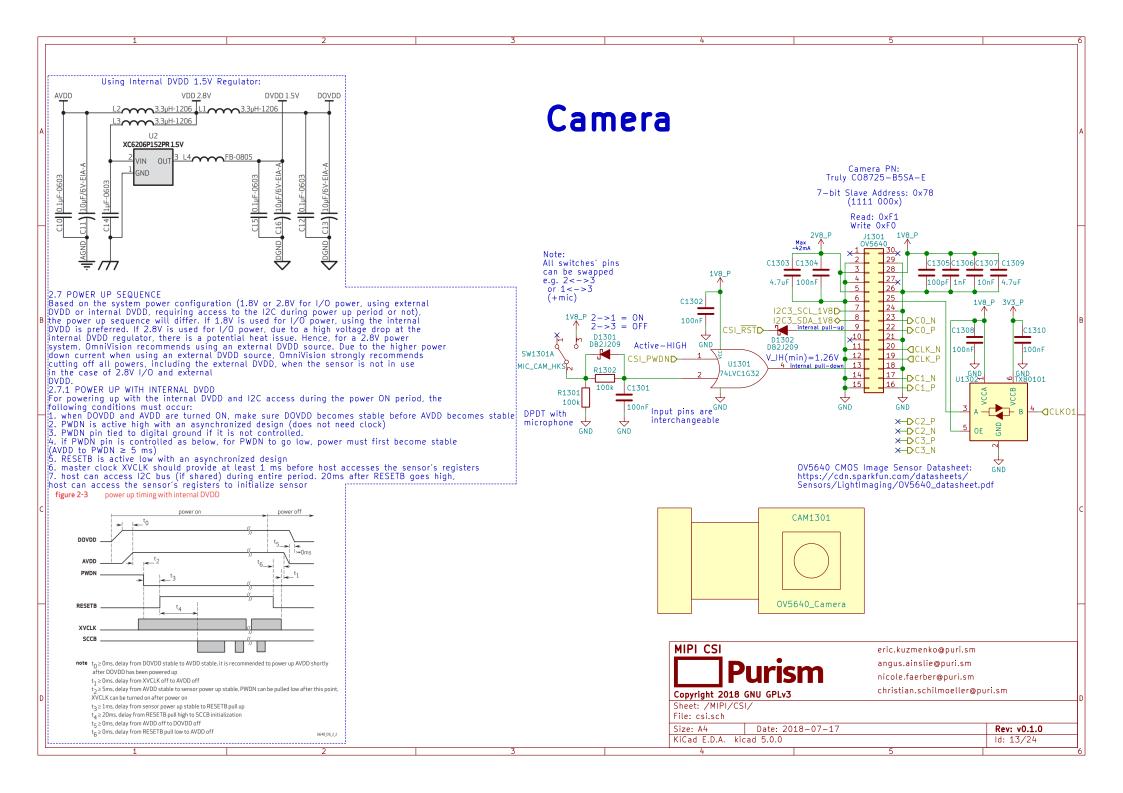






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File: mipi.sch Size: A4	Date: 2018-07-17		Rev: v0.1.0	
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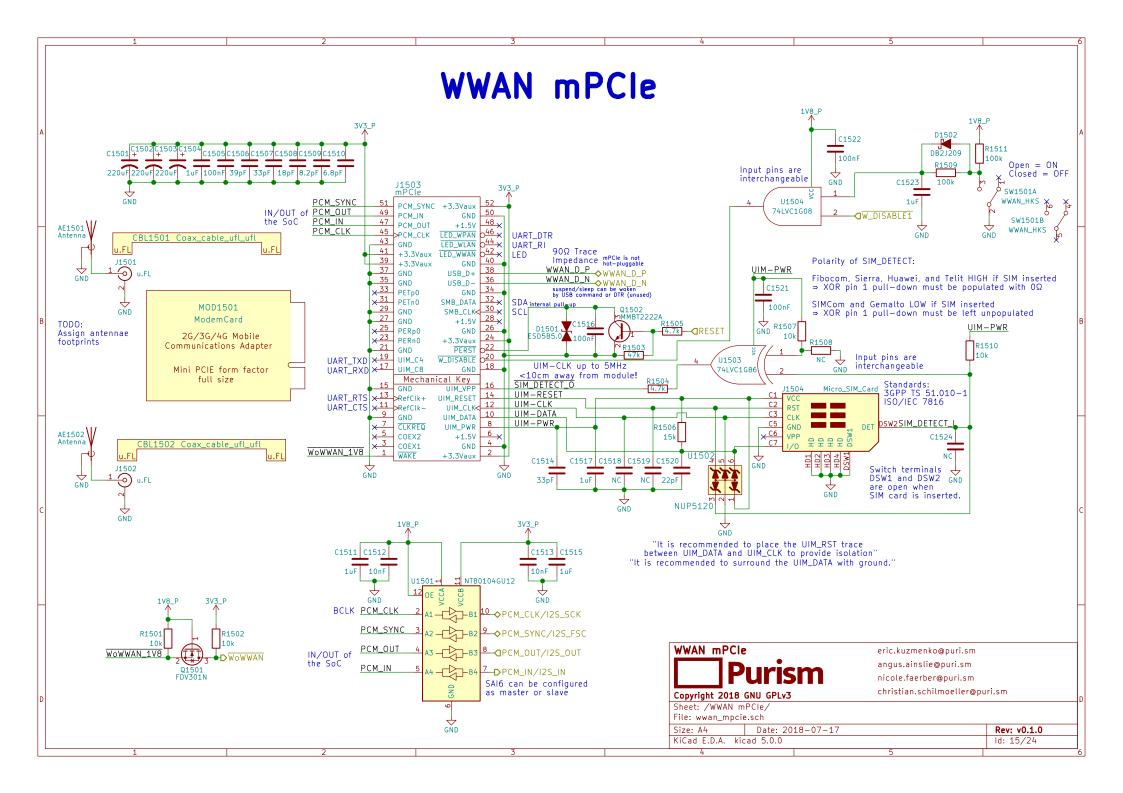
# **Buttons & LED**

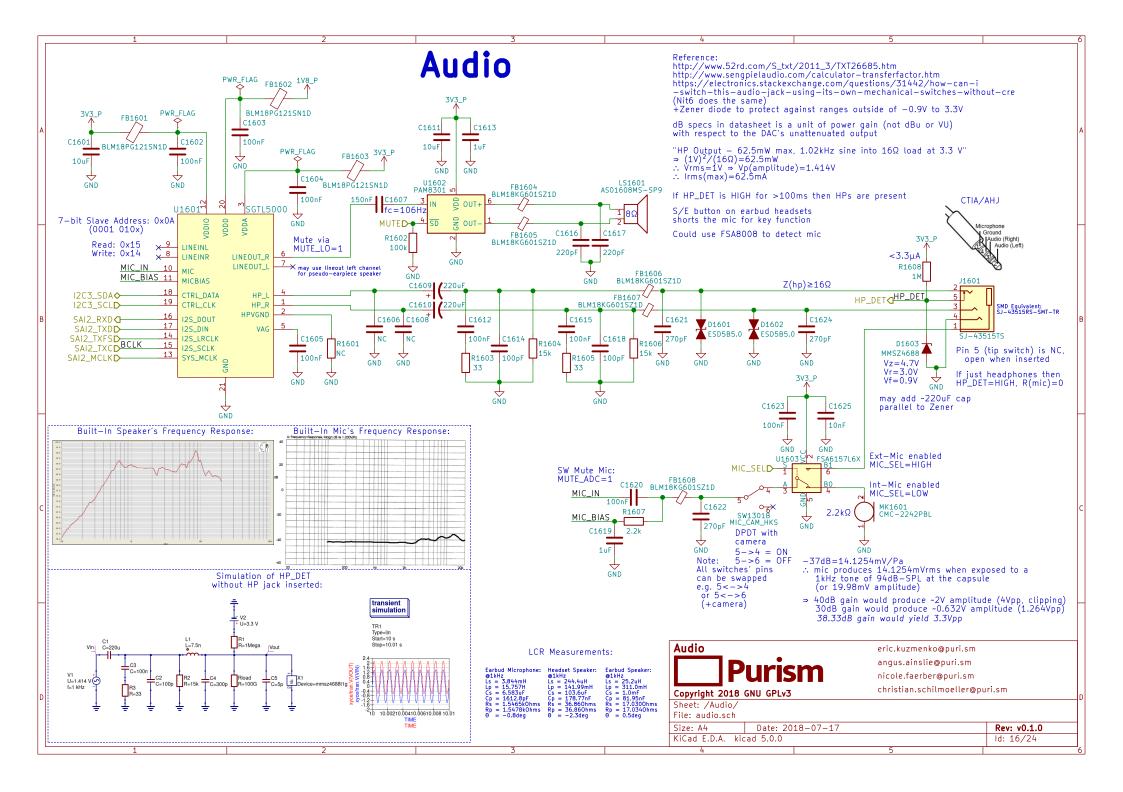


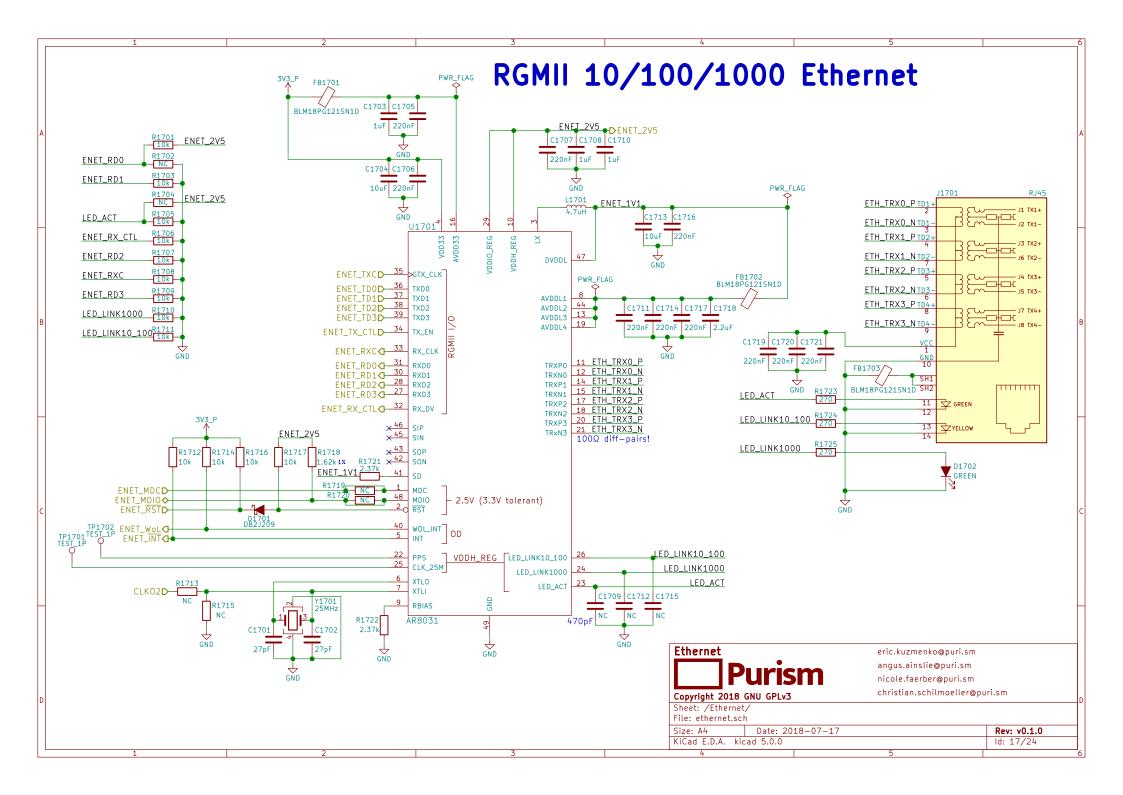
Use PWM2\_PWMSAR to set the compare value (duty cycle)
Use PWM2\_PWMCR[15:4] to set the PRESCALER (frequency)
Use PWM2\_PWMPR to set the top of the counter (frequency)

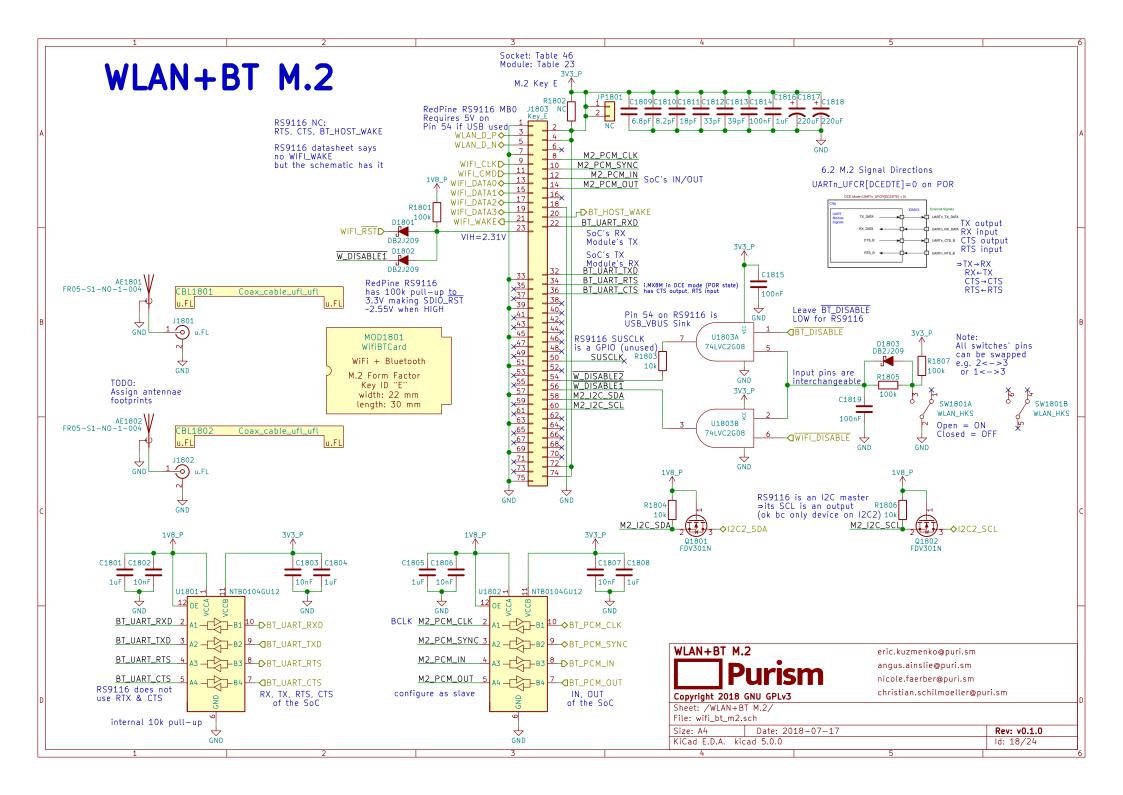








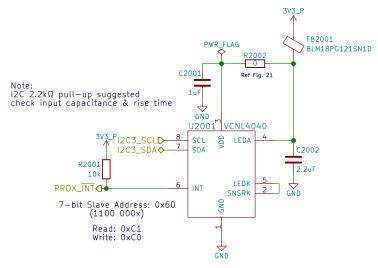




TUSB1046 can be used for DP over USB-C **HDMI** Layout Note: May need swap some signals due to micro—HDMI pinout diff 3V3\_P depending on pin location/routing 5V\_P D1901 DB2J209 F1901  $100\Omega$  diff pairs U1901 PCMF3HDMI2S D1905 DB2J209 C1901 1uF HDMI\_Utility HDMI AUX PC-SMD Micro-HDMI Type D Alternative: 0467650301 C2 HDML HPD PICOSMDC035S-HDMI\_AUX\_N C1904 C1903 A3 HDMI\_CN\_TXO\_P HDMI\_TX0\_PD• R1910 R1911 R1912 J1901 Mini-HDMI A4 HDMI\_CN\_TXO\_N HDMI\_TX0\_ND-1.5k 1.5k 27k CMF+ESD A5 HDMI\_CN\_CLK\_P HDMI\_CN\_TX2\_P HDMI\_CLK\_PD A6 HDMI\_CN\_CLK\_N C6 HDMI\_CLK\_ND-GND HDMI\_CN\_TX2\_N 83 82 81 R1907 R1903 R1905 HDMI\_CN\_TX1\_P ±1%!!! HDMI\_CN\_TX1\_N HDMI\_CN\_TX0\_P Q1901A Q1901B Q1902A Q1902B NX3020NAKS NX3020NAKS NX3020NAKS NX3020NAKS HDMI\_CN\_TXO\_N HDMI\_CN\_CLK\_P HDMI\_CN\_CLK\_N HDMI\_CEC ♦ HDMI\_CEC Dual N-Fet annotation HDMI\_Utility must follow text! U1902 PCMF2HDMI2SZ A1HDMI\_CN\_TX2\_P HDMI\_DDC\_SCLDHDMI\_DDC\_SCL HDMI\_DDC\_SDA HDMI\_TX2\_PD→ A2HDMI\_CN\_TX2\_N HDMI\_TX2\_ND DCDC\_5V\_CN A3HDMI\_CN\_TX1\_P HDMI\_TX1\_PD HDMI\_HPD (HDMI\_HPD A4HDMI\_CN\_TX1\_N HDMI\_TX1\_ND CMF+ESD R1902 R1904 R1906 R1908 C1905 D1903 D1904 D1906 R1913 R1914 ESD5B5.0 ESD5B5.0 D1906 Q1903A Q1903B Q1904A Q1904B NX3020NAKS NX3020NAKS NX3020NAKS NX3020NAKS ESD5B5.0 GND GND **HDMI** eric.kuzmenko@puri.sm angus.ainslie@puri.sm nicole.faerber@puri.sm christian.schilmoeller@puri.sm Copyright 2018 GNU GPLv3 Sheet: /HDMI/ File: hdmi.sch Size: A4 Date: 2018-07-17 Rev: v0.1.0 KiCad E.D.A. kicad 5.0.0 ld: 19/24

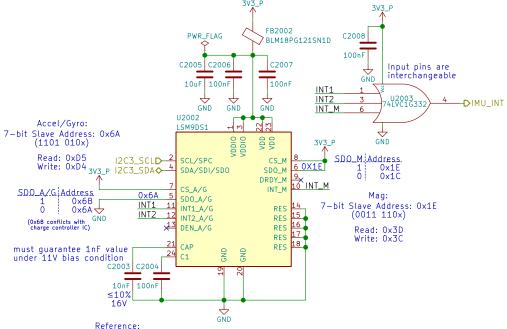
## Sensors

### Proximity & Ambient Light

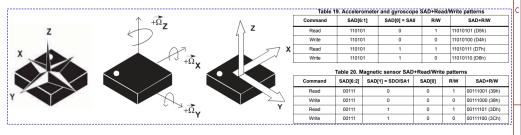


Reference: https://www.vishay.com/docs/84307/designingvcnl4040.pdf http://www.vishay.com/docs/84931/vcnl4040sensorboardfiles.pdf

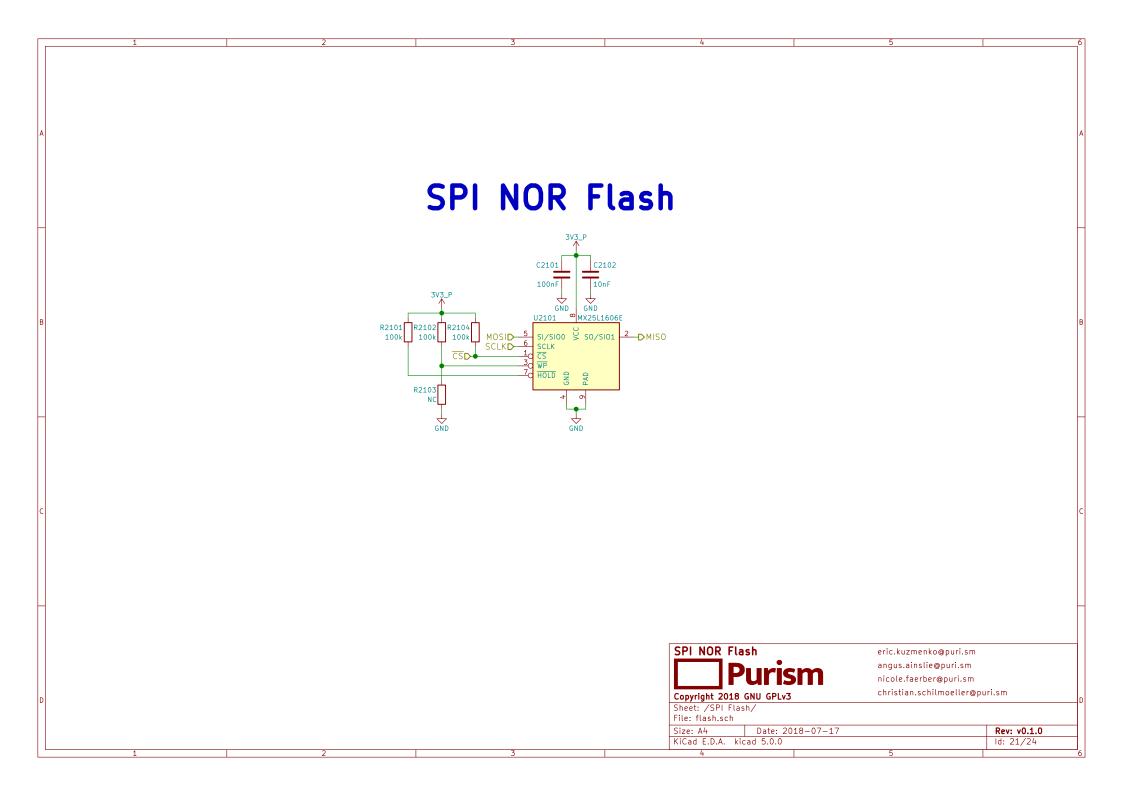
#### 9-Axis IMU



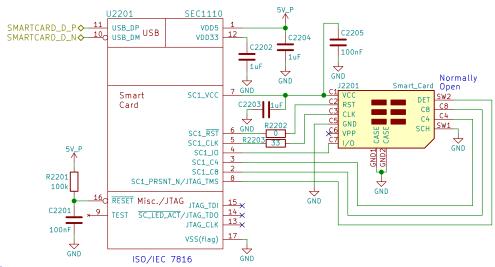
http://www.st.com/en/evaluation-tools/steval-mki159v1.html





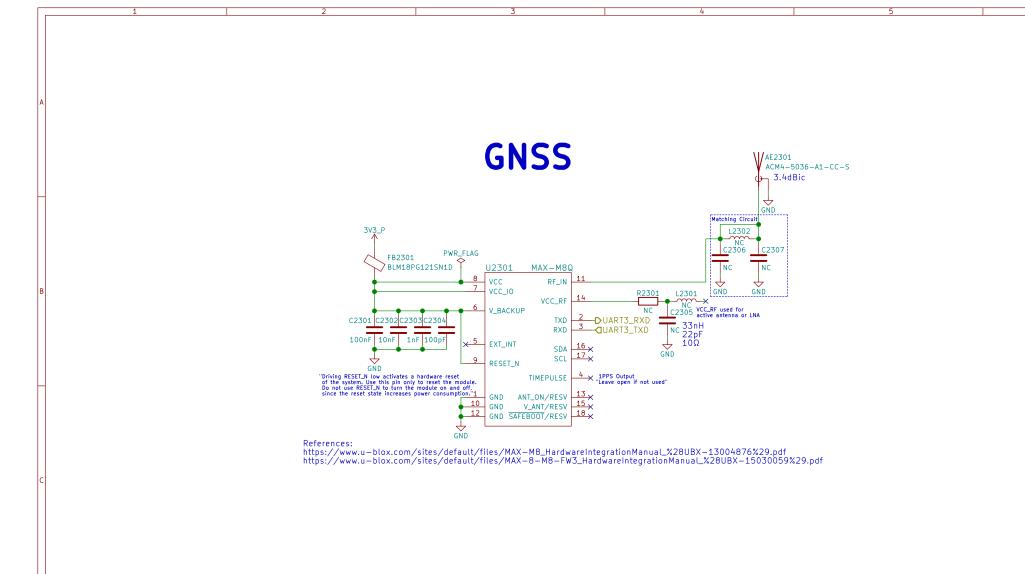


# **Smart Card**



Reference: http://www.microchip.com/DevelopmentTools/ProductDetails.aspx?PartN0=EVB-SEC1110







# **Haptic Motor**



When the motor is off both terminals are at GND Motor will have wire leads
with a 2-pin Molex or Boom Precision
connector installed (by request) Metal housing is floating thick adhesive layer underneath (not connected to either pin)

Haptic/Vibration Motor Copyright 2018 GNU GPLv3

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Sheet: /Haptic Motor/ File: haptic.sch

Size: A4 Date: 2018-07-17 KiCad E.D.A. kicad 5.0.0

Rev: v0.1.0 ld: 24/24