



Thunderboard Sense

EFR32MG12P332F1024GL125

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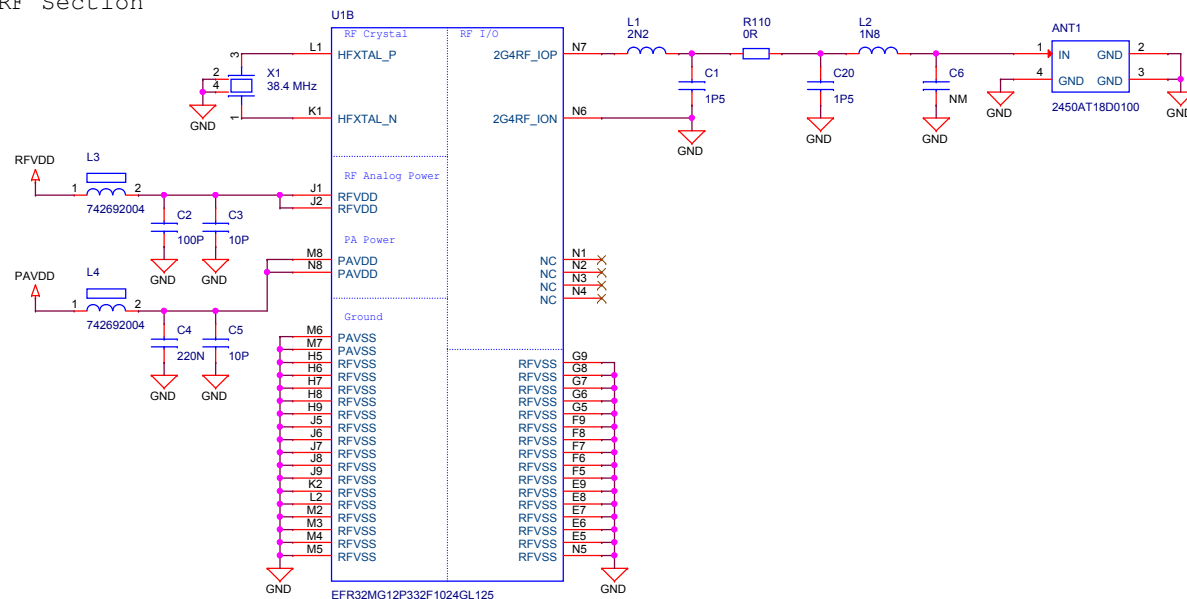


Revision History

Rev.	Description
A00	Initial prototype version.
B00	Updated EFR32 and debugger IC revisions. Replaced analog microphone with an I2S-based digital one.
B01	Changed microphone to Knowles SPH0645LM4H-B
C00	Updated microphone and SPI Flash pinout. Changed to Invensense microphone and 9-axis IMU.
C01	Updated hall effect sensor (si7210) revision.
D00	Changed back to Invensense 6-axis IMU.
D01	Updated EFR32MG12 to IC rev. C.

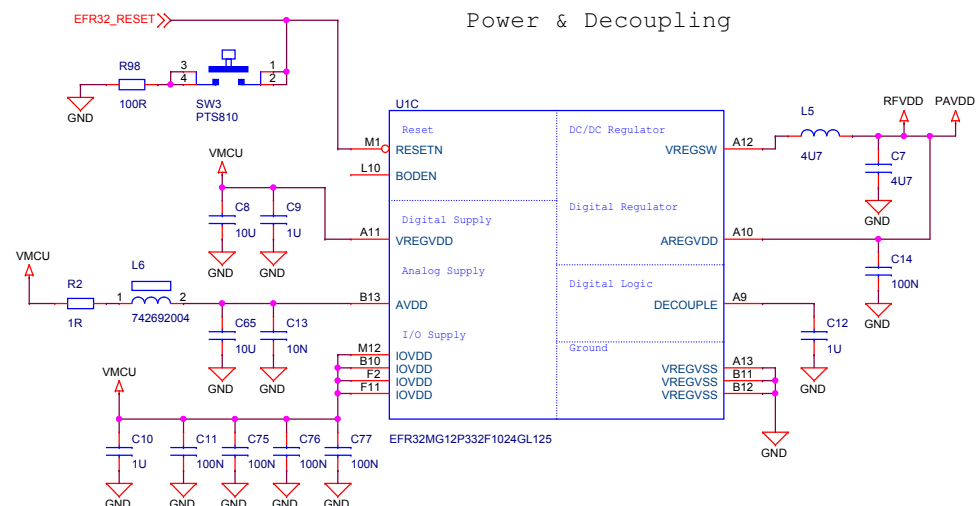
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Thunderboard Sense			
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M1 2.2 MM

M2 2.2 MM



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Wednesday, November 30, 2016

September 30, 2016

Thunderboard Sense 2

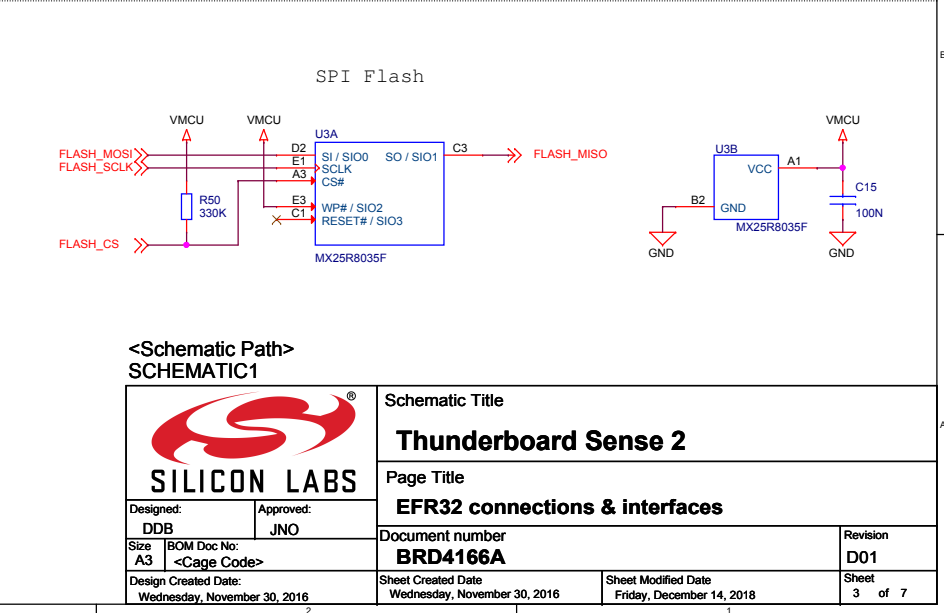
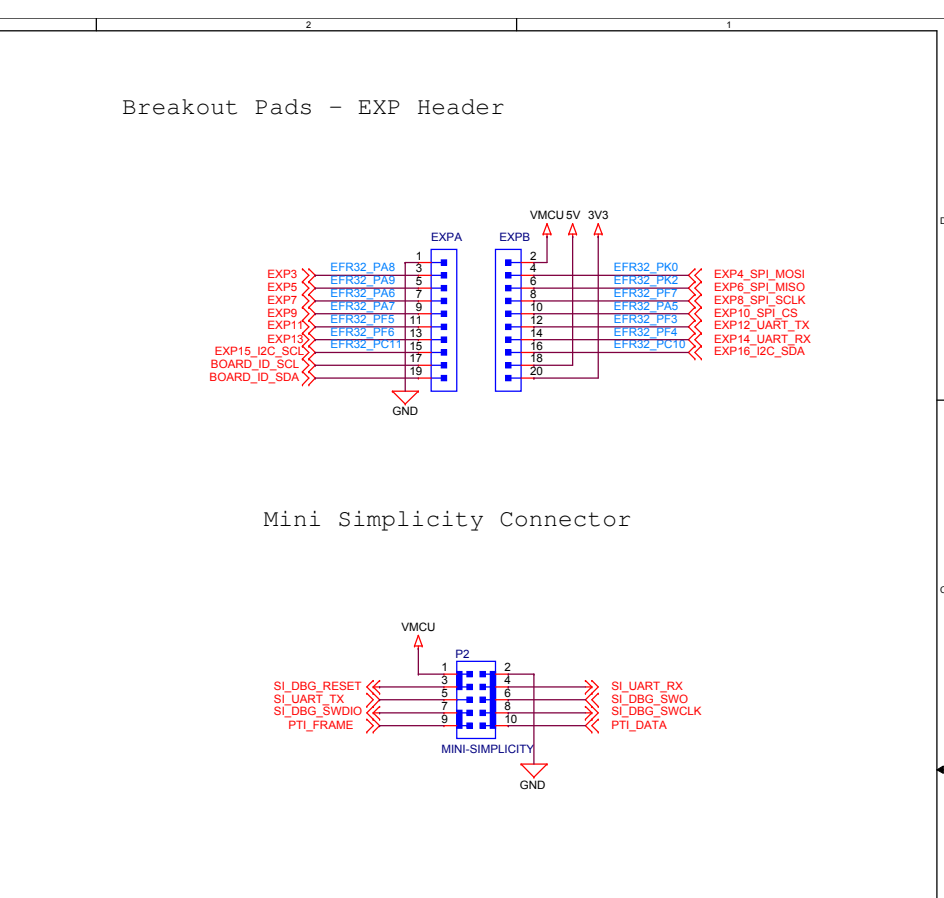
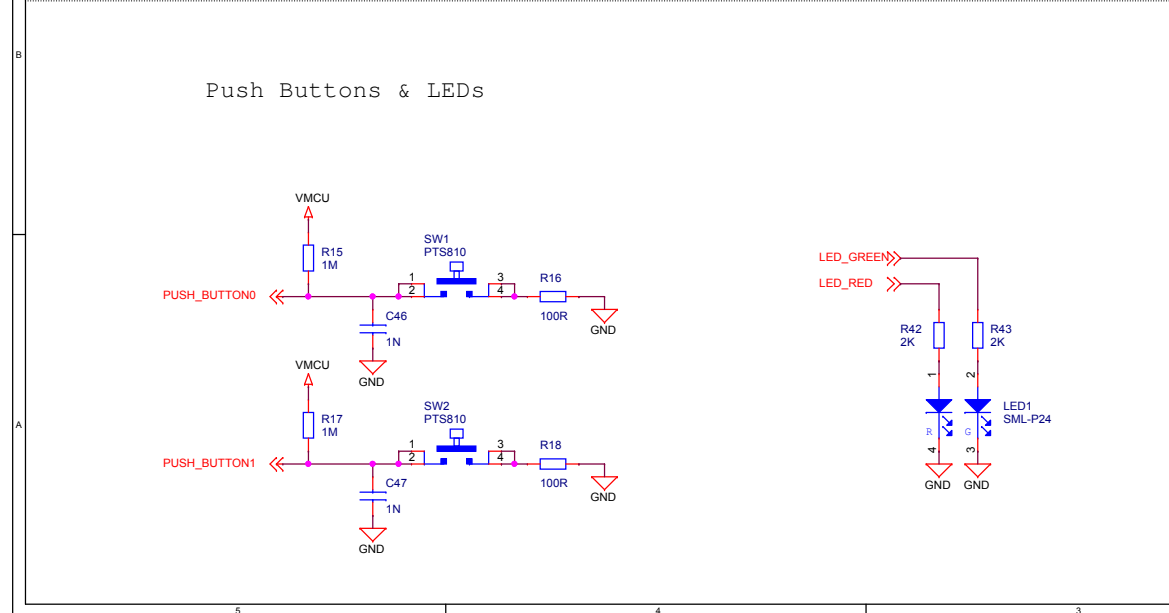
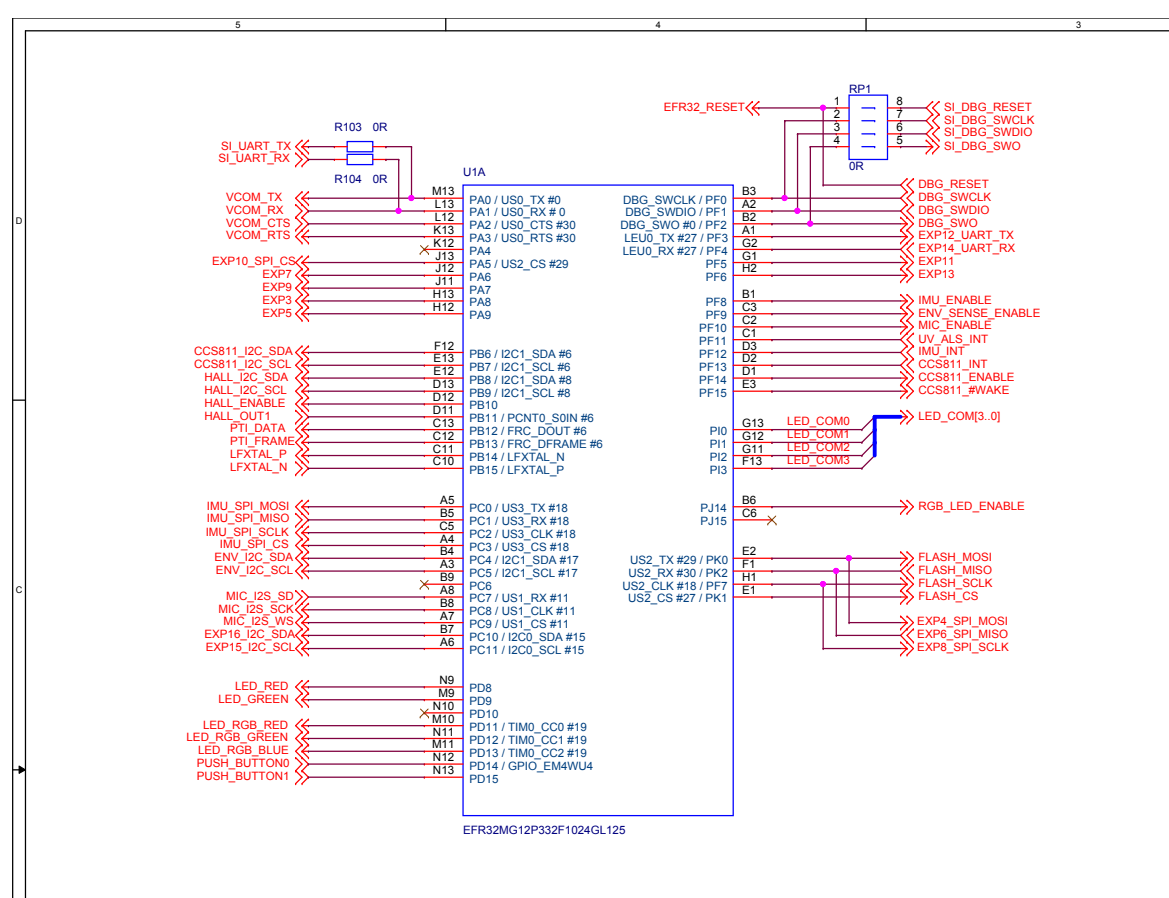
EFR32 - RF, power & IO

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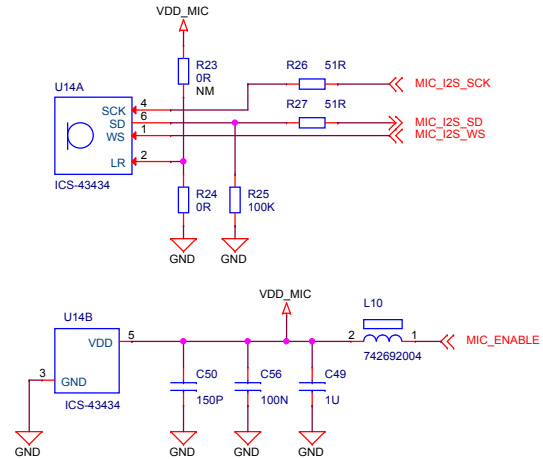
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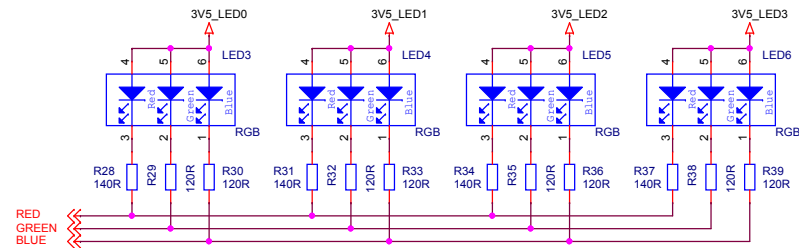
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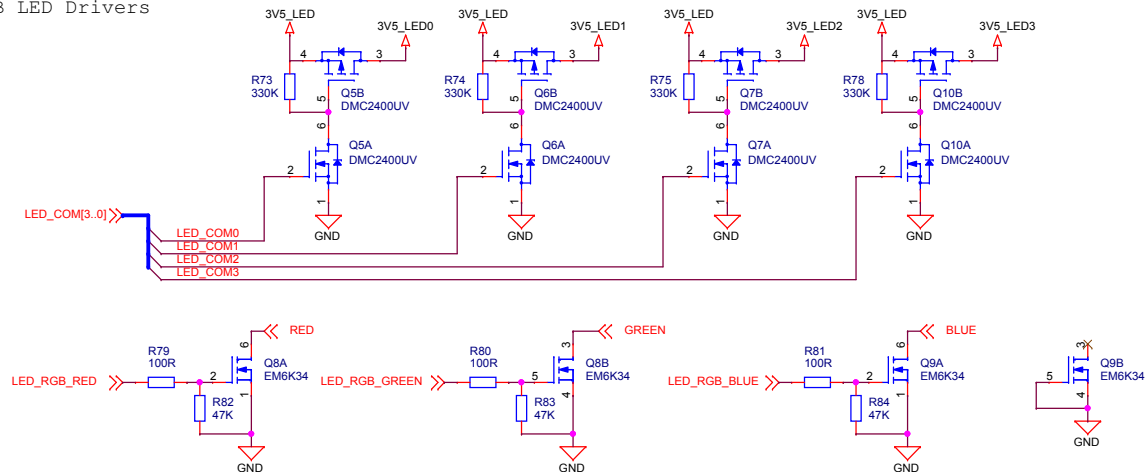
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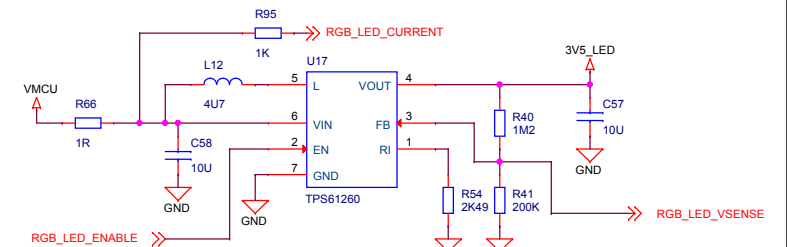
RGB LEDs



RGB LED Drivers



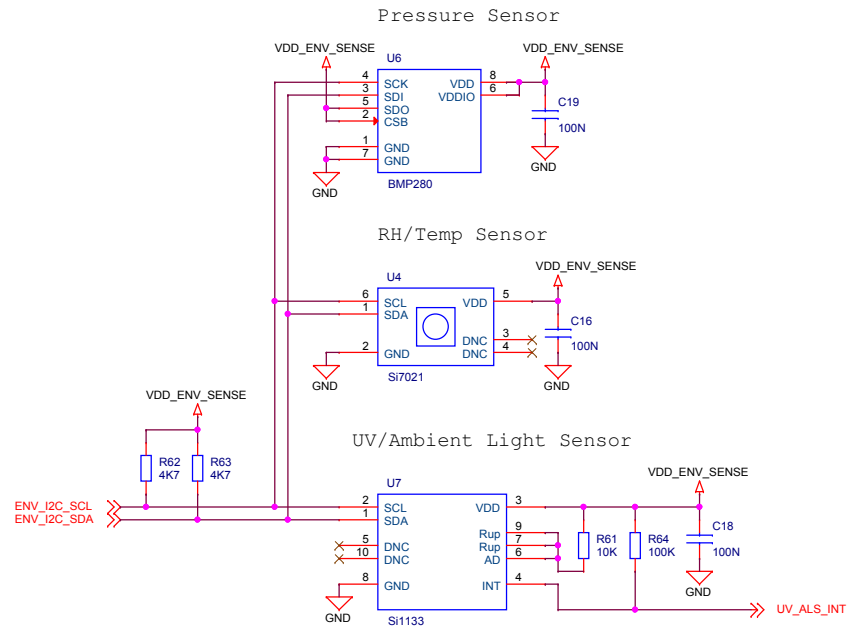
RGB LED power supply



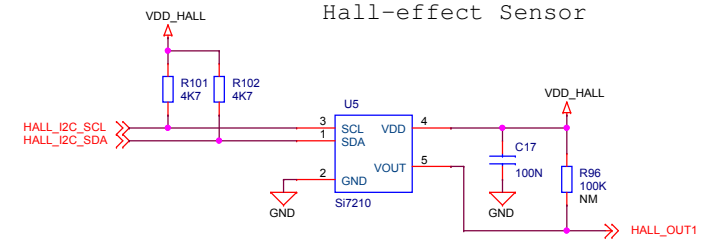
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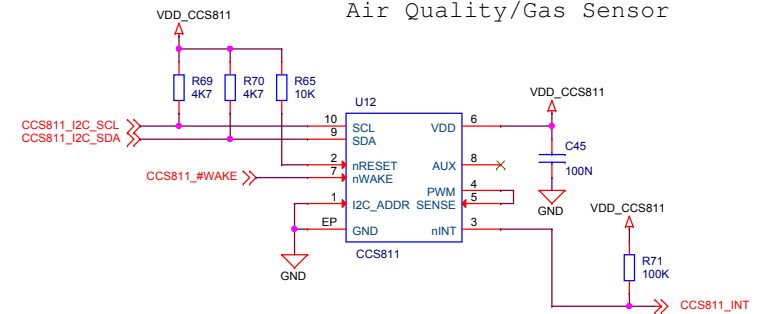
Environmental Sensors



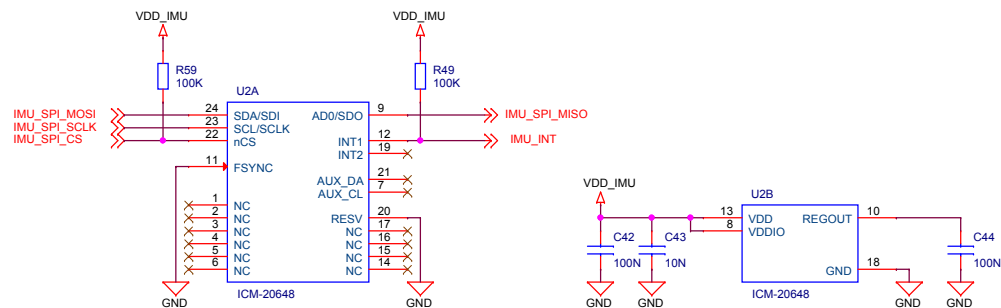
Hall-effect Sensor



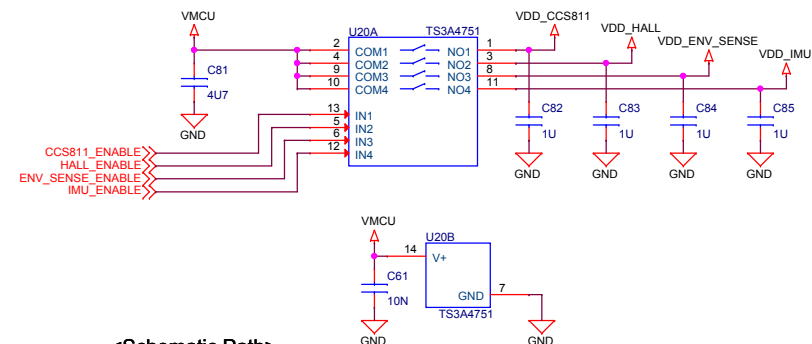
Air Quality/Gas Sensor



6-axis inertial sensor



Sensor Power Control



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I2C & SPI Sensors

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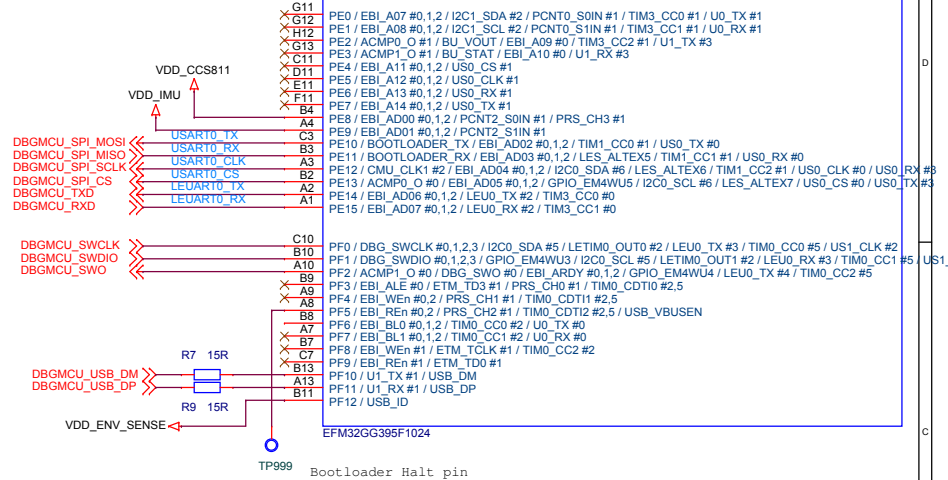
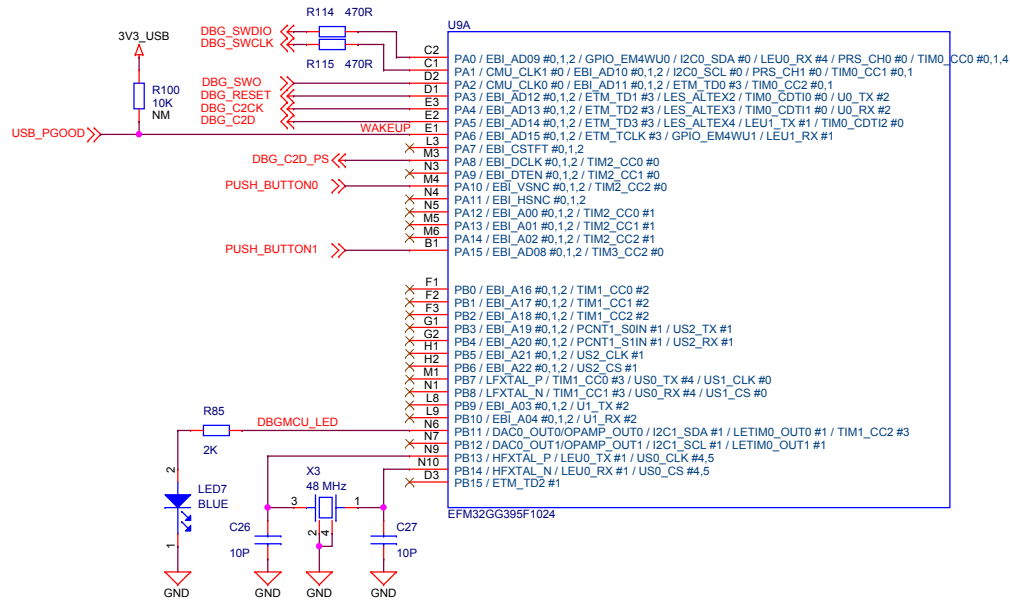
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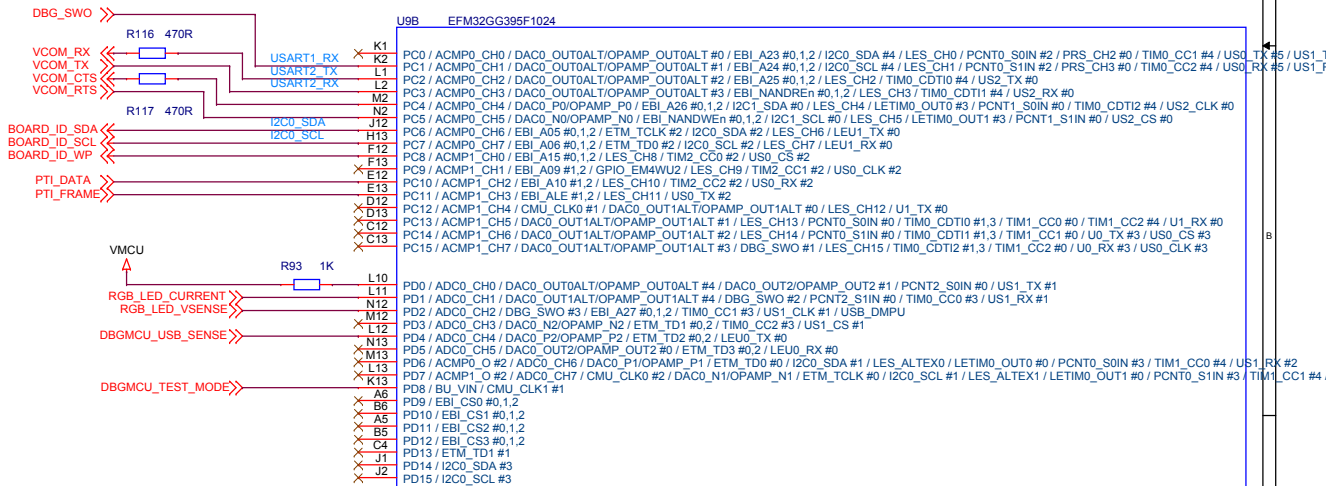
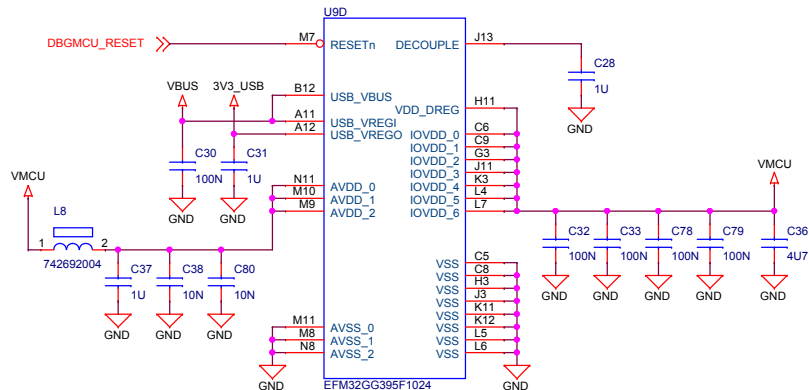
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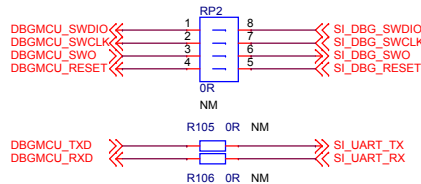
Debug MCU Connections



Debug MCU Decoupling



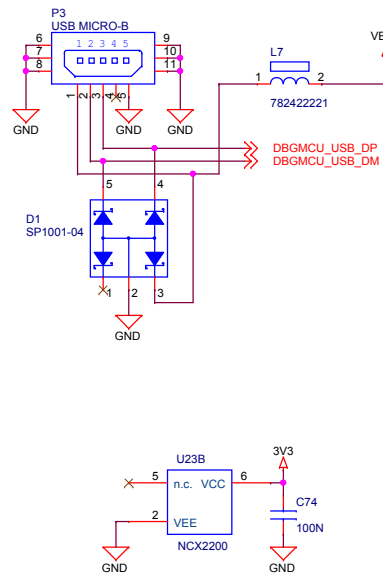
Debug MCU Connections to Mini Simplicity Header



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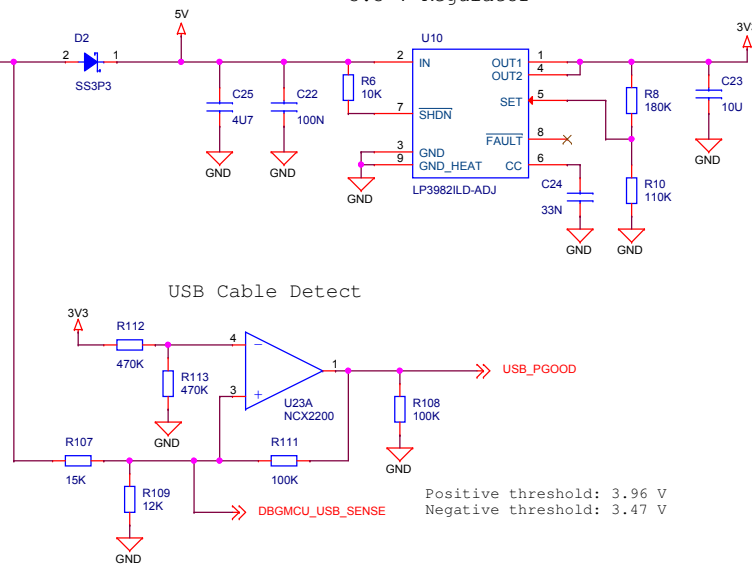
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USB Connector

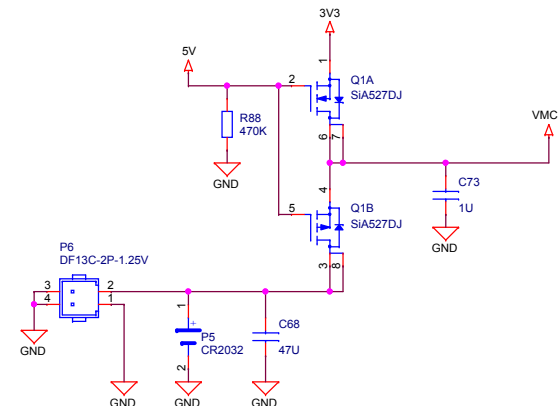


User can supply 3.6 - 5.5 on "5V" pin instead of using the USB cable

3.3 V Regulator



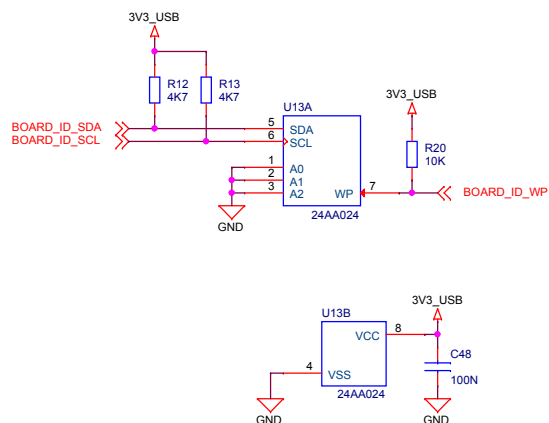
Board power select circuit



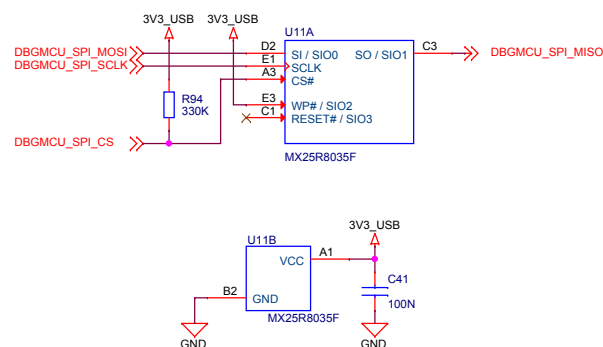
Q1 switches from battery power to USB when USB is plugged in.

Additionally, the Mini Simplicity Debug connector can supply power directly to the target voltage domain.

Board ID EEPROM

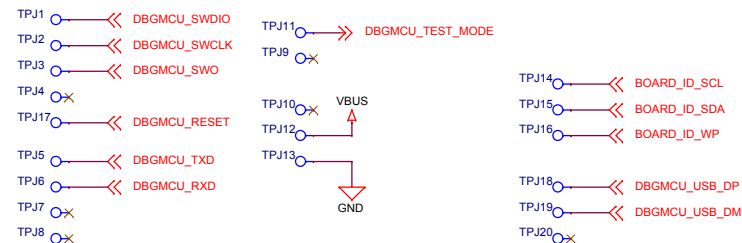


SPI Flash



Note: The SPI flash is only available to the debug mcu when the USB cable is plugged in!

Test Points



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