

Thunderboard Sense	
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Debug Misc. & Power	7

The Silicon Labs logo features a stylized red 'S' composed of two curved, flame-like shapes. Below the logo, the text 'SILICON LABS' is written in a bold, black, sans-serif font.

A small photograph of a green printed circuit board (PCB) with various electronic components. The label 'PCB4166' is printed in blue text below the image.

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.

SCHEMATIC1

		Schematic Title	
SILICON LABS		Thunderboard Sense	
Page Title		Title Page	
Designed: DDB		Approved: JNO	
Size: A3		BOM Doc No: <Cage Code>	
Design Created Date: Wednesday, November 30, 2016		Document number: BRD4166A	
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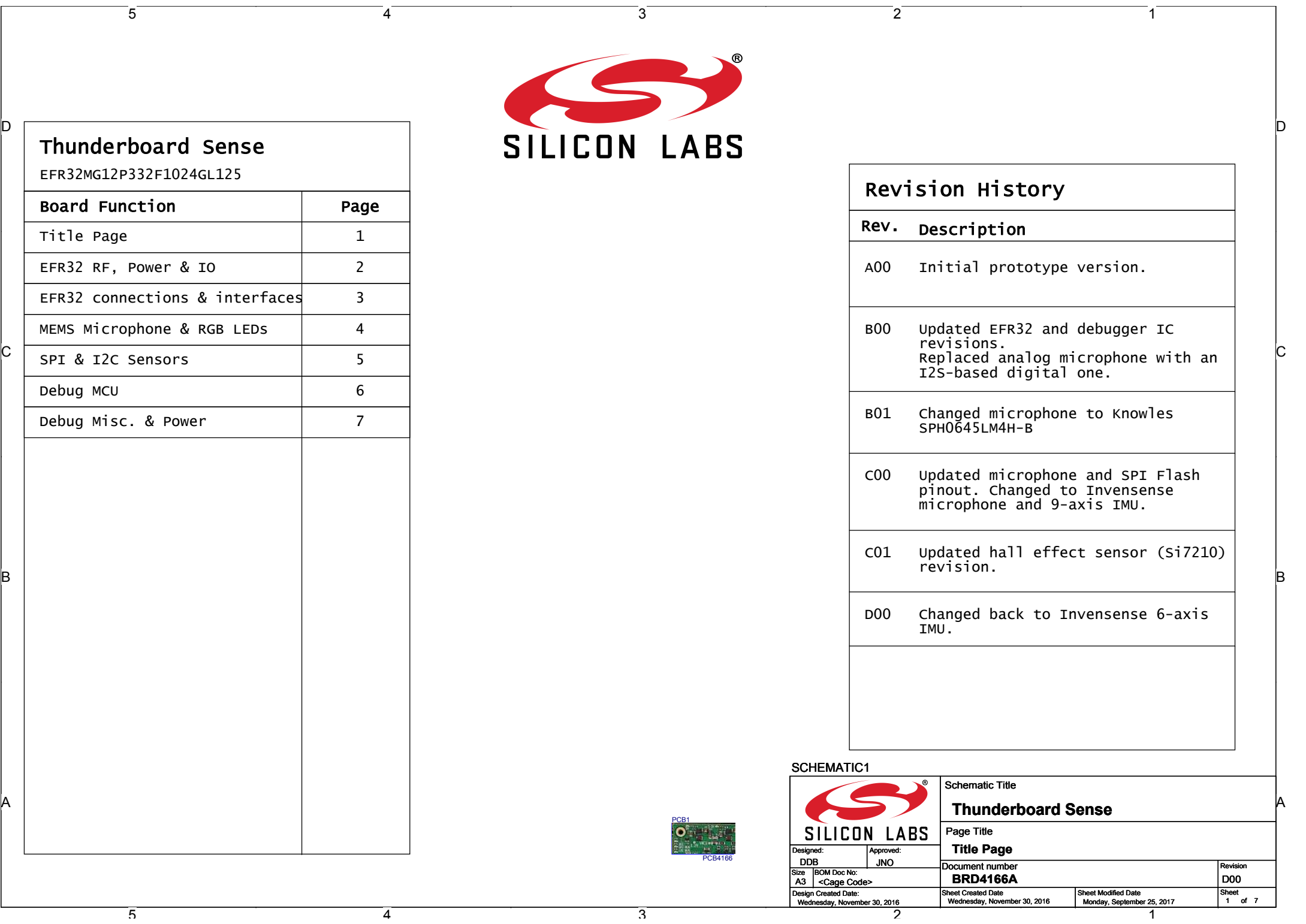
The Silicon Labs logo features a stylized red 'S' icon above the text 'SILICON LABS' in a bold, black, sans-serif font.

A small image of a green printed circuit board (PCB) with various electronic components, labeled 'PCB4166'.

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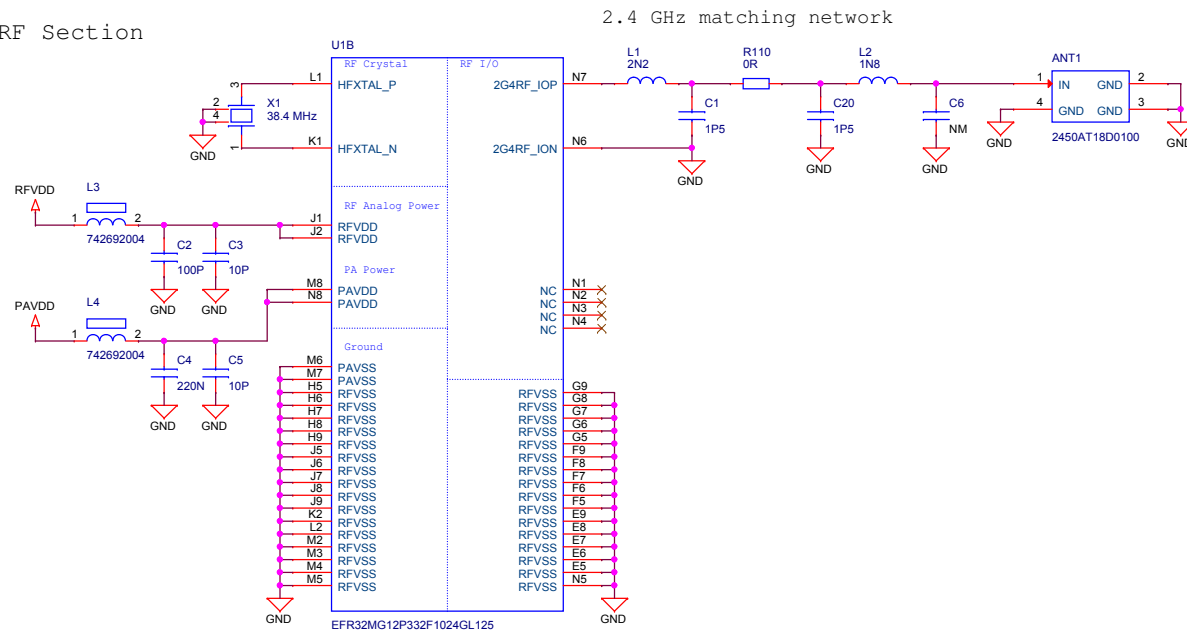
A small image of a green printed circuit board (PCB) with various components, labeled 'PCB4166'.

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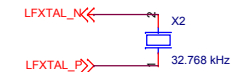
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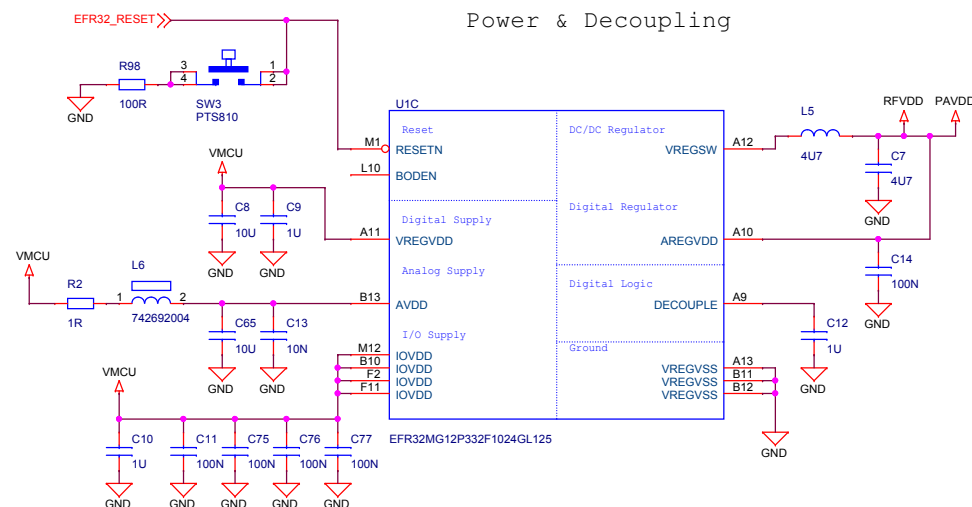
Mounting Holes




Low Frequency Crystal

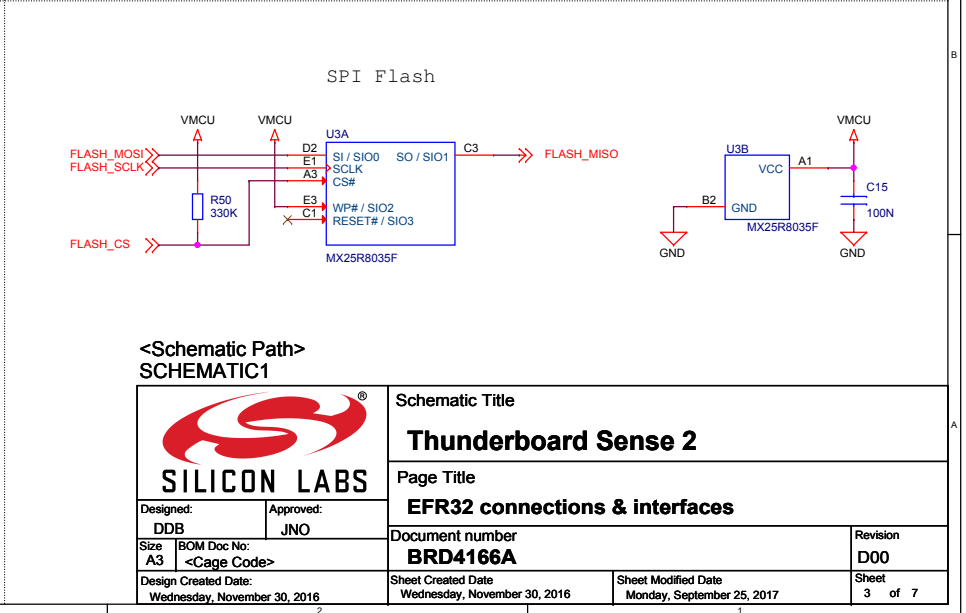
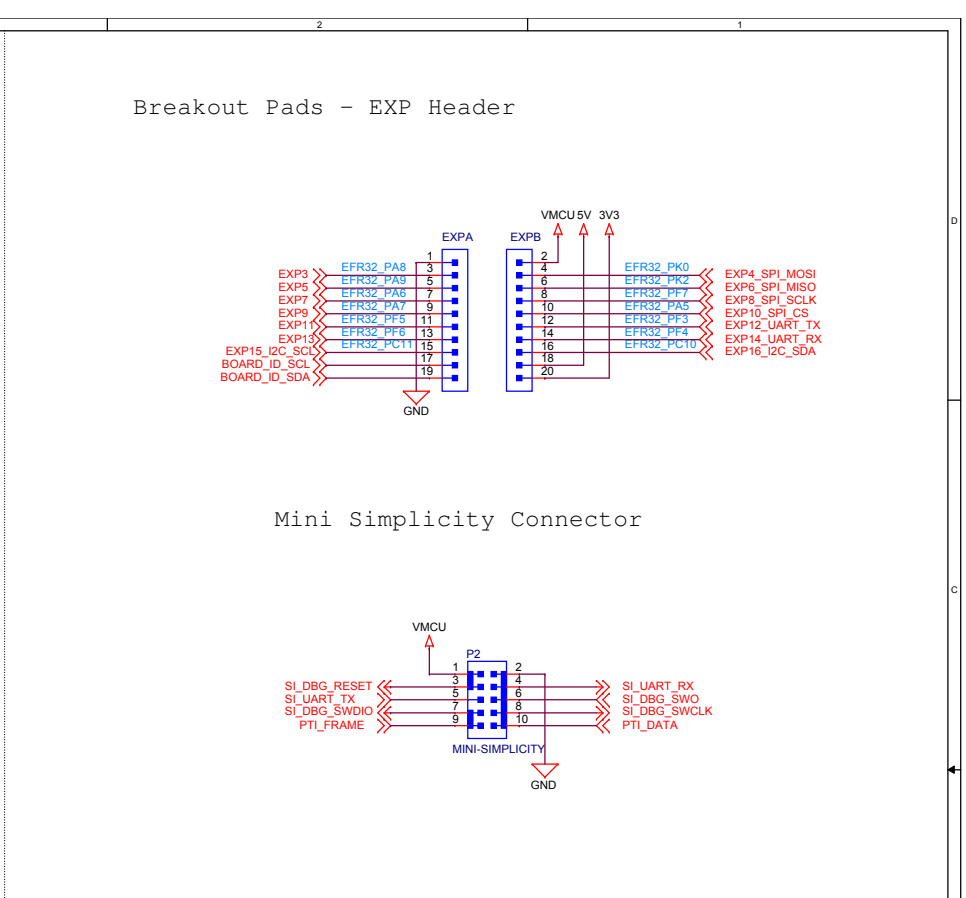
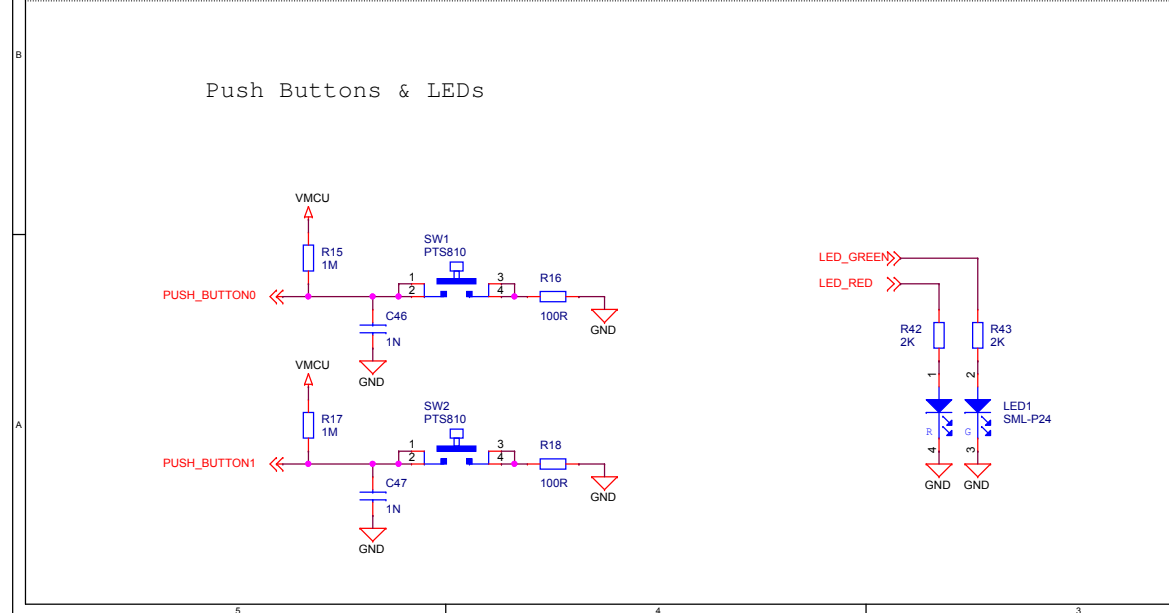
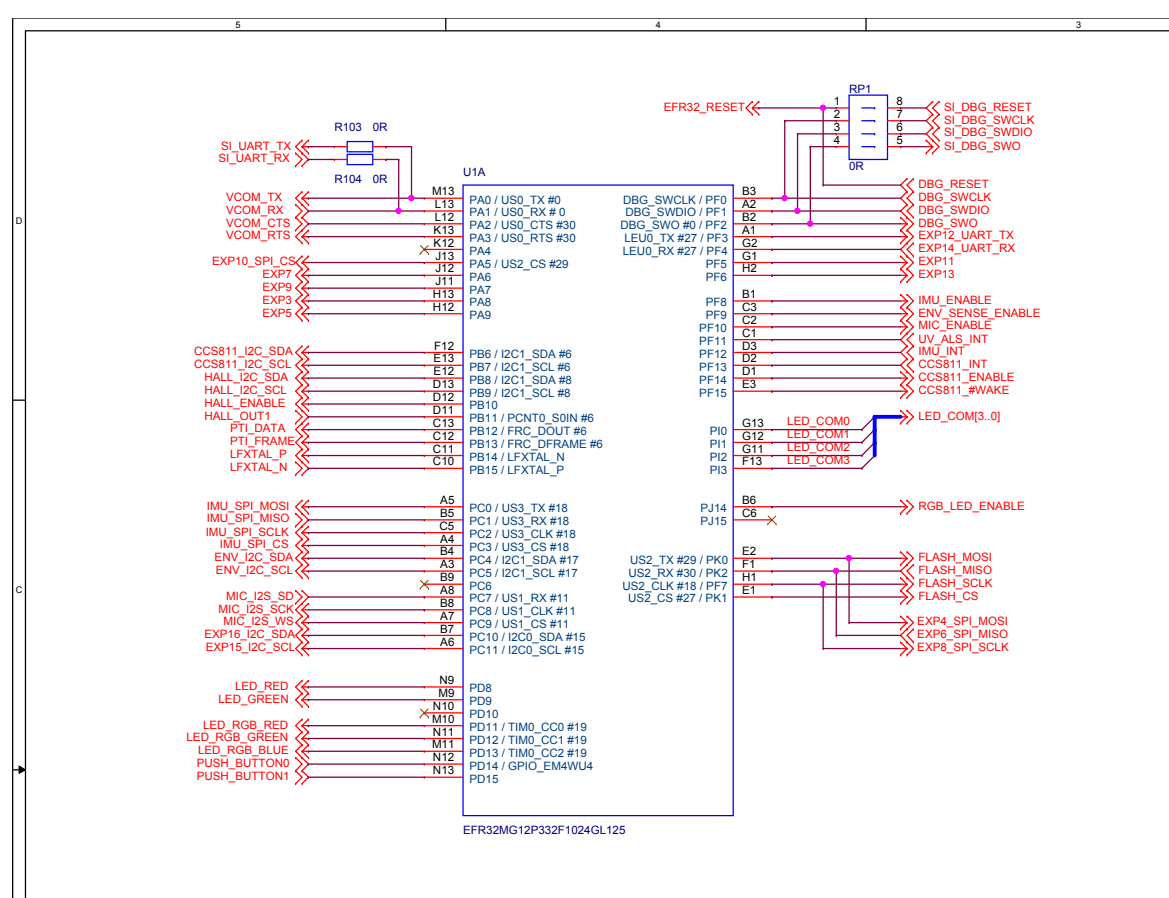


Reset button

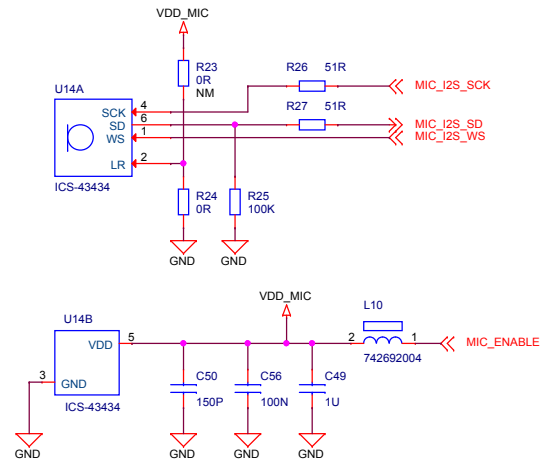


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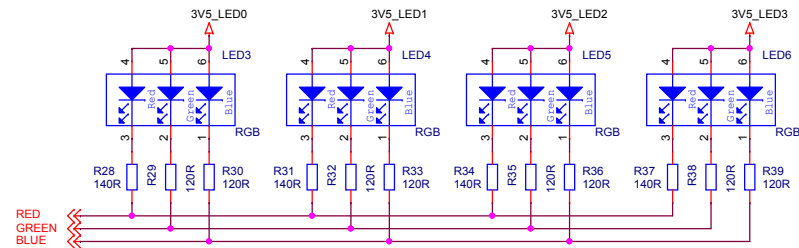
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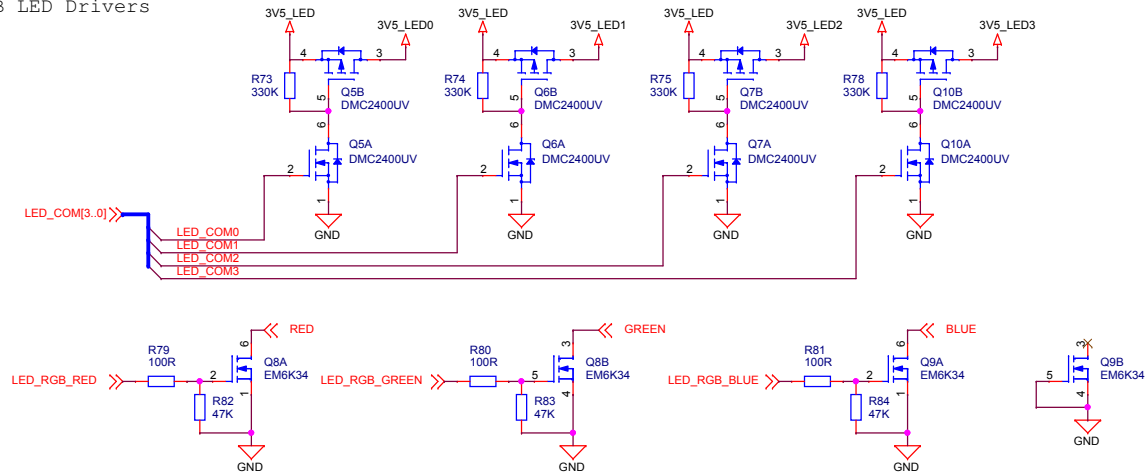
MEMS Microphone



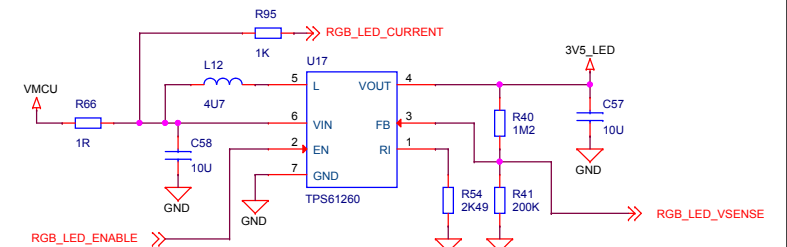
RGB LEDs




RGB LED Drivers



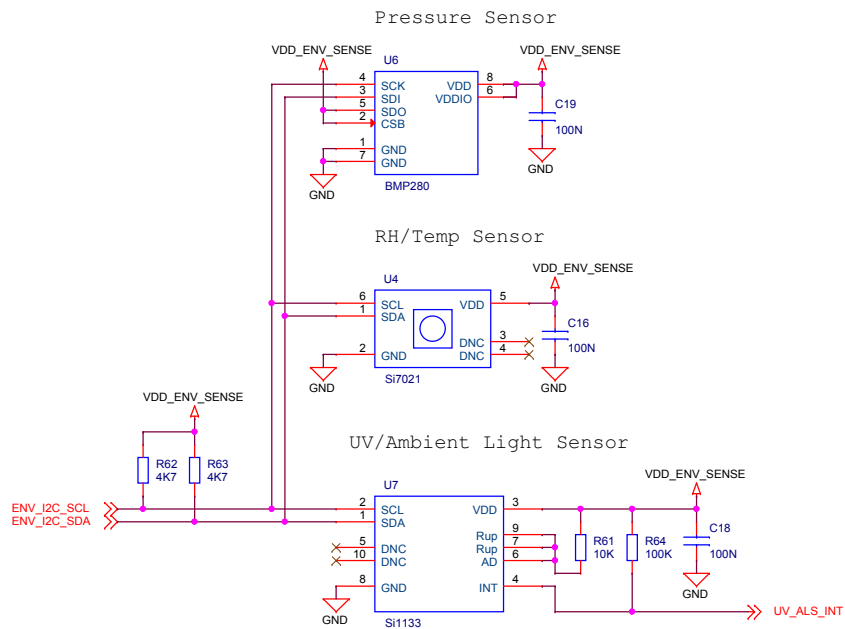
RGB LED power supply



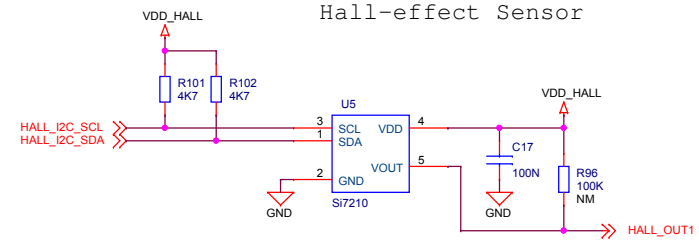
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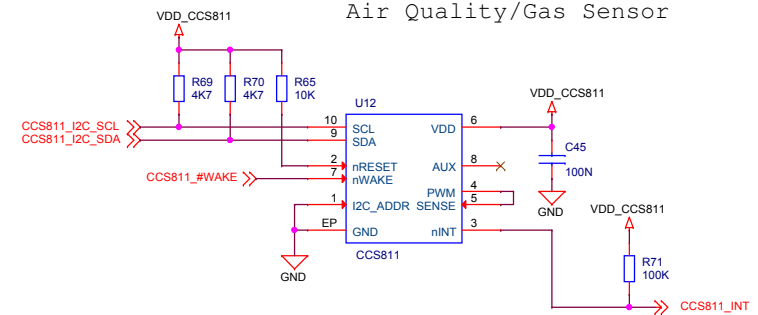
Environmental Sensors



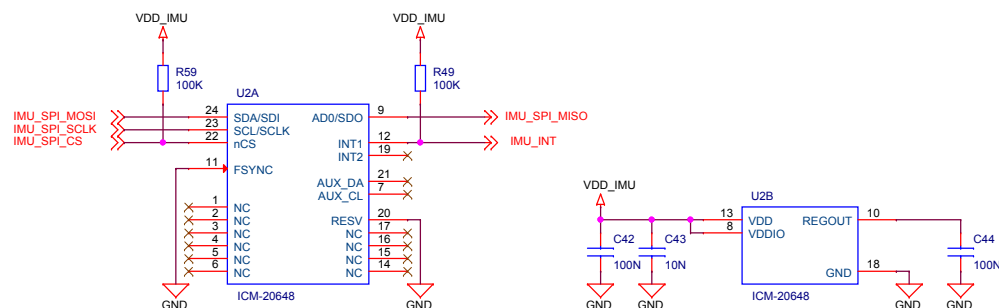
Hall-effect Sensor



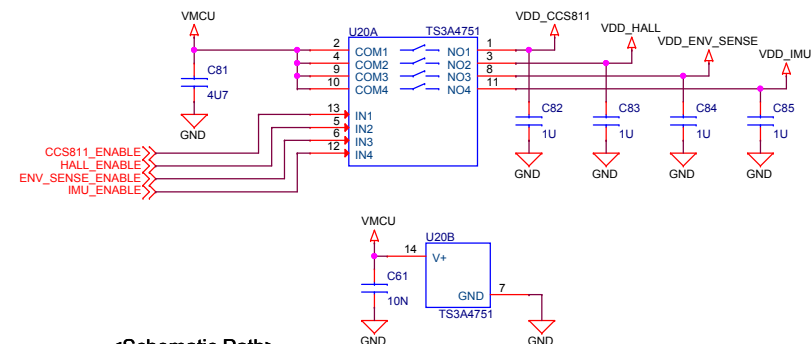
Air Quality/Gas Sensor




6-axis inertial sensor



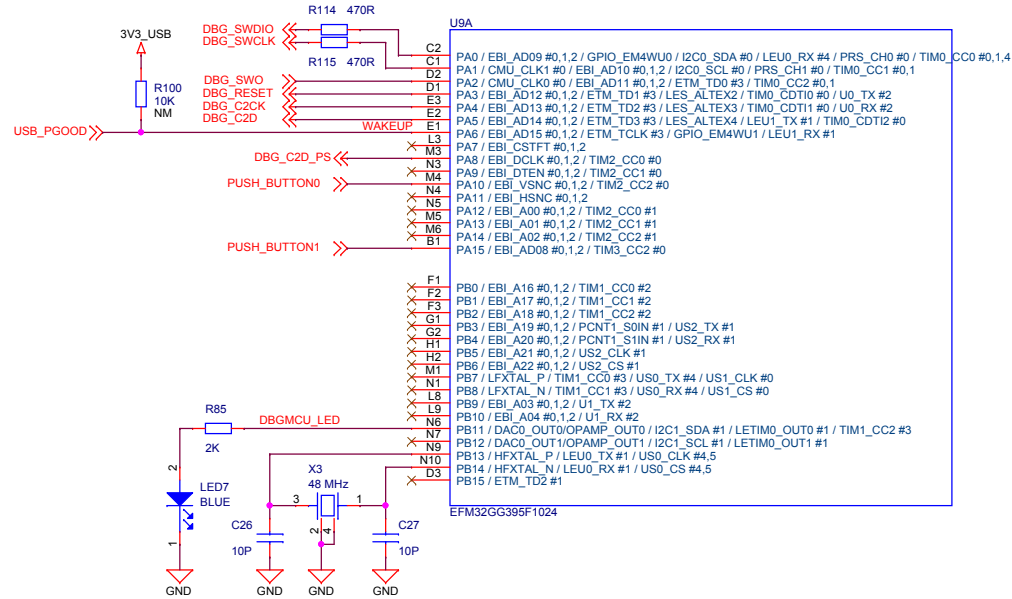
Sensor Power Control



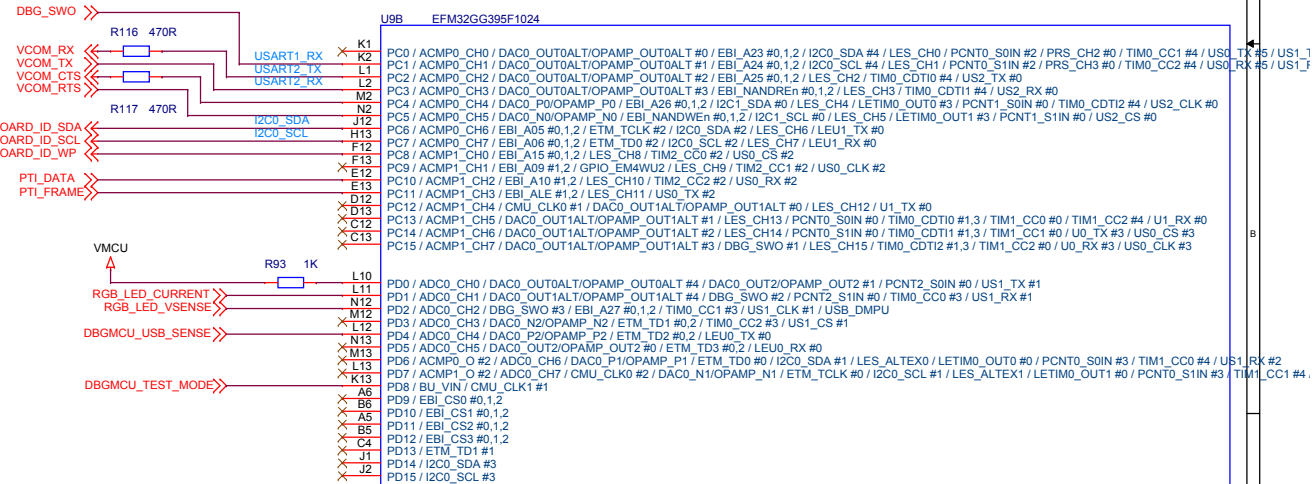
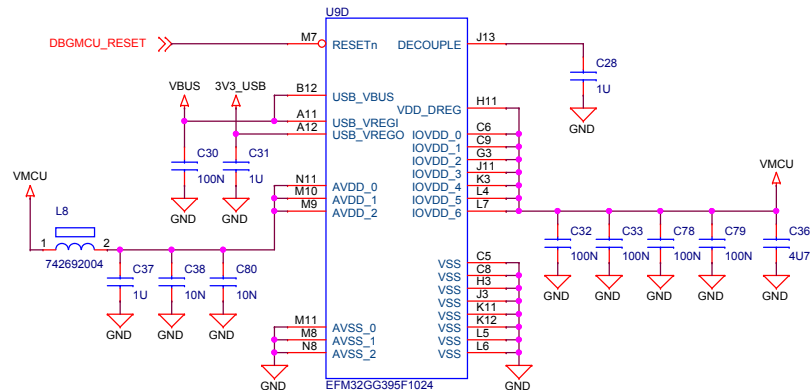
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SCHEMATIC1

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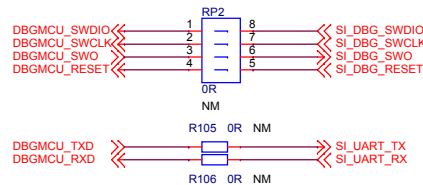
Debug MCU Connections




Debug MCU Decoupling

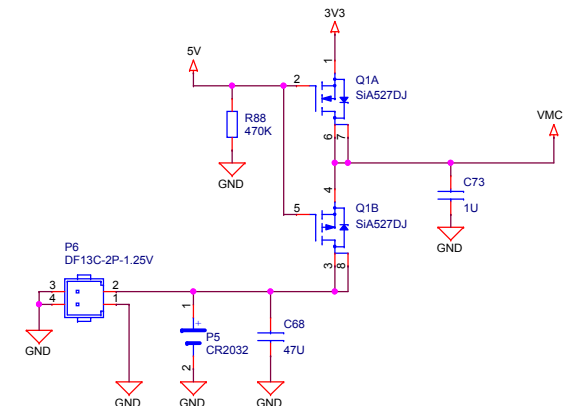
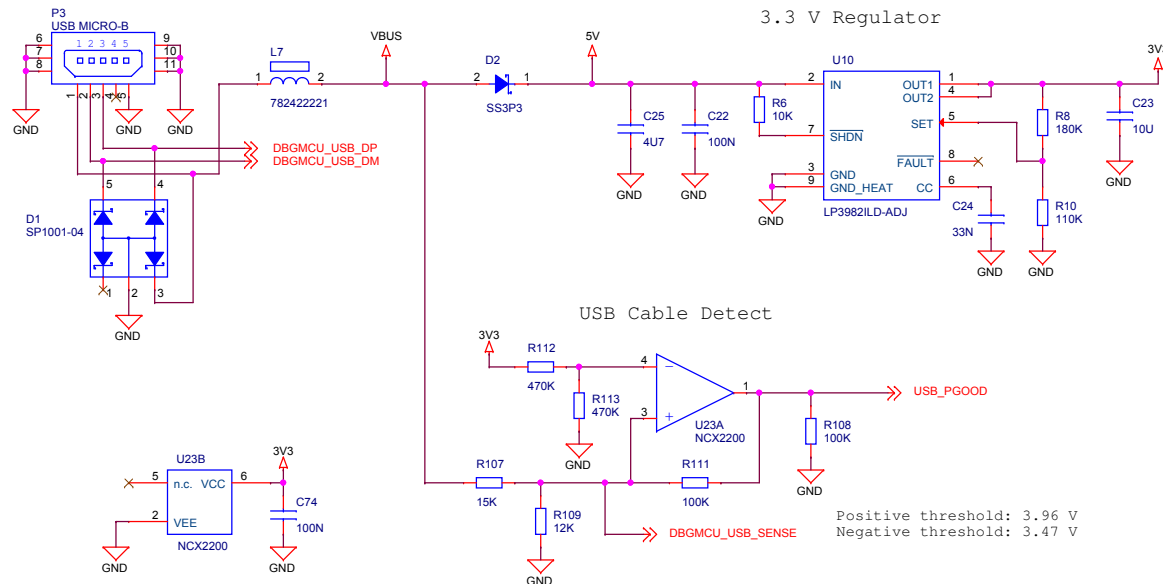


Debug MCU Connections to Mini Simplicity Header

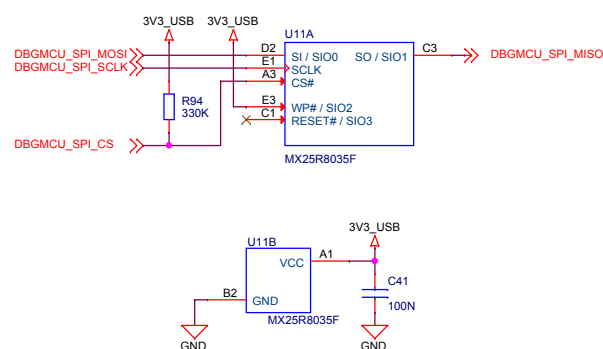
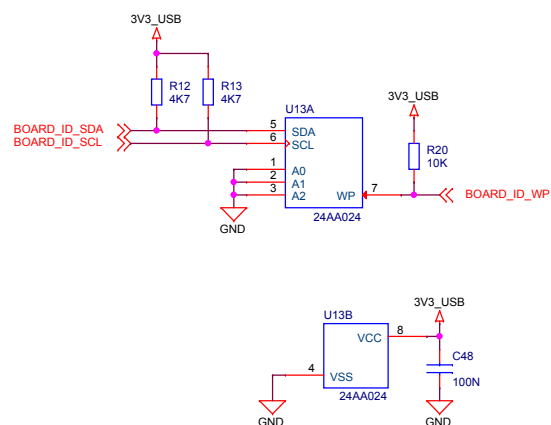


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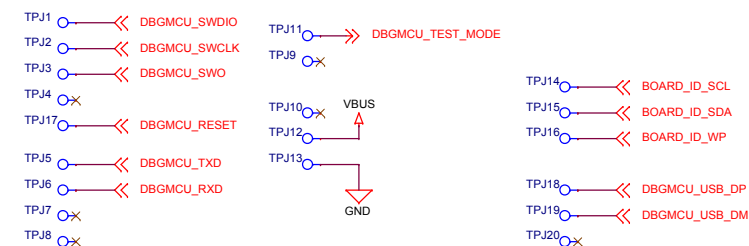
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Designed: DDB		Page Title	
Size A3		Debug MCU	
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Additionally, the Mini Simplicity Debug connector can supply power directly to the target voltage domain.



Test Points



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