EFR32 Mighty Gecko Sensor Node

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Revision History

Rev.	Description
A00	Initial prototypes.
A01	Major update - LED drivers, power topology, component values updated.
A02	Changed buttons, updated component values, removed power switch and added reset button. Changed from BMP180 to BMP280. Changed from MPU-9250 to ICM-20648 Adjusted microphone gain.
B00	Removed the Hall effect sensor
B01	Fixed PCB error that causes the coin cell to short circuit in some cases. Added silk screen text above SW1 and SW2

SCHEMATIC1

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Size: A3	BOM Doc No: <Cage Code>	Document number: BRD4160A	Revision: B01
Design Created Date: Monday, April 02, 2012		Sheet Created Date: Monday, April 02, 2012	Sheet Modified Date: Wednesday, August 24, 2016
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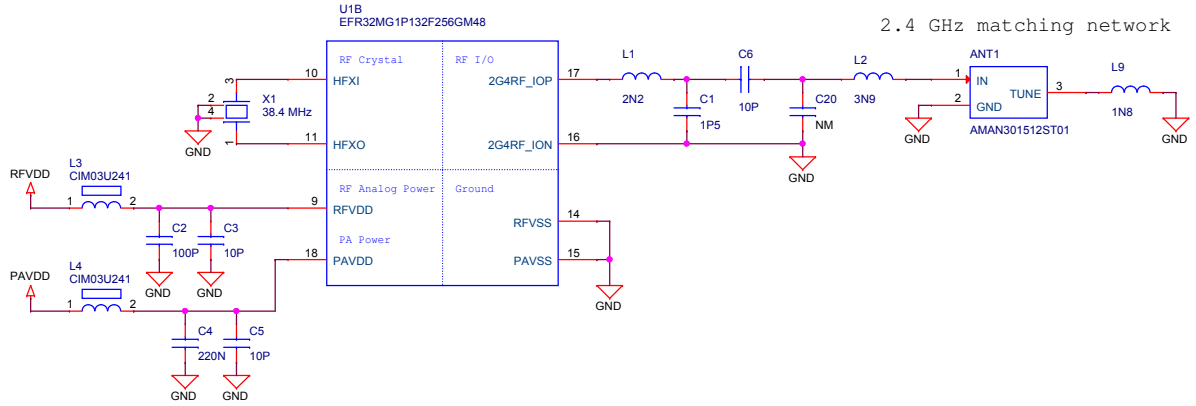
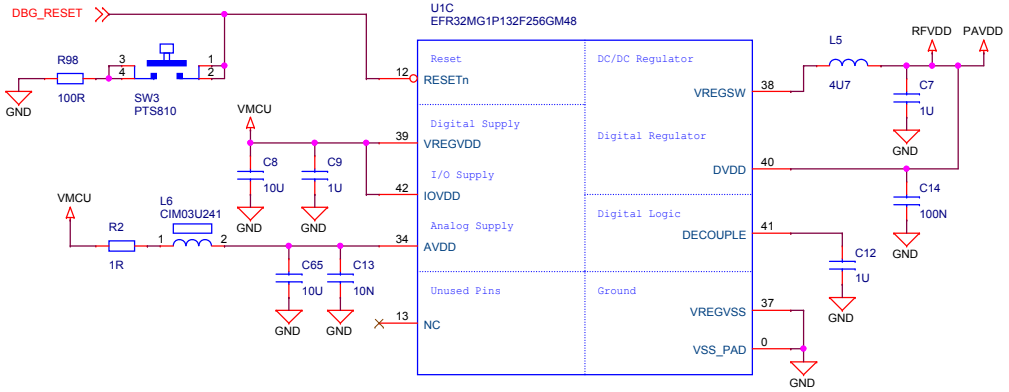
RF Section



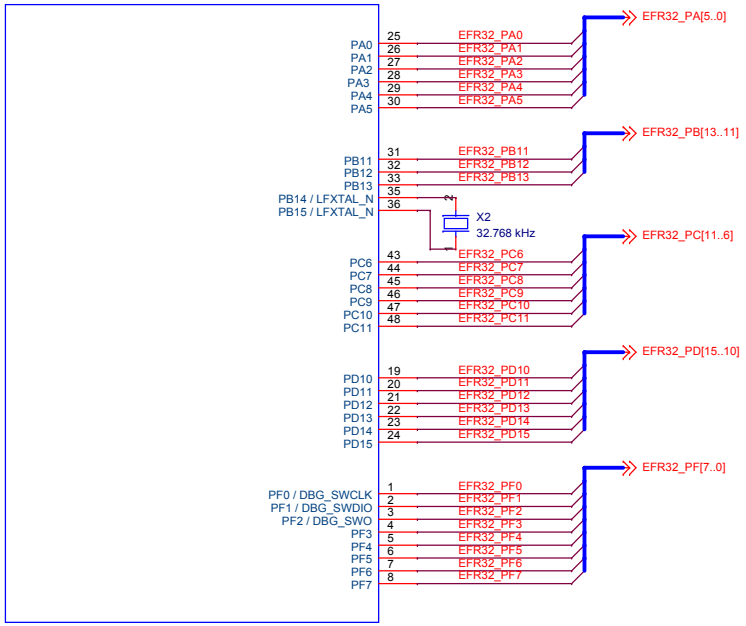
2.4 GHz matching network

Reset button

Power & Decoupling



U1A



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EFR32 Mighty Gecko Sensor Node

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EFR32 - RF, power & IO

Document number: BRD4160A	Revision: B01
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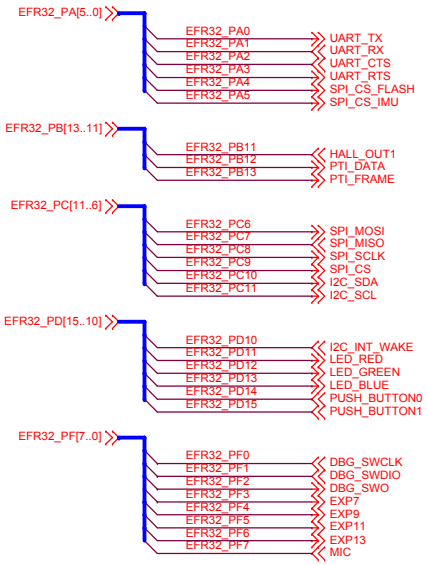
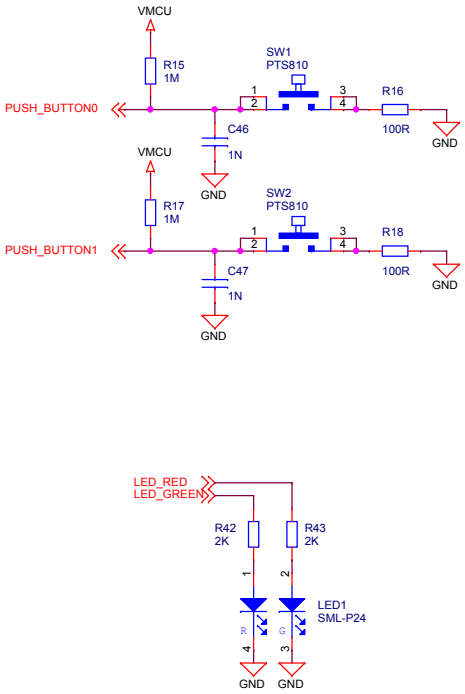
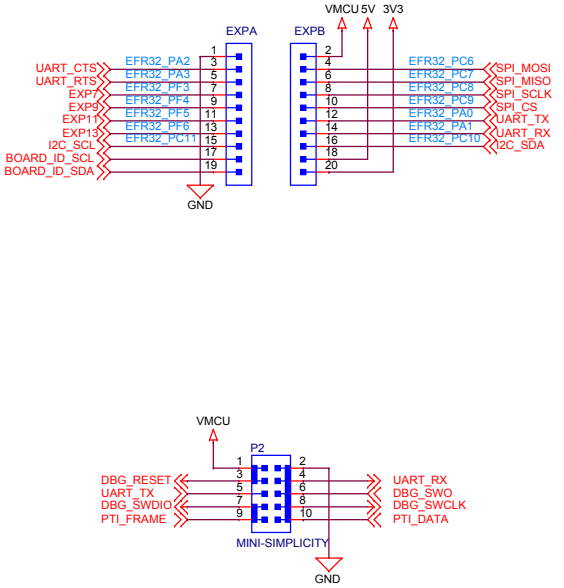
EFR32 I/O Connections



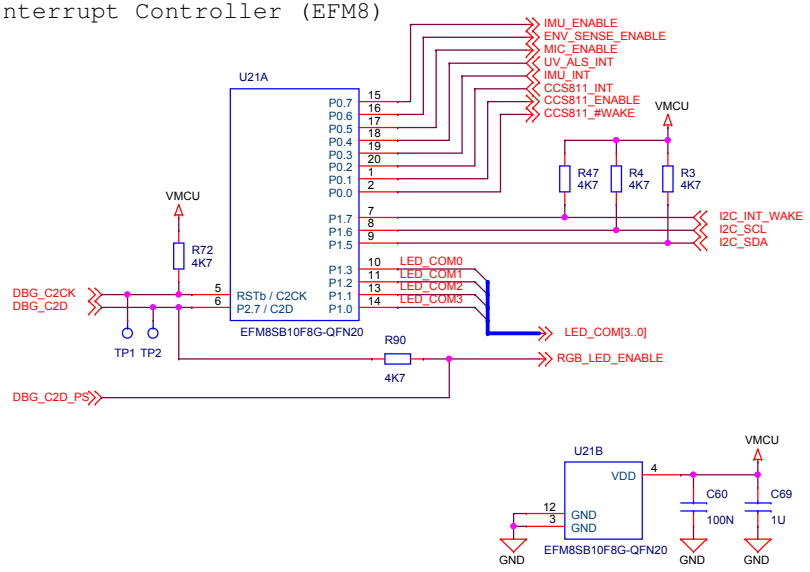
Push Buttons & LEDs



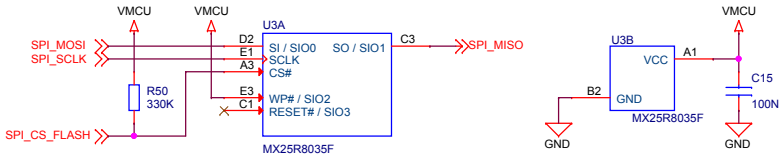
Breakout Pads - EXP Header



Power & Interrupt Controller (EFM8)



SPI Flash



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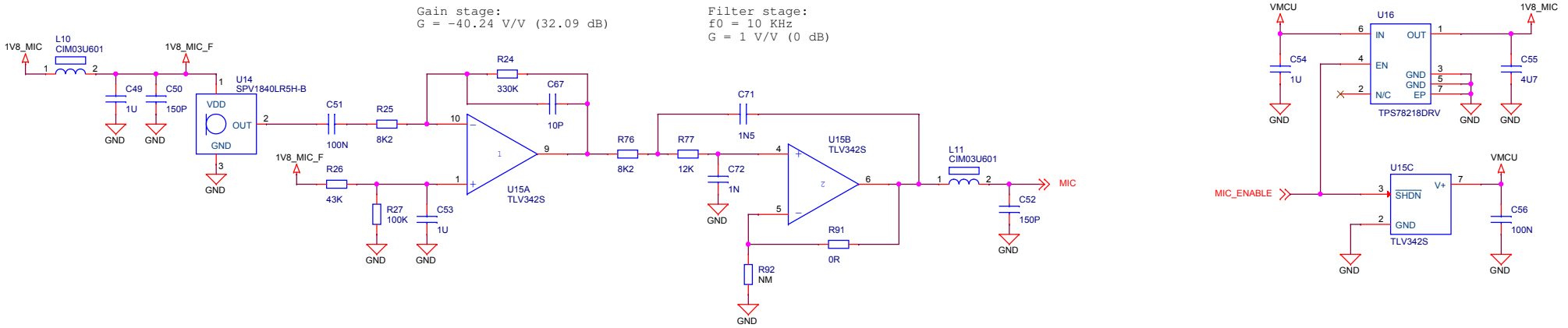
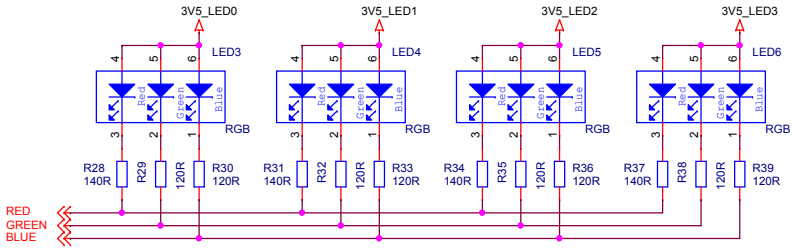
Design Created Date: Monday, April 02, 2012	Sheet Created Date: Wednesday, April 11, 2012 / Sheet Modified Date: Wednesday, August 24, 2016 / Sheet 3 of 7

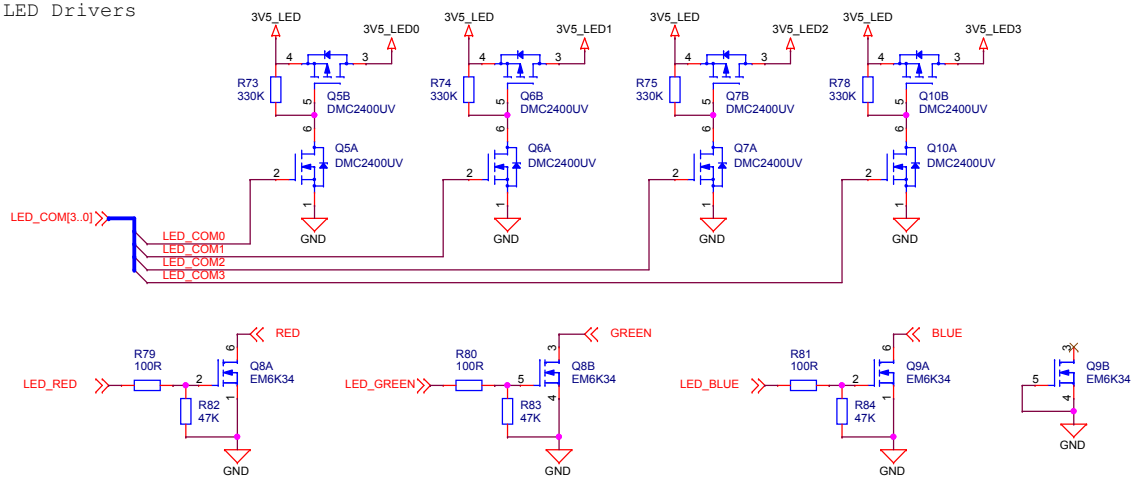
MEMS Microphone



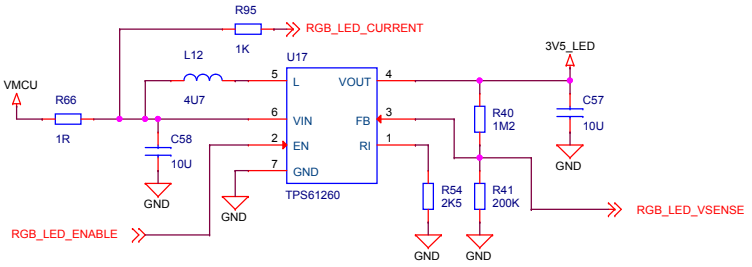
RGB LEDs



RGB LED Drivers



RBG LED power supply



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EFR32 Mighty Gecko Sensor Node

Page Title
MEMS Microphone & RGB LEDs

Document number: **BRD4160A**		Revision: **B01**
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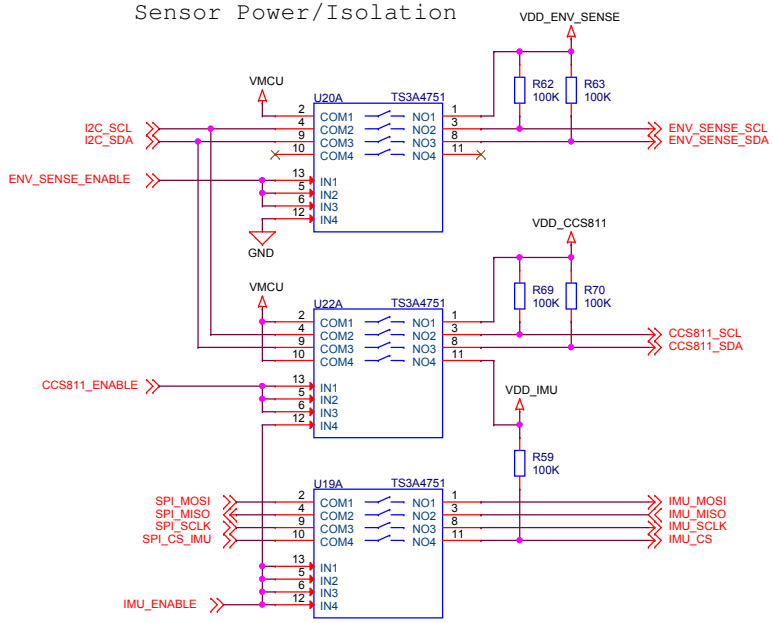
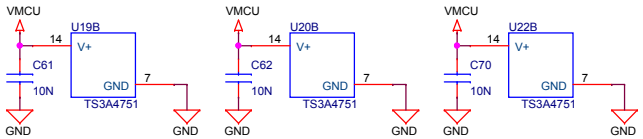
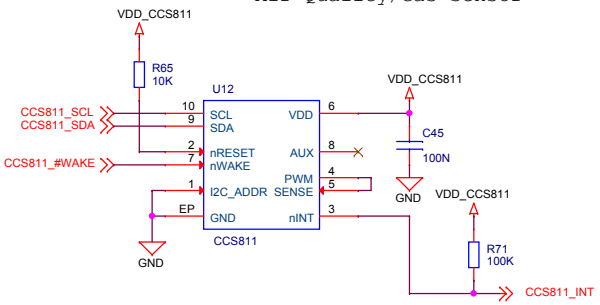
Sensor Power/Isolation



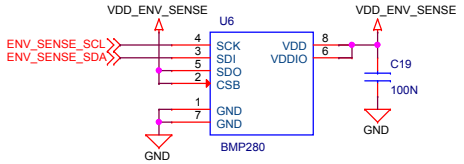


Air Quality/Gas Sensor

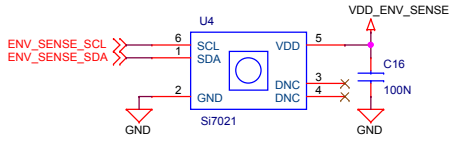


Environmental Sensor Group

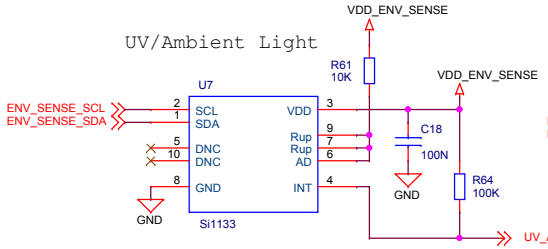
Pressure



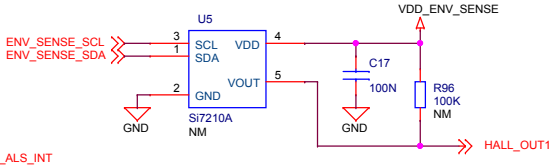
RH/Temp



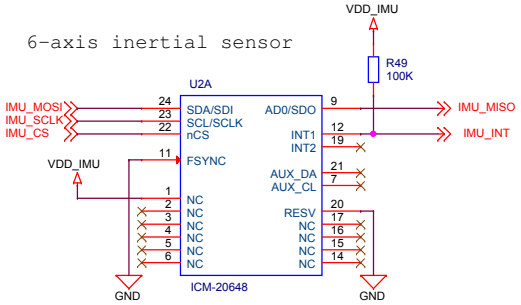
UV/Ambient Light

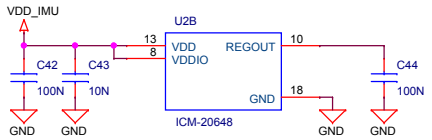


Hall-effect



6-axis inertial sensor





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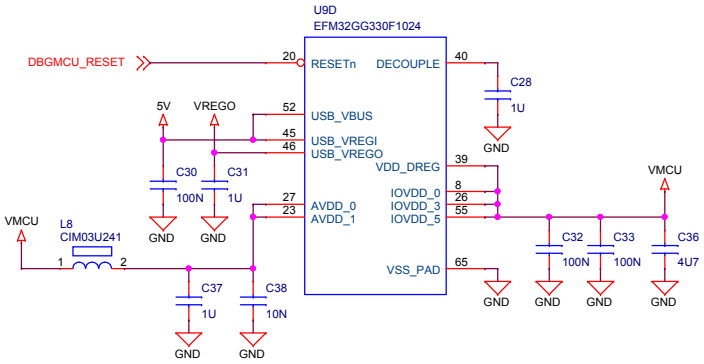
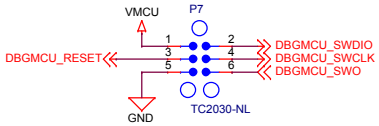
Design Created Date: Monday, April 02, 2012	Sheet Created Date: Wednesday, December 02, 2015 / Sheet Modified Date: Thursday, August 18, 2016 / Sheet: 5 of 7

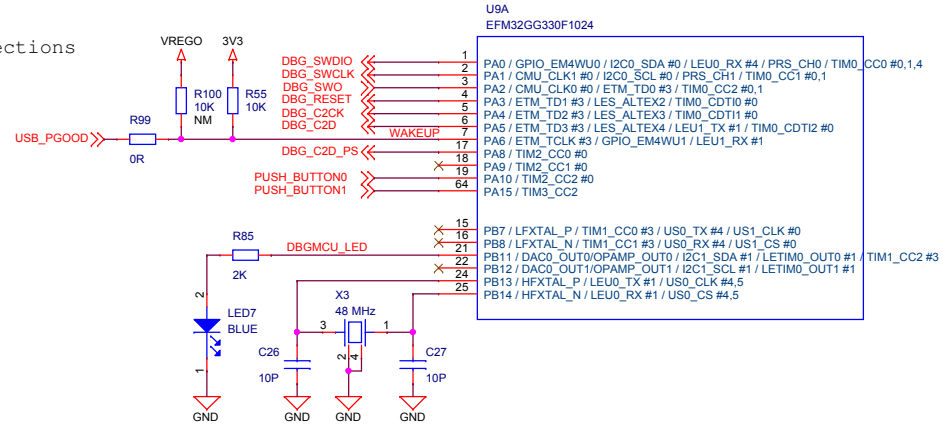
Debug MCU Decoupling

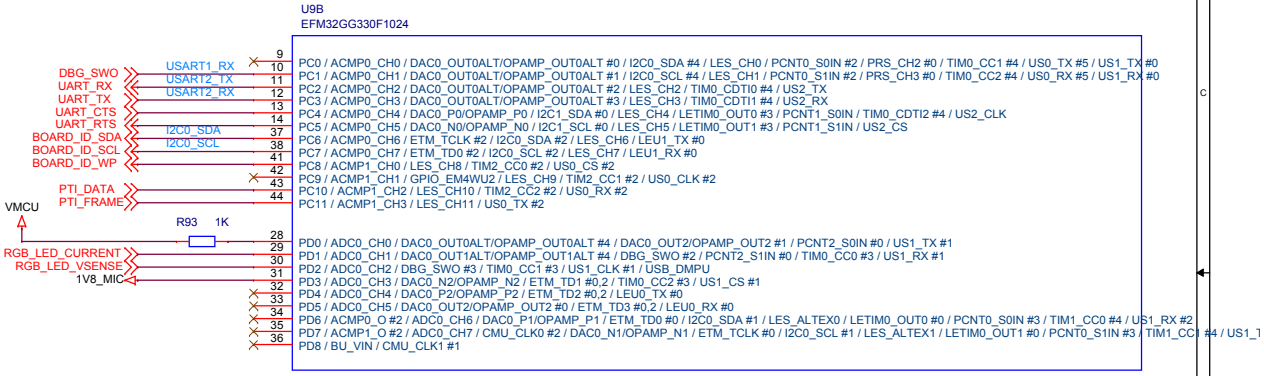


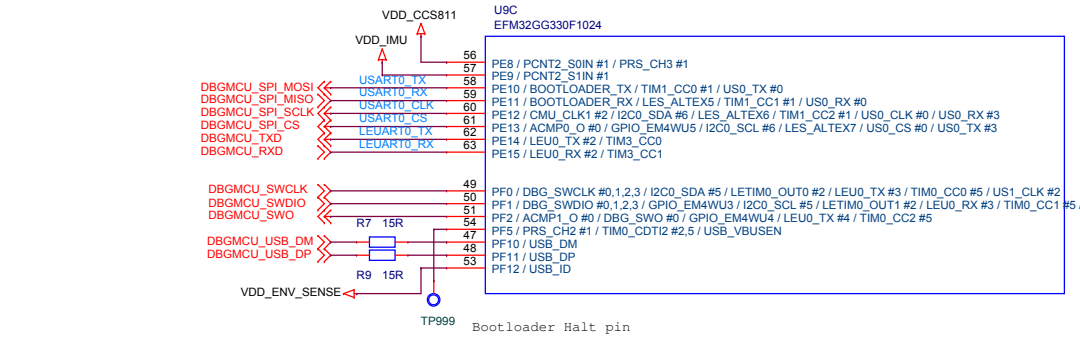
Debug MCU SWD header



Debug MCU Connections







Bootloader Halt pin

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EFR32 Mighty Gecko Sensor Node

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Debug MCU

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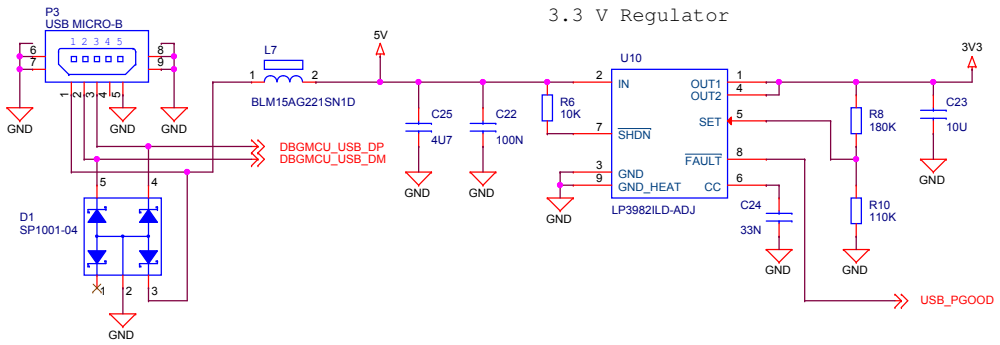
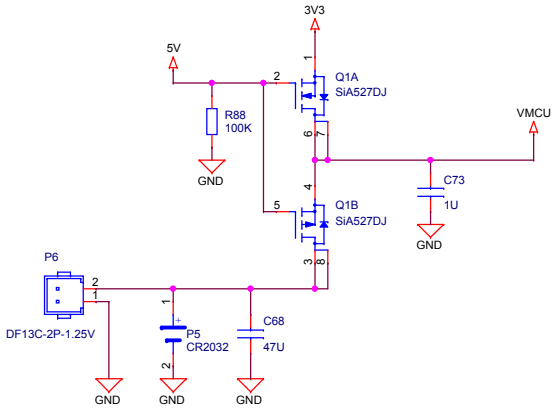
USB Connector



3.3 V Regulator

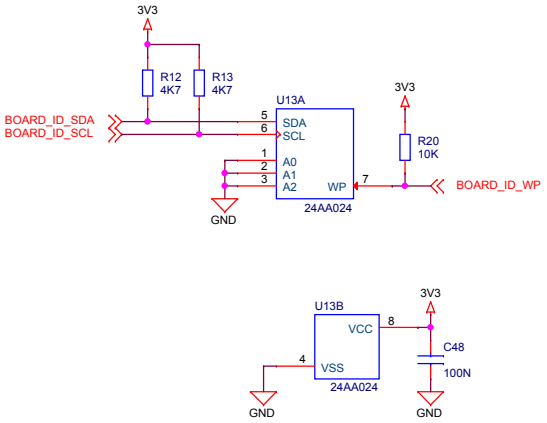
Board power supply circuit



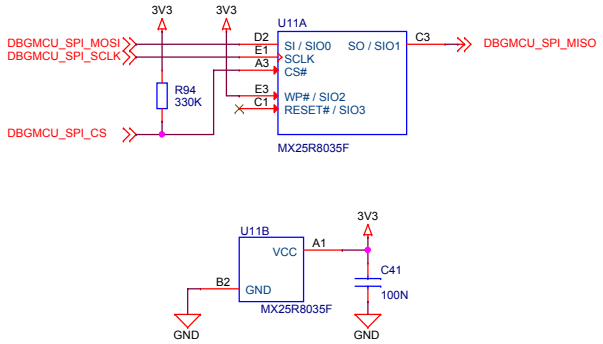
Q1 switches from battery power to USB when USB is plugged in.

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

Board ID EEPROM

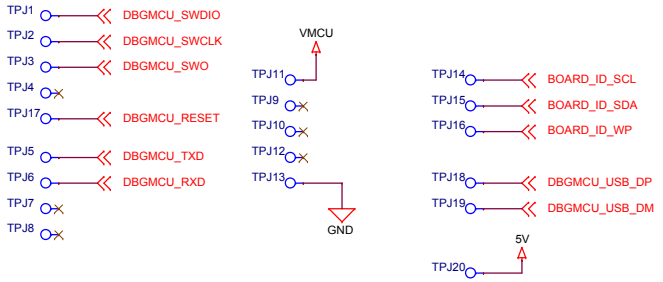


SPI Flash



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

Test Points



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