



ZGM230S Dev Kit

Board Function	Page
Title Page	1
ZGM230S	2
User Interface	3
Sensors & Peripherals	4
On-board Debugger	5
Power & Mini Simplicity	6



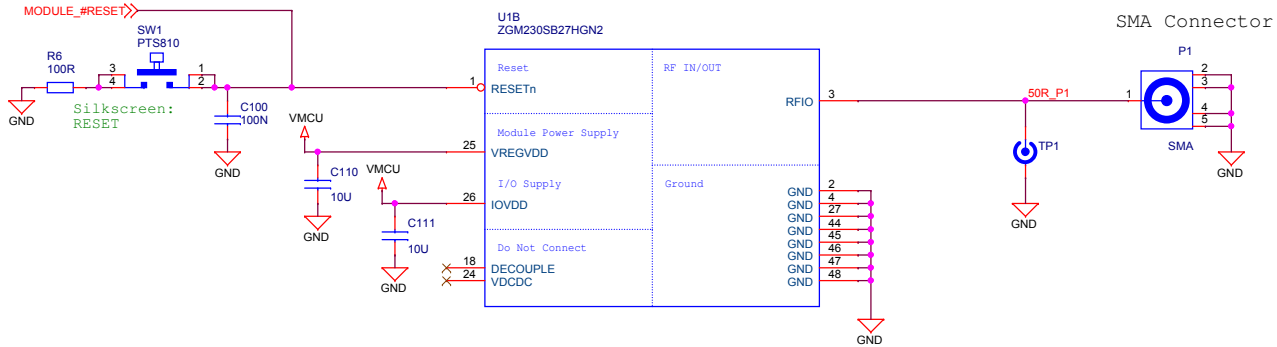
LEGAL NOTICE:
SILICON LABORATORIES INC. ("SILICON LABS") AND/OR ITS LICENSORS DO NOT WARRANT THE ACCURACY OR COMPLETENESS OF THIS SCHEMATIC OR ANY INFORMATION CONTAINED WITHIN THIS SCHEMATIC. IT IS PROVIDED "AS-IS" FOR REFERENCE ONLY. SILICON LABS DOES NOT WARRANT THAT THIS DESIGN WILL MEET THE SPECIFICATIONS, BE SUITABLE FOR YOUR APPLICATION OR FIT FOR ANY PARTICULAR PURPOSE, OR WILL OPERATE IN YOUR IMPLEMENTATION. SILICON LABS AND ITS LICENSORS DO NOT WARRANT THAT THE DESIGN IMPLIED IN THIS SCHEMATIC IS PRODUCTION-WORTHY. YOU SHOULD COMPLETELY VALIDATE AND TEST YOUR DESIGN IMPLEMENTATION TO CONFIRM SYSTEM FUNCTIONALITY FOR YOUR APPLICATION.

Revision History

Rev.	Description
A00	Initial version.

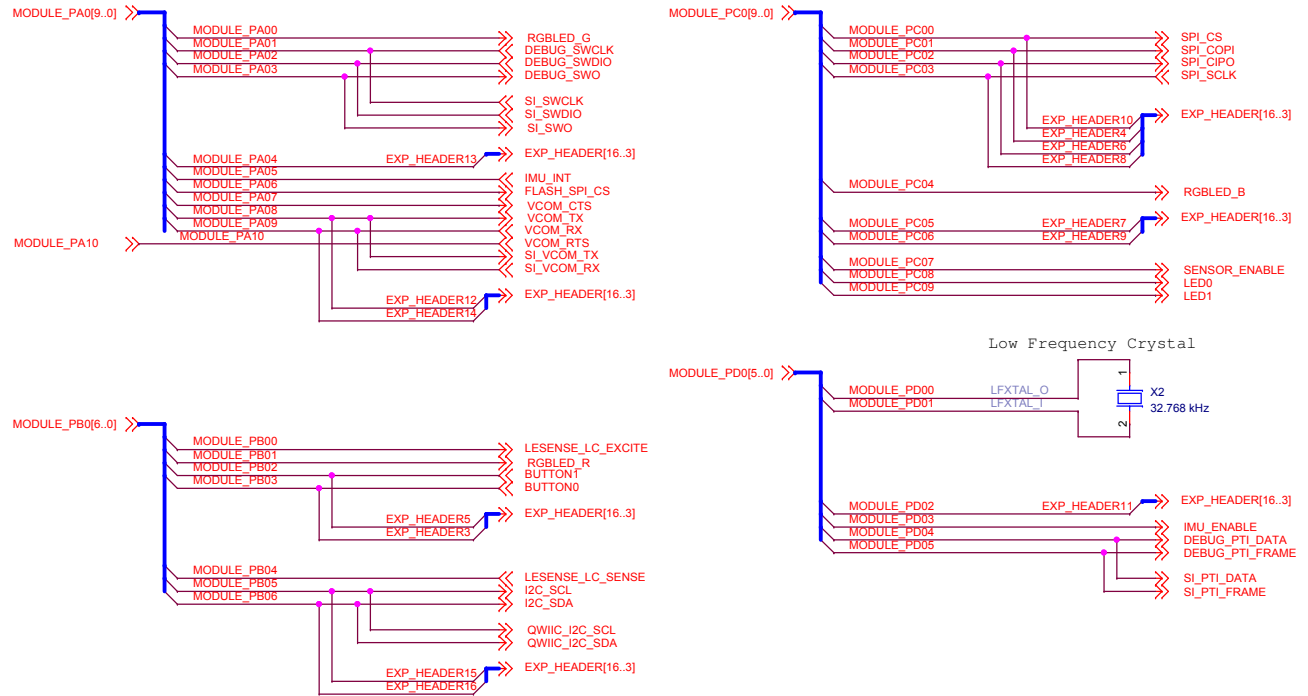
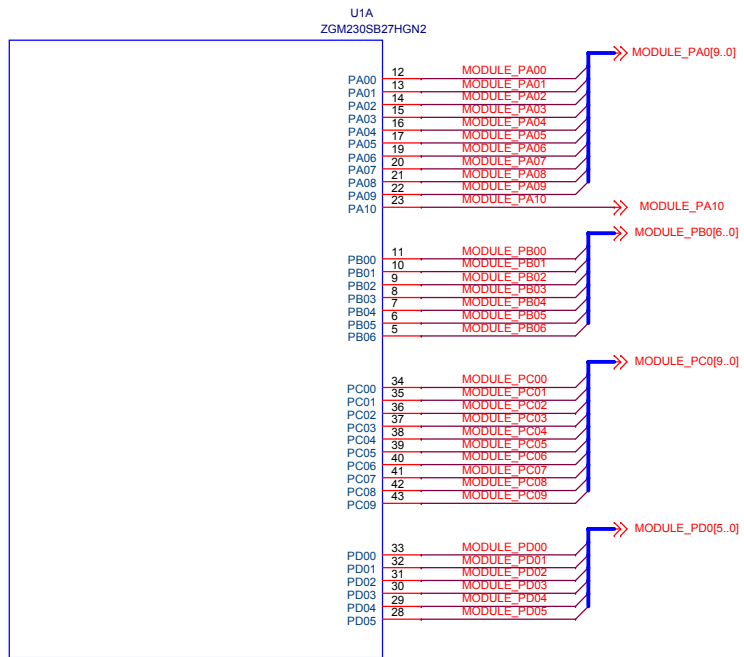
 SILICON LABS		Board Name	
		ZGM230S Dev Kit	
Designed PEP		Page Title	
		Title Page	
Approved RGU		Board Number	Revision
		BRD2603A	A00
Size A3	Sheet Modified Date Wednesday, December 08, 2021	COPYRIGHT SILICON LABORATORIES INC. 2021 CONFIDENTIAL – SUBJECT TO TERMS OF USE	
		Sheet	1 of 6

Power & Antenna & Radio Interface



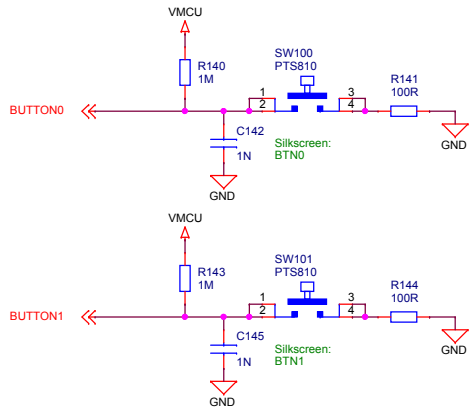
ZGM230S I/O & Signal Assignments

I/O Port Pins

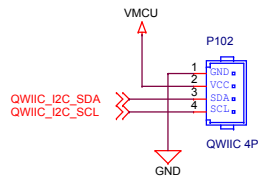


 SILICON LABS		Board Name	
		ZGM230S Dev Kit	
Designed		Approved	
PEP		RGU	
Size	Sheet Modified Date	Board Number	
A3	Friday, February 04, 2022	BRD2603A	
Revision			Sheet
A00			2 of 6

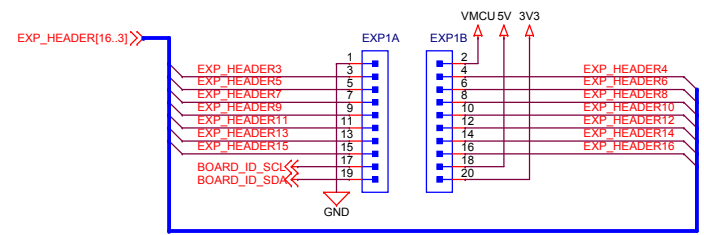
Push Buttons



Qwiic Connector



Breakout Pads - EXP Header

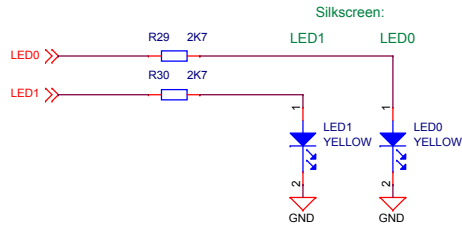
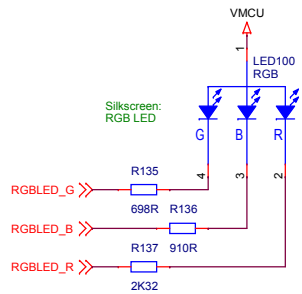


EXP Header Functionality

2	VMCU	
4	PC01	SPI_COPI
6	PC02	SPI_CIP0
8	PC03	SPI_SCK
10	PC00	SPI_CS
12	PA08	UART_TX
14	PA09	UART_RX
16	PB06	I2C_SDA
18	5V	
20	3V3	

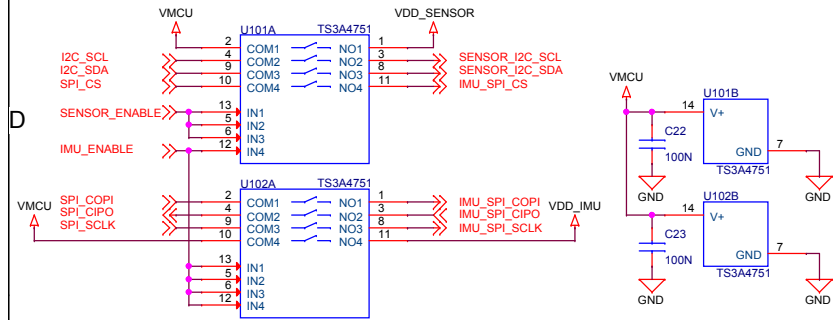
1	GND	
3	PC05	GPIO (BUTTON0)
5	PC06	GPIO (BUTTON1)
7	PB03	GPIO
9	PB02	GPIO
11	PD02	GPIO
13	PA04	GPIO
15	PB05	I2C_SCL
17	Reserved for EXP Board Identification	
19	Reserved for EXP Board Identification	

LEDs



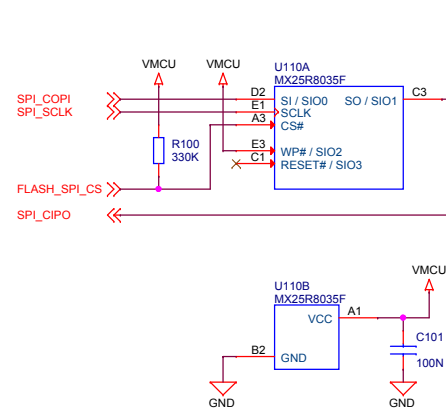
		Board Name	
		ZGM230S Dev Kit	
Designed PEP		Page Title	
		User Interface	
Size	Sheet Modified Date	Board Number	Revision
A3	Wednesday, December 08, 2021	BRD2603A	A00
COPYRIGHT SILICON LABORATORIES INC. 2021 CONFIDENTIAL – SUBJECT TO TERMS OF USE			Sheet 3 of 6

Sensor Power/Isolation

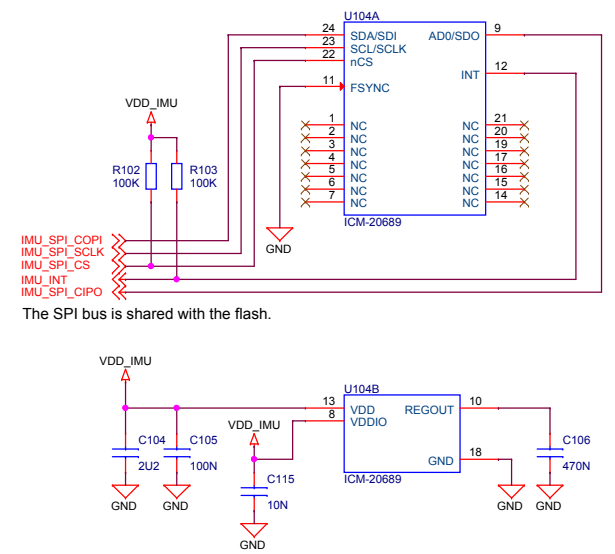


There are no pull-down resistors on the enable pins, and software should therefore immediately drive the lines to prevent the pins from floating.

SPI Flash

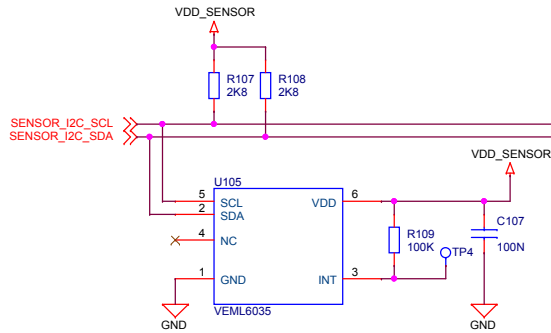


6-axis Inertial Sensor (IMU)

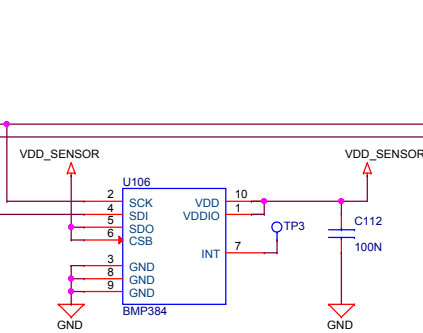


The SPI bus is shared with the flash.

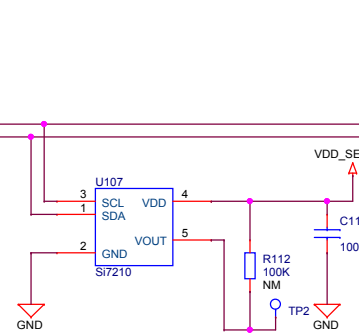
Ambient Light Sensor



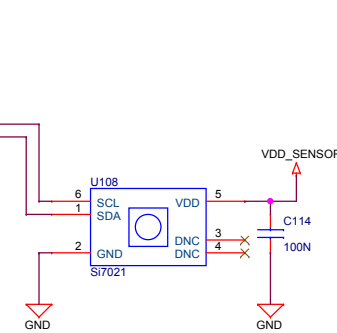
Pressure Sensor



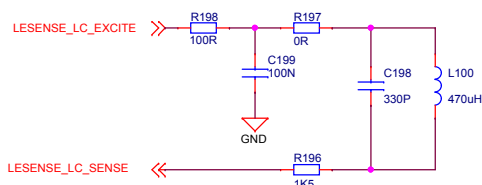
Hall-effect Sensor



RH/Temp Sensor

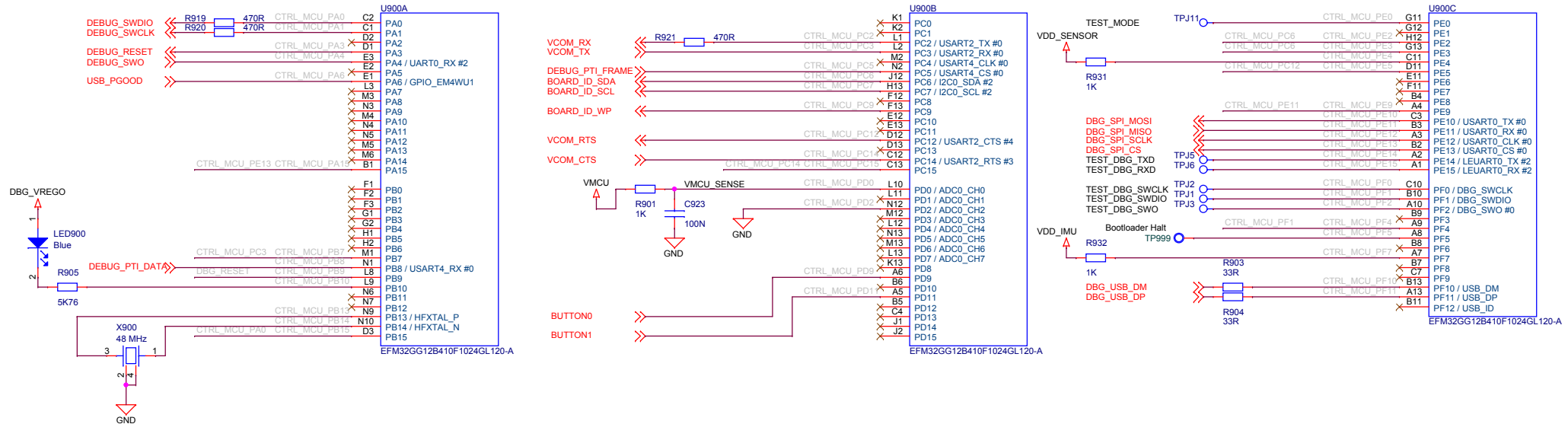


LESENSE LC-Sensor

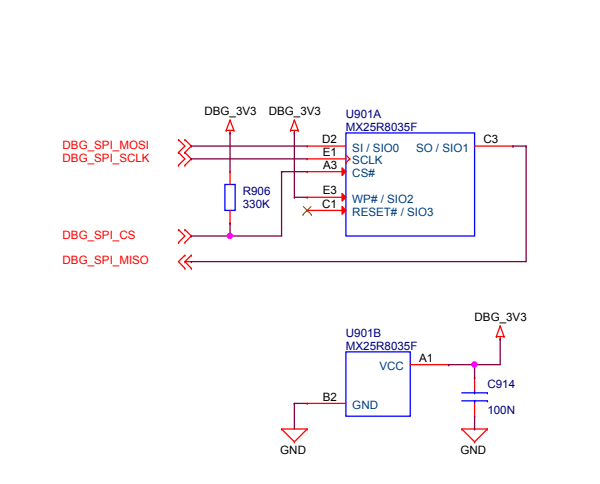


		Board Name	ZGM230S Dev Kit
		Page Title	
Designed PEP	Approved RGU	Board Number	Revision
Size A3	Sheet Modified Date Wednesday, December 08, 2021	BRD2603A	A00
COPYRIGHT SILICON LABORATORIES INC. 2021 CONFIDENTIAL – SUBJECT TO TERMS OF USE			Sheet 4 of 6

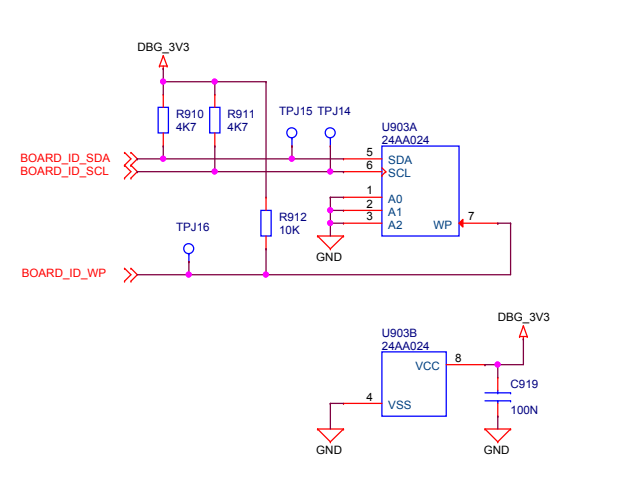
On-board Debugger



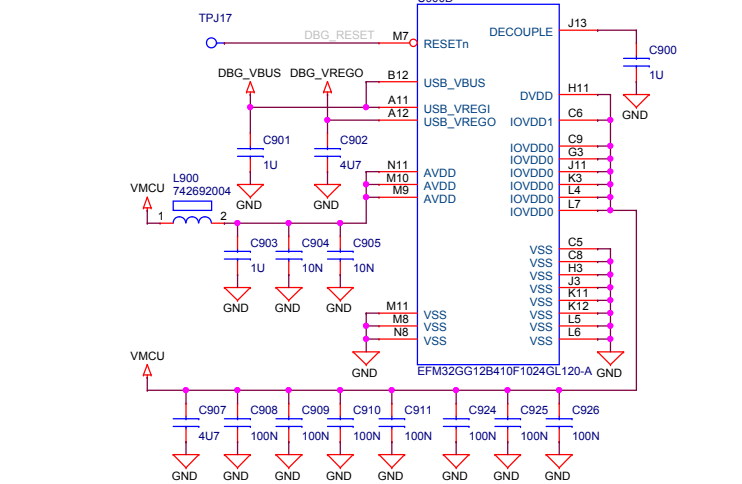
Serial Flash



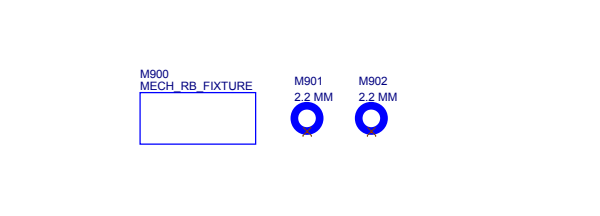
Board ID



Power & Decoupling

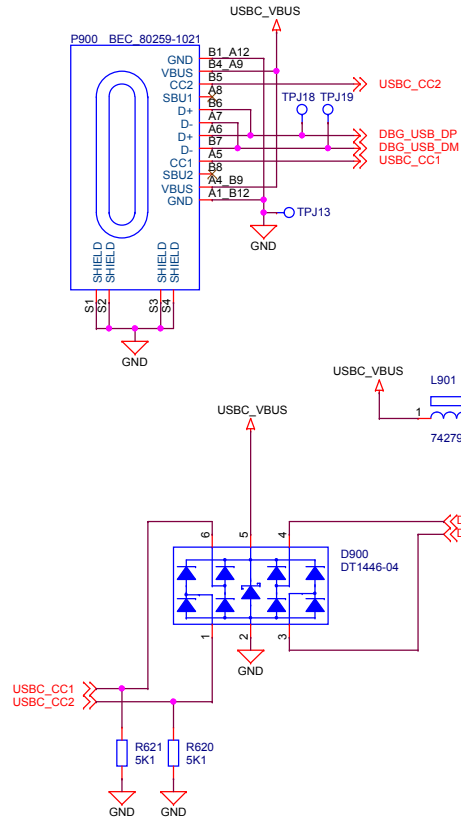


Mechanical

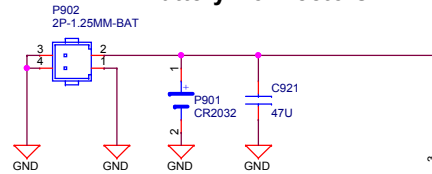


		Board Name	ZGM230S Dev Kit
		Page Title	On-board Debugger
Designed PEP	Approved RGU	Board Number	BRD2603A
Size A3	Sheet Modified Date Friday, February 04, 2022	Revision	A00
COPYRIGHT SILICON LABORATORIES INC. 2021 CONFIDENTIAL – SUBJECT TO TERMS OF USE			Sheet 5 of 6

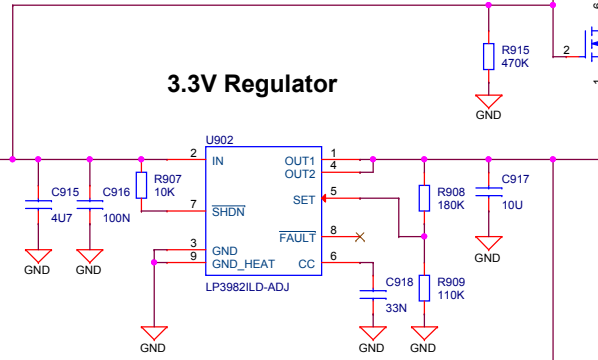
Debug USB Connection



Battery Connectors



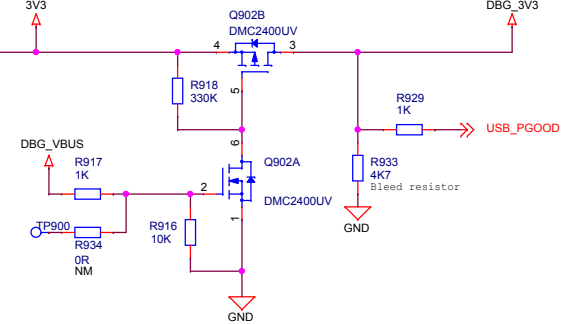
3.3V Regulator



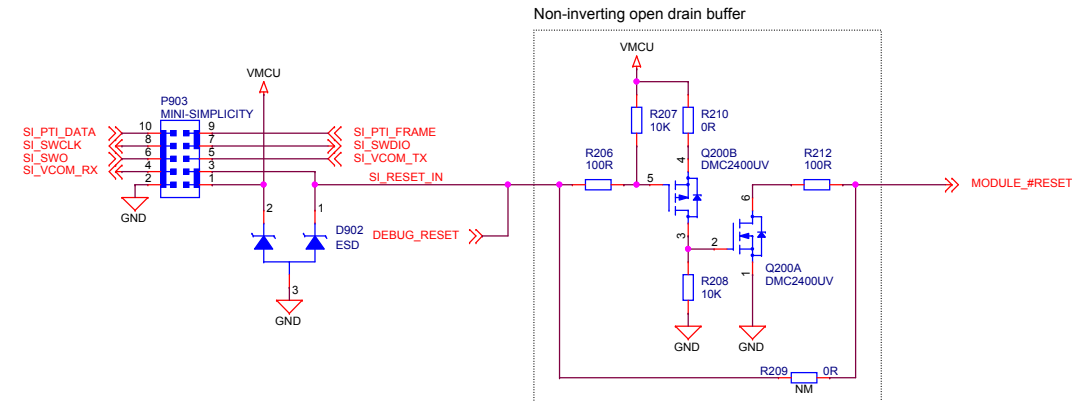
Target Voltage Domain

Q901 switches from battery power to USB when USB is plugged in. Additionally, the Mini Simplicity connector can supply power directly to the target voltage domain (VMCU) if the USB line and battery is removed.

Debugger Power Isolation



Mini Simplicity Connector



RESETEn on U1 has an internal pull-up to DVDD. The purpose of this circuit is to prevent current flowing from VMCU to DVDD through this pull-up if a connected debugger has a pull-up resistor from reset to VMCU.

 SILICON LABS		Board Name	
		ZGM230S Dev Kit	
Designed PEP		Page Title	
		Power & Mini Simplicity	
Size A3		Board Number	
		BRD2603A	
Sheet Modified Date Thursday, December 09, 2021		Revision	
		A00	
COPYRIGHT SILICON LABORATORIES INC. 2021 CONFIDENTIAL – SUBJECT TO TERMS OF USE			
		Sheet 6 of 6	