



EFM32 Zero Gecko STK	
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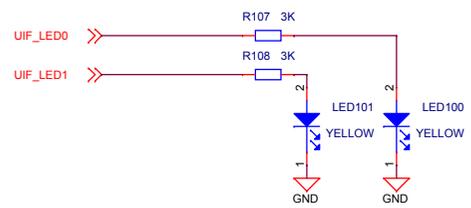
Revision History	
Rev.	Description
B00	Initial release for series production.
C01	Updated EFM32ZG chip revision + major updates to debugger

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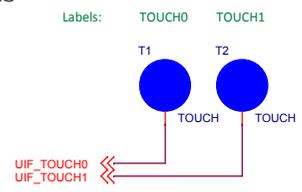


/ EFM32 ZG STK			
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SILICON LABS		EFM32ZG Zero Gecko STK	
Designed: HEL		Page Title	
Approved: JNO		Title Page	
Size: A3	BOM Doc No: <Cage Code>	Document number	Revision
Design Created Date: Wednesday, December 03, 2008		BRD2010A	C01
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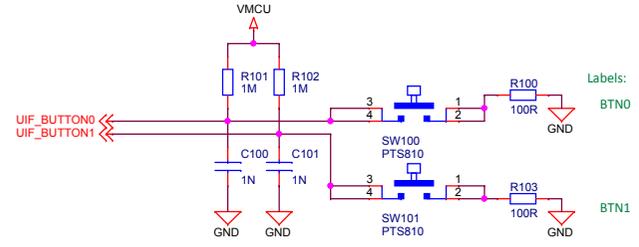
User LEDs



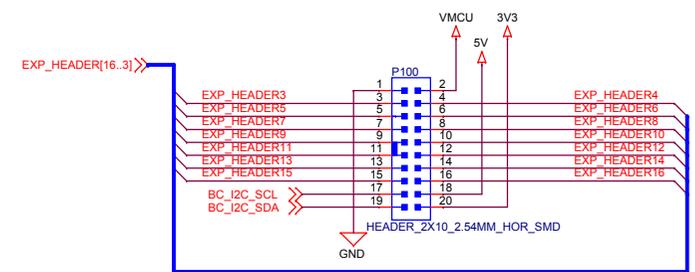
Touch Pads



User Pushbuttons



EXP Header



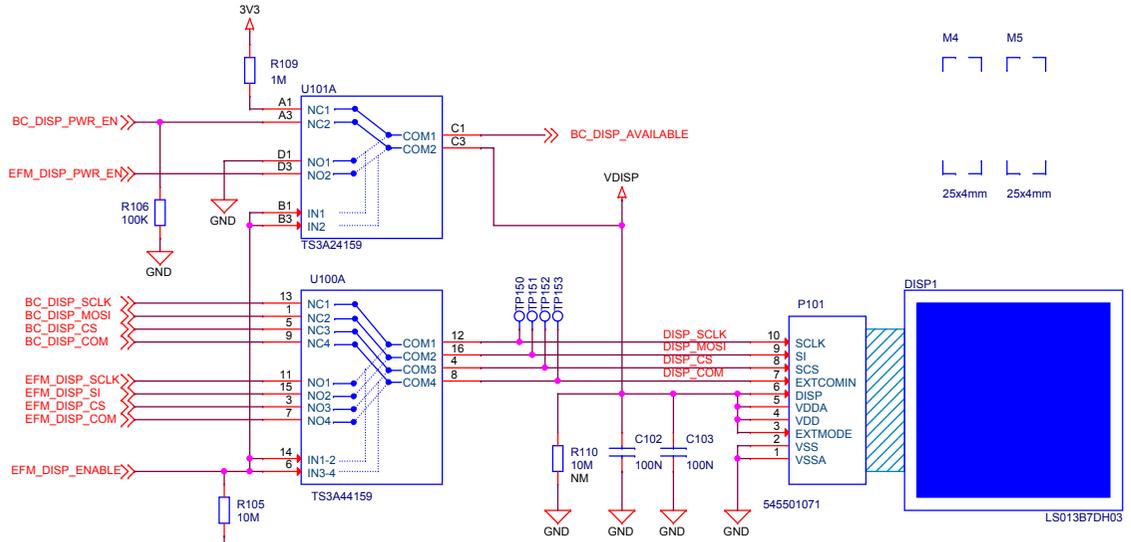
EXP-Header Functionality

1	GND		
3	PC0		ACMP0_CH0
5	PC1		ACMP0_CH1
7	PC2		ACMP0_CH2
9	PA0		
11	PB11		IDAC0_OUT
13	PA1		
15	PE13	I2C0_SCL	
17	Reserved for EXP Board Identification		
19	Reserved for EXP Board Identification		

2	VMCU		
4	PD7	US1_TX	ADC0_CH7
6	PD6	US1_RX	ADC0_CH6
8	PC15	US1_CLK	
10	PC14	US1_CS	
12	PD4	LEU0_TX	ADC0_CH4
14	PD5	LEU0_RX	ADC0_CH5
16	PE12	I2C0_SDA	
18	5V		
20	3V3		

Memory LCD-TFT Display & Multiplexer



EFM_DISP_ENABLE	DISP_CTRL	VDISP	BC_DISP_AVAILABLE
1	EFM	EFM_DISP_PWR_EN	0
0	BC	BC_DISP_PWR_EN	1

The EFM32 always controls ownership of the display using the EFM\_DISP\_ENABLE signal.

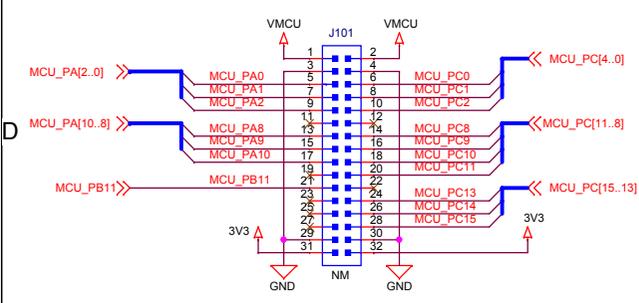
EFM32 ZG STK

**Schematic Title**  
EFM32ZG Zero Gecko STK

**Page Title**  
User Interfaces

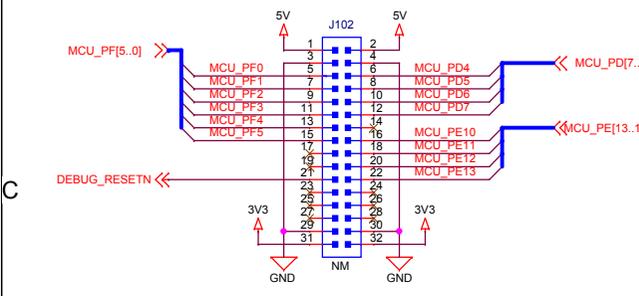
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# Breakout Connections



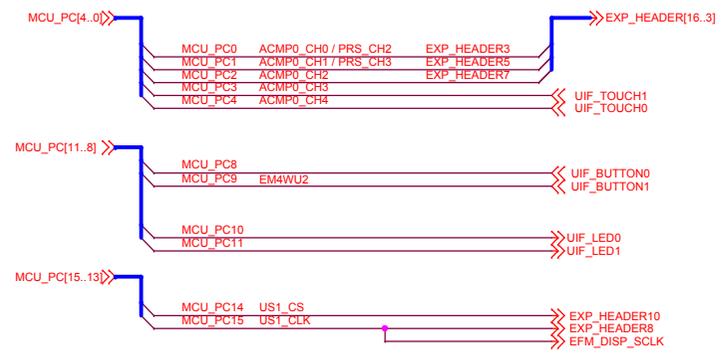
Breakout header labels:

VMCU	VMCU
GND	GND
A0	C0
A1	C1
A2	C2
NC	NC
A8	C8
A9	C9
A10	C10
NC	C11
B11	NC
NC	C13
NC	C14
NC	C15
GND	GND
3V3	3V3

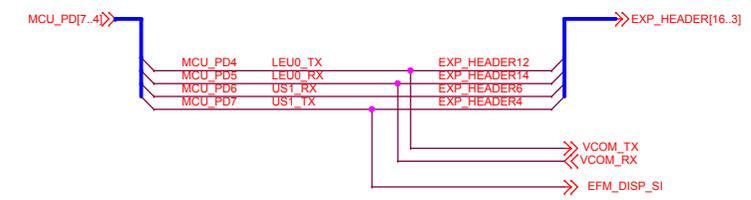


5V	5V
GND	GND
F0	D4
F1	D5
F2	D6
F3	D7
F4	NC
F5	E10
NC	E11
NC	E12
RST	E13
NC	NC
NC	NC
NC	NC
GND	GND
3V3	3V3

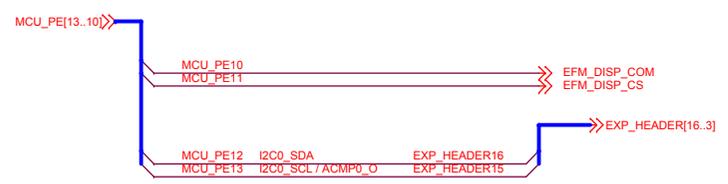
# PC Connections



# PD Connections



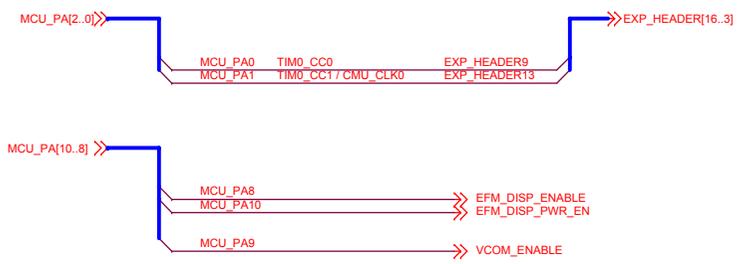
# PE Connections



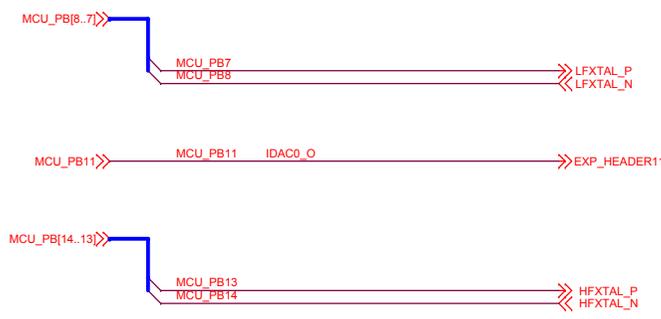
# PF Connections



# PA Connections

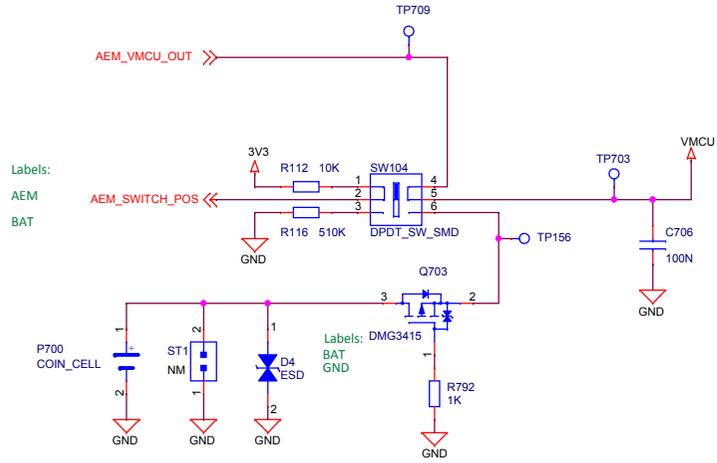


# PB Connections



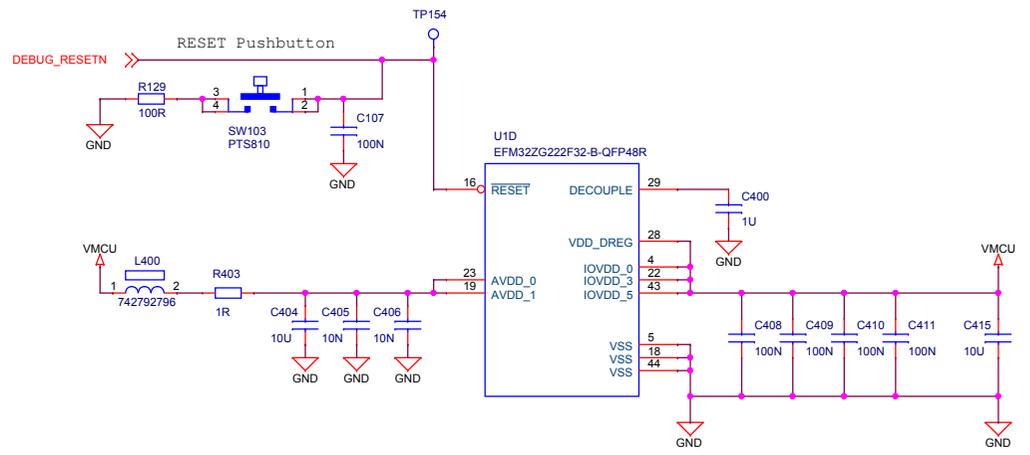
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Page Title		<b>EFM32 Signal Assignments</b>	
Designed: HEL	Approved: JNO	Document number	Revision
Size: A3	BOM Doc No: <Cage Code>	<b>BRD2010A</b>	C01
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Power Select Switch: AEM/BAT

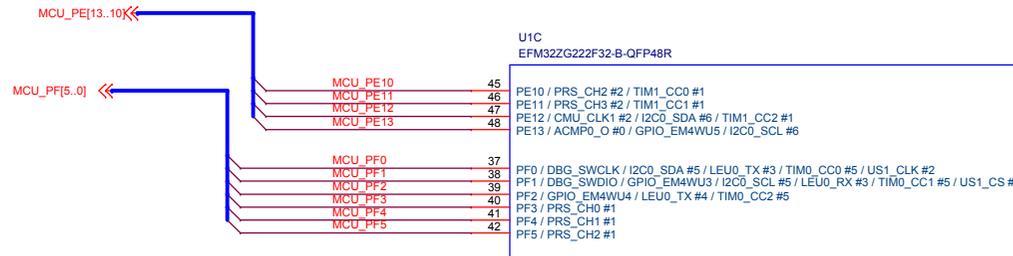
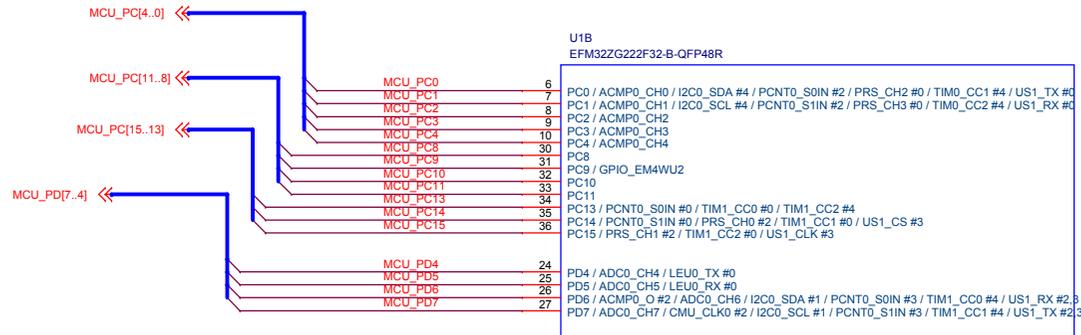
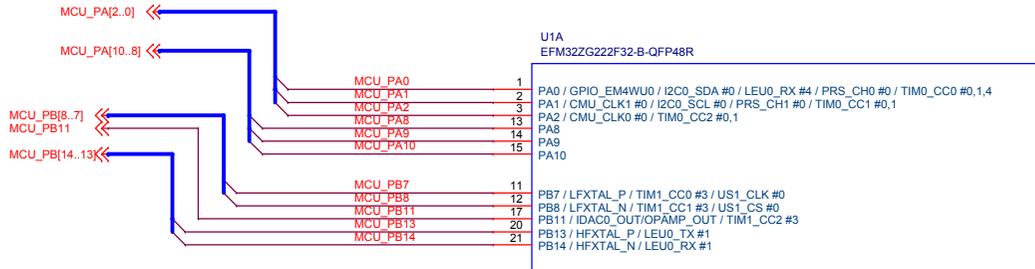


SWITCH POS	MODE DESCRIPTION
AEM	AEM Enabled, VMCU sourced from external 3.3v LDO powered by BC USB 5V supply
BAT	AEM Disabled, VMCU sourced from coin-cell battery or external power supply

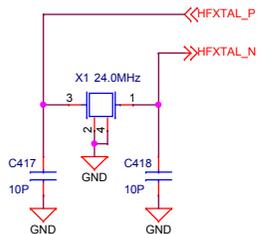
EFM32 Power and Decoupling



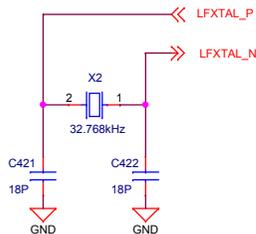
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		<b>EFM32ZG Zero Gecko STK</b>	
Designed: HEL Approved: JNO		Page Title	
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Size: A3	BOM Doc No: <Cage Code>	Document number	Revision
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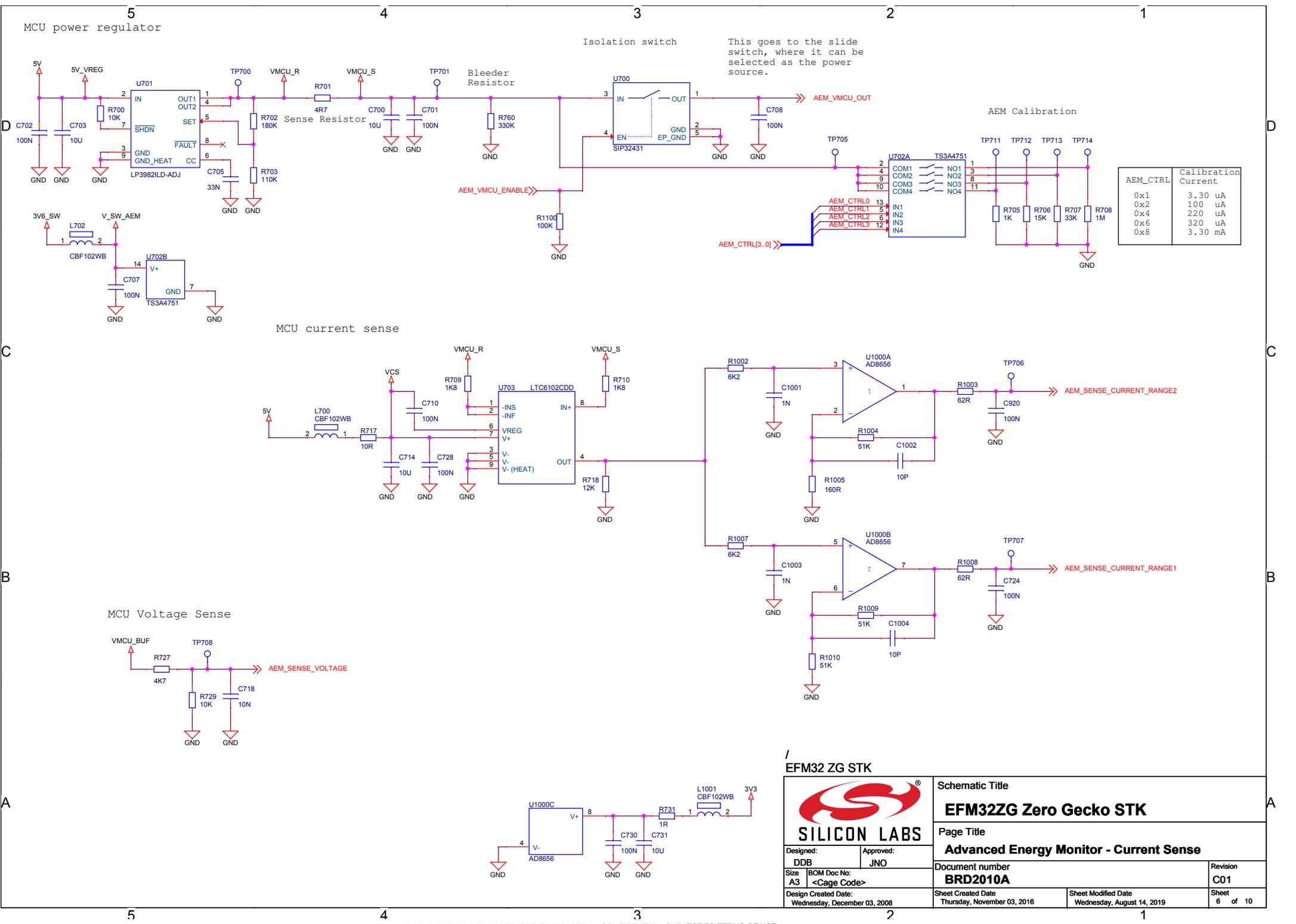
High Frequency Clock



Low Frequency Clock



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		<b>EFM32ZG Zero Gecko STK</b>	
Designed: HEL Approved: JNO		Page Title	
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Size: A3	BOM Doc No: <Cage Code>	Document number	Revision
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AEM_CTRL	Calibration Current
0x1	3.30 uA
0x2	100 uA
0x4	220 uA
0x6	320 uA
0x8	3.30 mA

**EFM32 ZG STK**



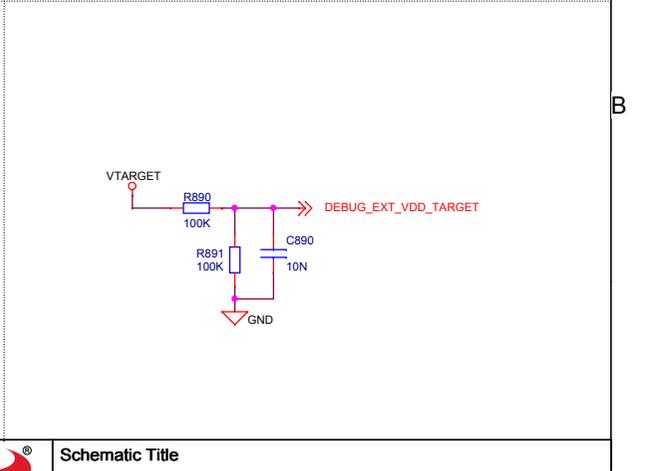
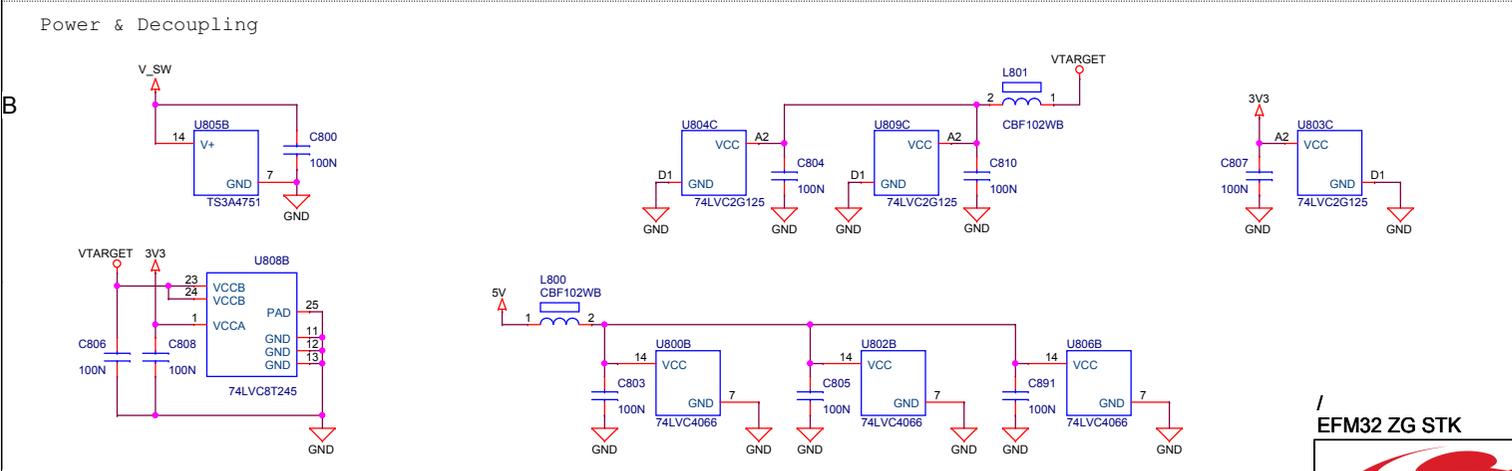
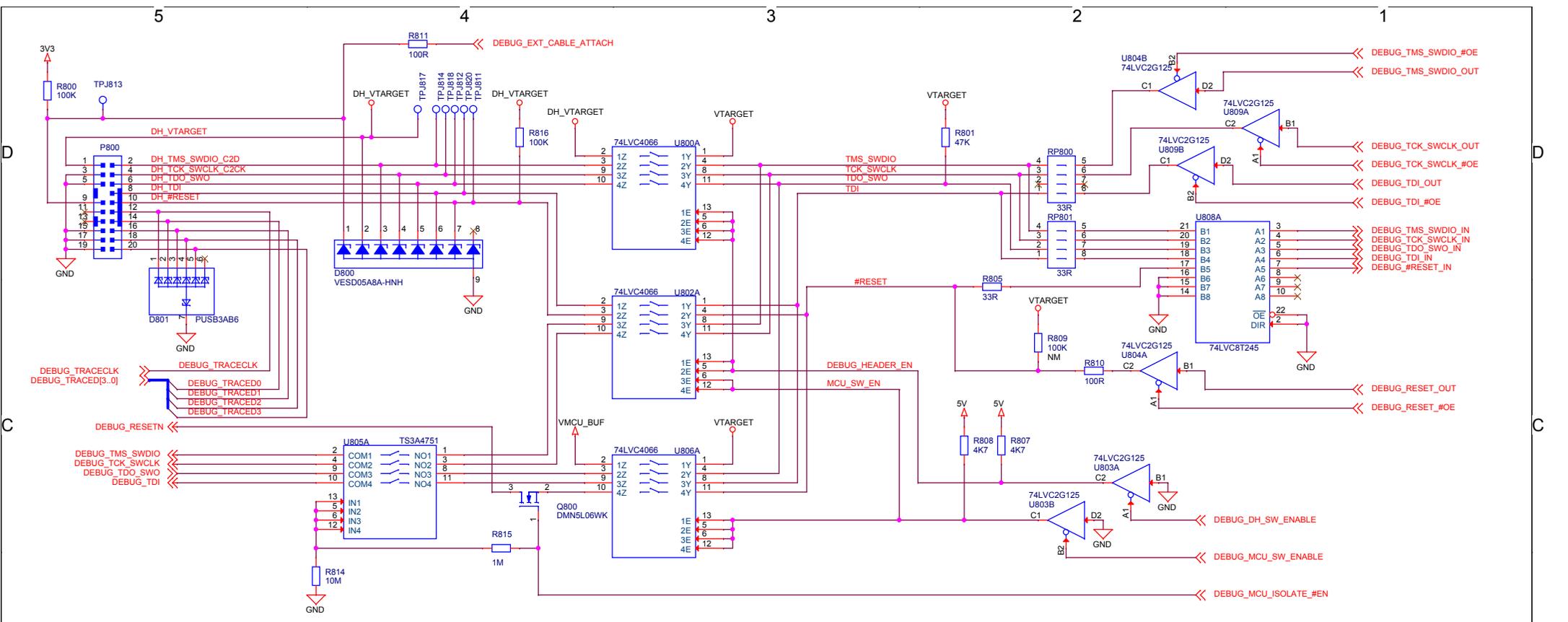
**Schematic Title**  
**EFM32ZG Zero Gecko STK**

**Page Title**  
**Advanced Energy Monitor - Current Sense**

**Document number**  
**BRD2010A**

**Revision**  
**C01**

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 Size: A3 BOM Doc No: <Cage Code>  
 Design Created Date: Wednesday, December 03, 2008  
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Mode	DEBUG_MCU_SW_ENABLE	DEBUG_DH_SW_ENABLE	DEBUG_BUF_#OE	ISOLATE_#EN	DH_VTARGET	VTARGET
Debug Out	0	1	0	0	External voltage	External voltage
MCU Debug	1	0	0	1	Disconnected	VMCU
Debug In	1	1	1	1	VMCU	VMCU
Debug Off	1	1	1	0	-	-

**EFM32 ZG STK**

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**Schematic Title**  
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**Debug Interface**

**Document number**  
**BRD2010A**

**Revision**  
**C01**

**Design:** DDB | **Approved:** JNO

**Size:** A3 | **BOM Doc No.:** <Cage Code>

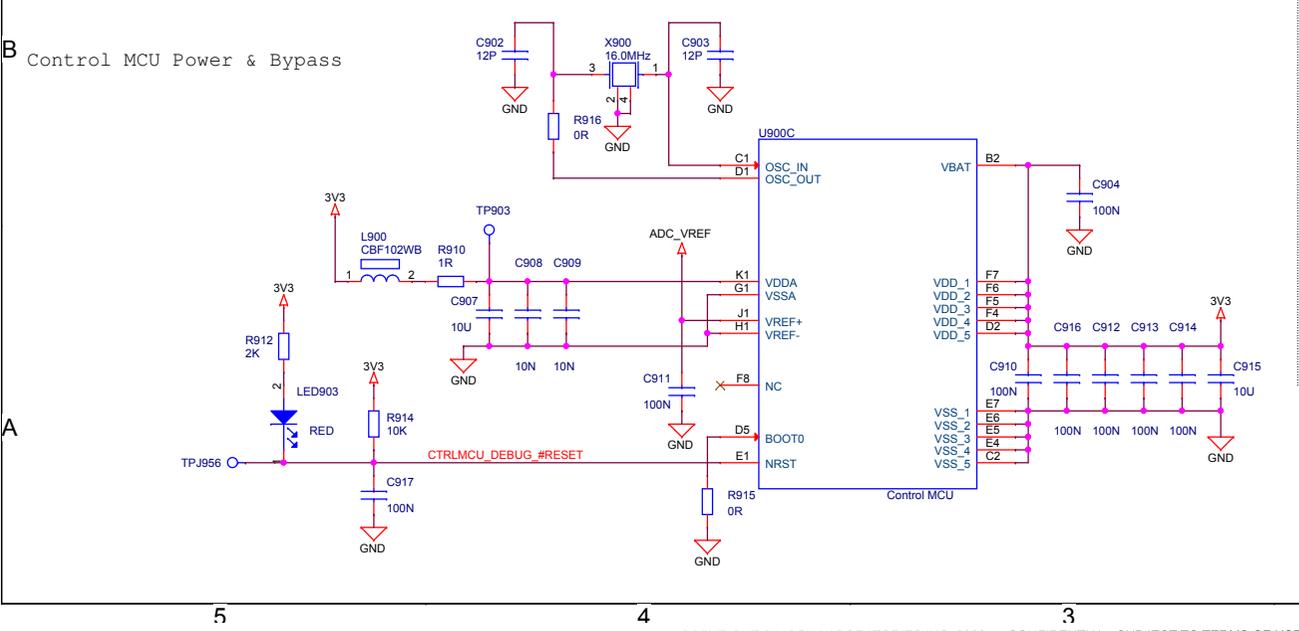
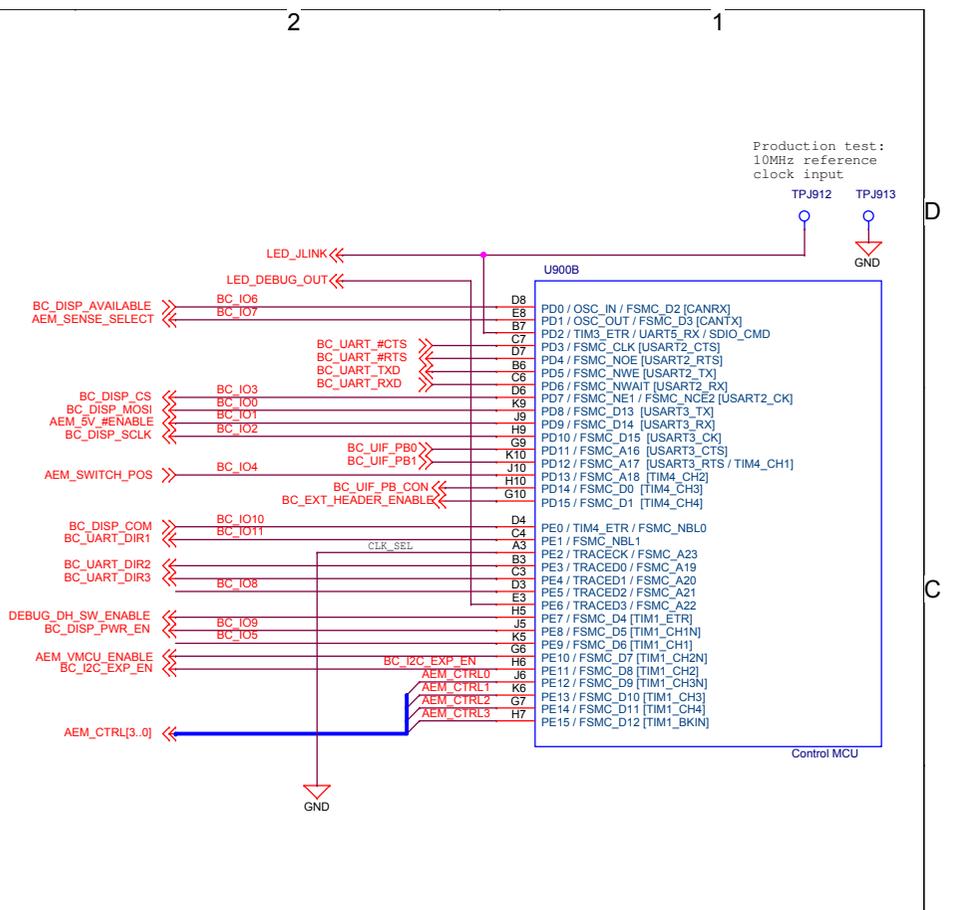
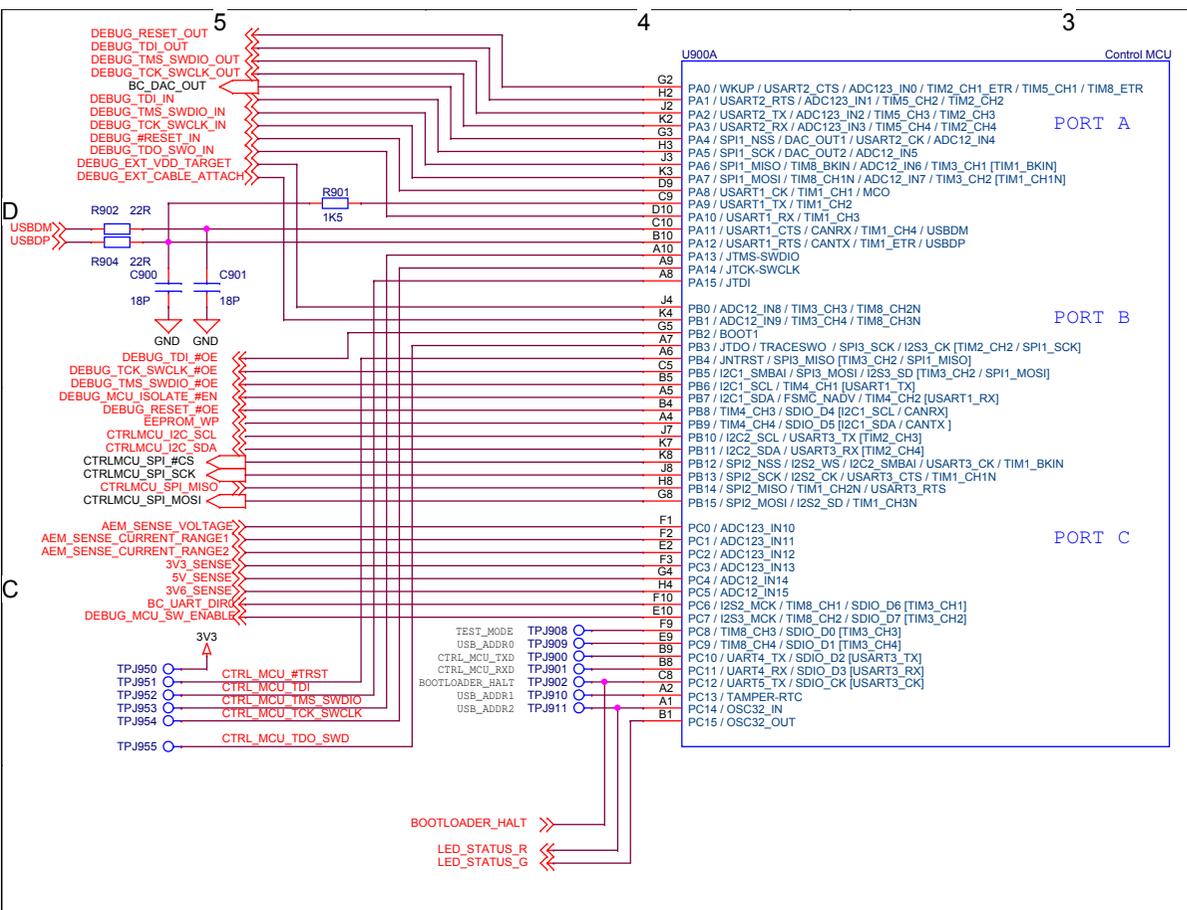
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**SILICON LABS**

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**EFM32ZG Zero Gecko STK**

Page Title  
**Control MCU**

Document number  
**BRD2010A**

Design: ANB Approved: JNO

Size: A3 BOM Doc No: <Cage Code>

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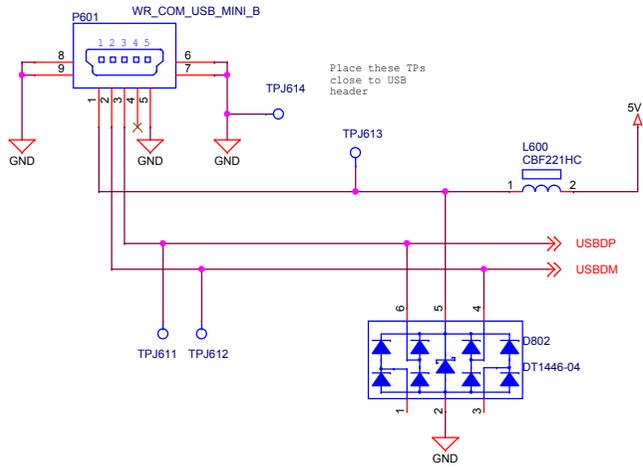
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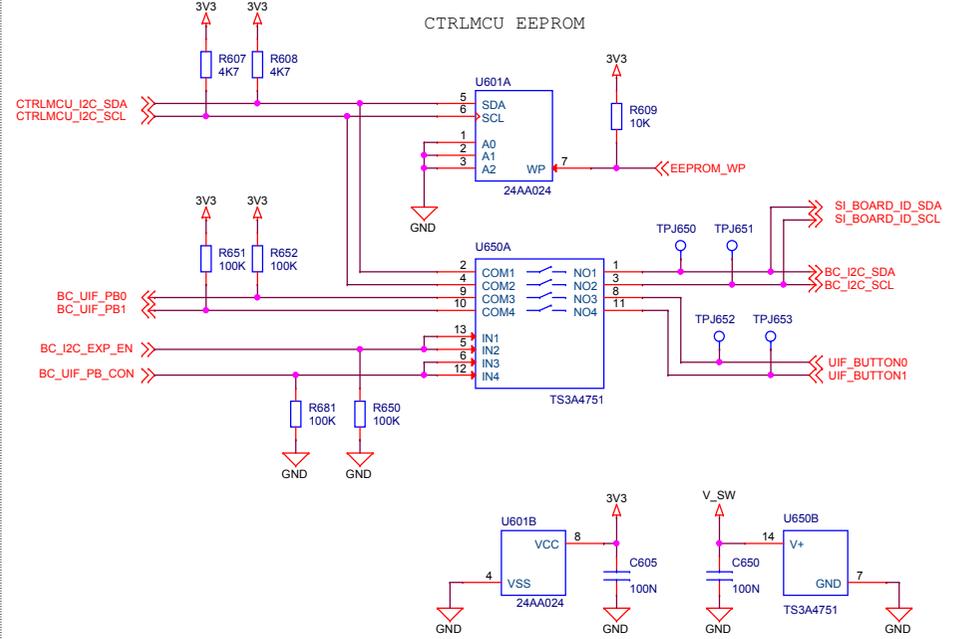
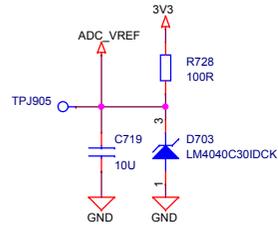
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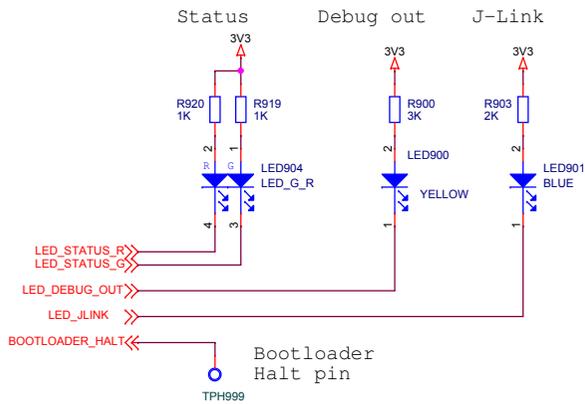
### J-Link USB Port



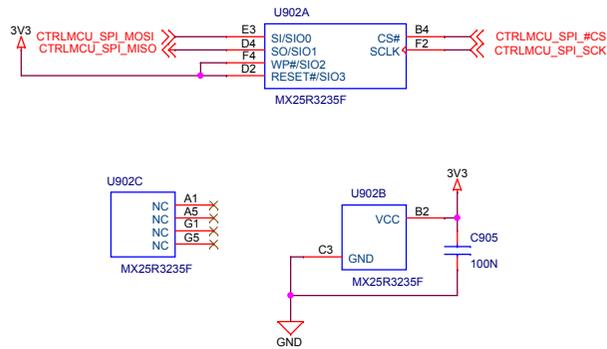
### ADC reference voltage



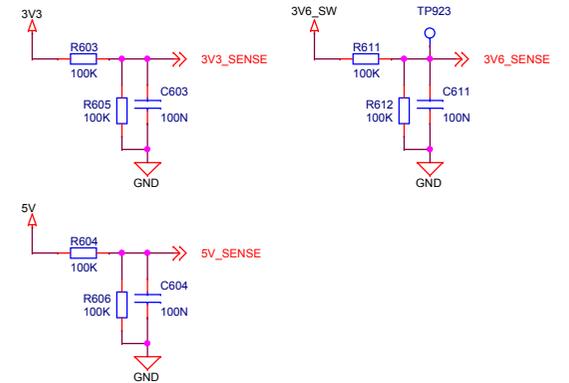
### Indicators:



### CTRLMCU SERIAL FLASH



### POWER SENSE



### EFM32 ZG STK

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		<b>EFM32ZG Zero Gecko STK</b>	
<b>SILICON LABS</b>		Page Title	
		<b>Board Controller Misc</b>	
Designed: ANB	Approved: JNO	Document number	
Size A3	BOM Doc No: <Cage Code>	<b>BRD2010A</b>	
Design Created Date: Wednesday, December 03, 2008		Sheet Created Date Thursday, November 03, 2016	Sheet Modified Date Tuesday, June 25, 2019
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