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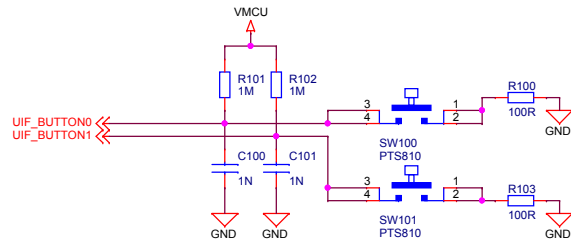


EFM32 Giant Gecko STK	
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Revision History	
Rev.	Description
B00	updated to new STK platform

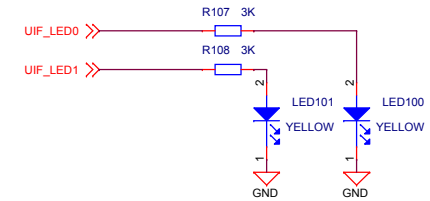
 SILICON LABS		Schematic Title EFM32 Wonder Gecko Starter Kit	
Designed: HEL		Approved: JSH	
Size A3	BOM Doc No:		Revision B04
Design Created Date: Tuesday, December 06, 2016		Document number BRD2400A	Sheet 1 of 12
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User Pushbuttons



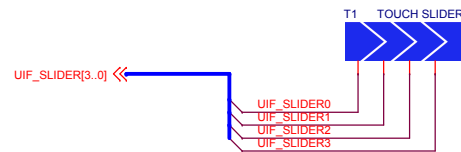
User LEDs

User LEDs

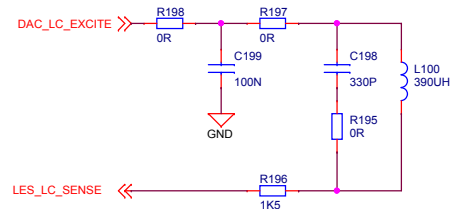


Touch Pads

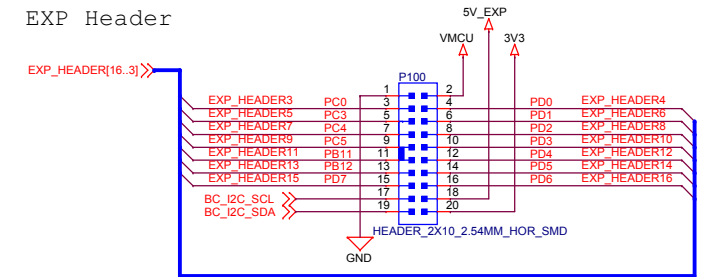
Touch slider



LESENSE LC-Sensor



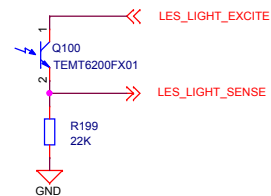
EXP Header



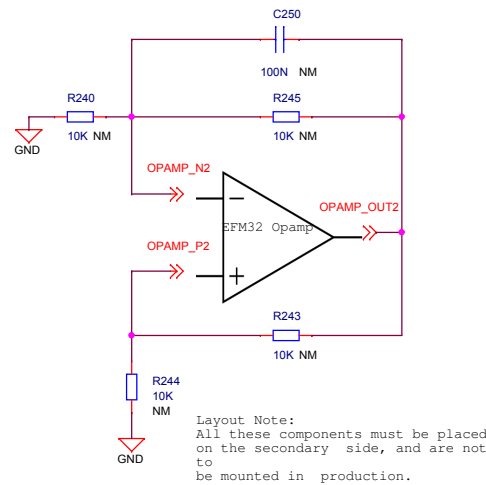
EXP-Header Functionality


ACMP0_CH4		GND	1	2	VMCU		
ACMP0_CH5		PC0	3	4	PD0	US1_TX	ADC0_CH0
ACMP1_CH4		PC3	5	6	PD1	US1_RX	ADC0_CH1
ACMP1_CH5		PC4	7	8	PD2	US1_CLK	ADC0_CH2
ACMP0_O		PC5	9	10	PD3	US1_CS	ADC0_CH3
DAC0_OUT0		PB11	11	12	PD4	LEU0_TX	ADC0_CH4
DAC0_OUT1		PB12	13	14	PD5	LEU0_RX	ADC0_CH5
I2C0_SCL#1		PD7	15	16	PD6	I2C0_SDA#1	
Reserved for EXP Board Identification			17	18	5V		
Reserved for EXP Board Identification			19	20	3V3		

Photo Transistor

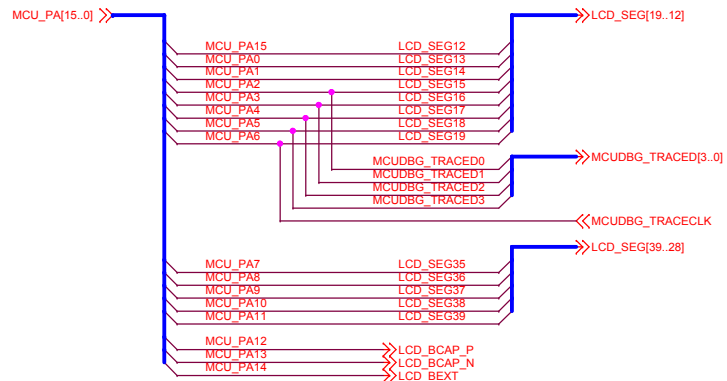


OPAMP Connection Footprint

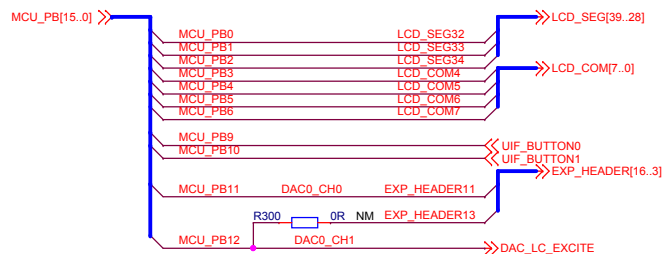


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		EFM32 Wonder Gecko Starter Kit	
Designed: HEL		Page Title	
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Size A3	BOM Doc No:	Document number	Revision
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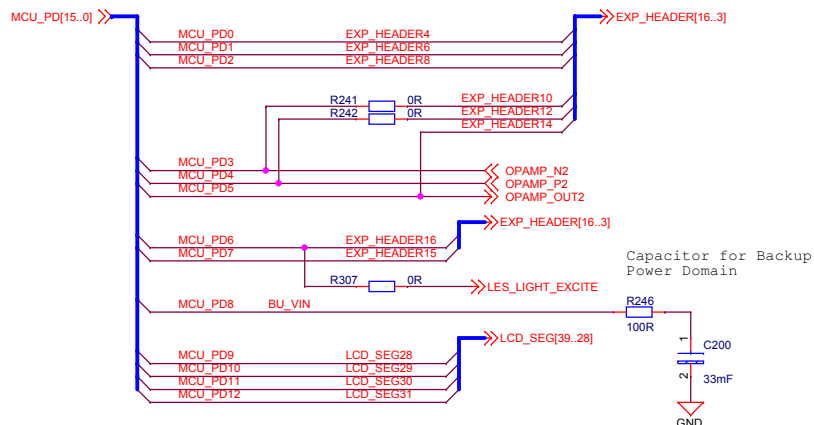
PA Connections



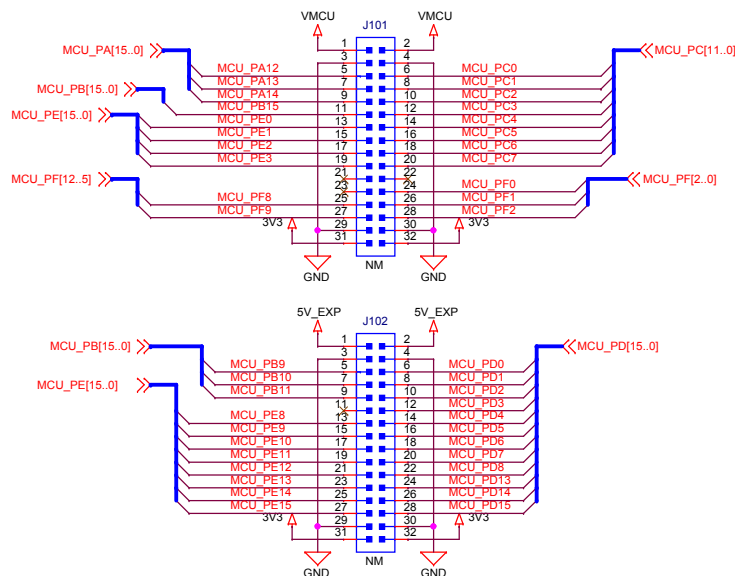
PB Connections



PD Connections



Breakout connections

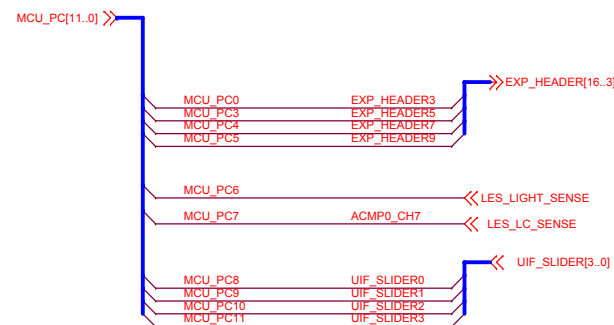


Breakout header labels:

VMCU	VMCU
GND	GND
A12	C0
A13	C1
A14	C2
B15	C3
E0	C4
E1	C5
E2	C6
E3	C7
NC	NC
NC	F0
F8	F1
F9	F2
GND	GND
3V3	3V3

5V	5V
GND	GND
B9	D0
B10	D1
B11	D2
NC	D3
E8	D4
E9	D5
E10	D6
E11	D7
E12	D8
E13	D13
E14	D14
E15	D15
GND	GND
3V3	3V3

PC Connections



Designed: HEL
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Schematic Title

EFM32 Wonder Gecko Starter Kit

Page Title

Signal Assignments

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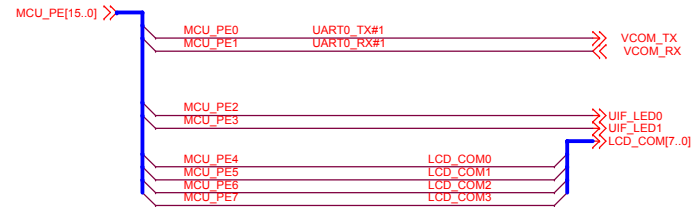
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B04

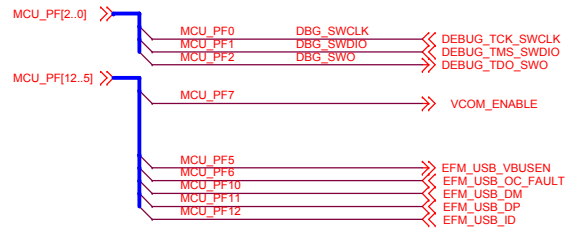
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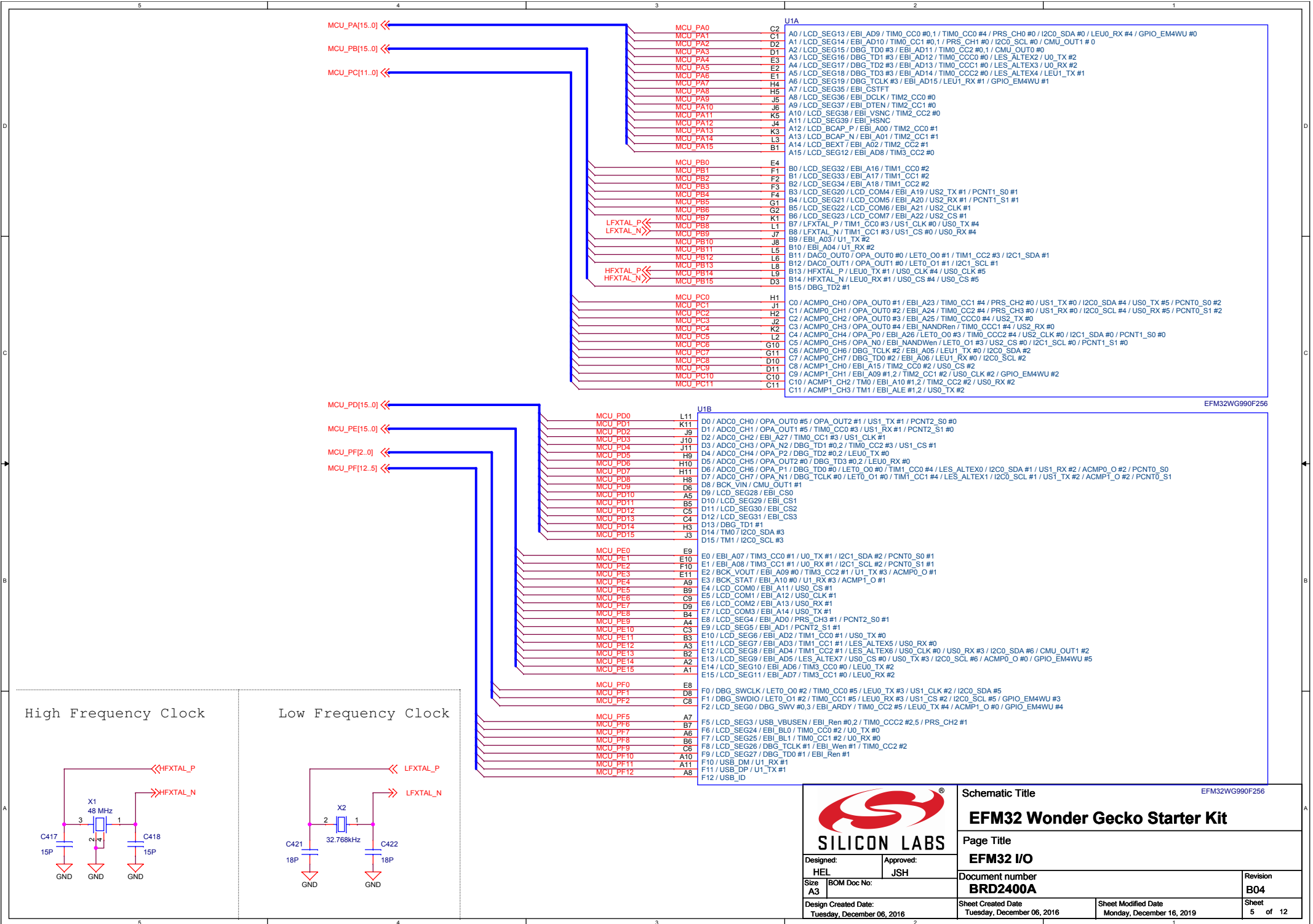
PE Connections



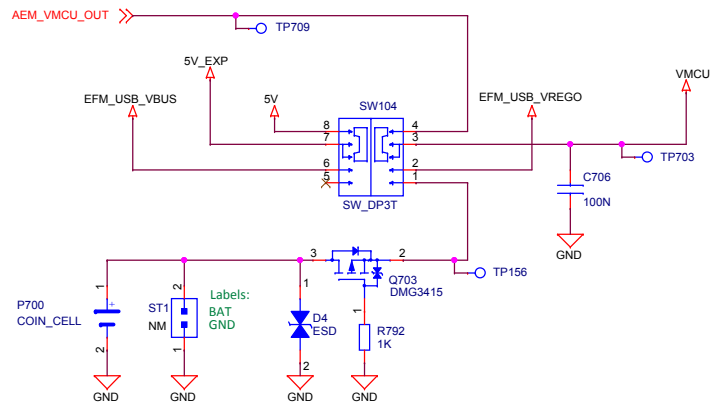
PF Connections



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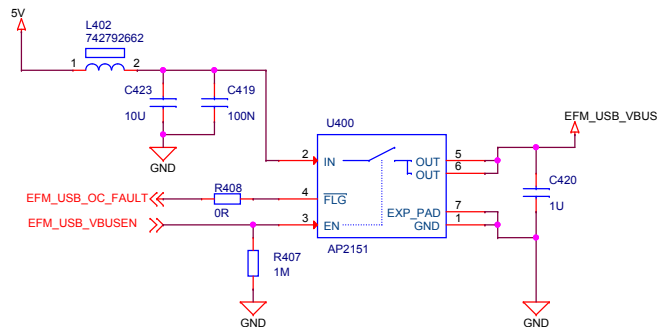


Power Select Switch: AEM/USB/BAT

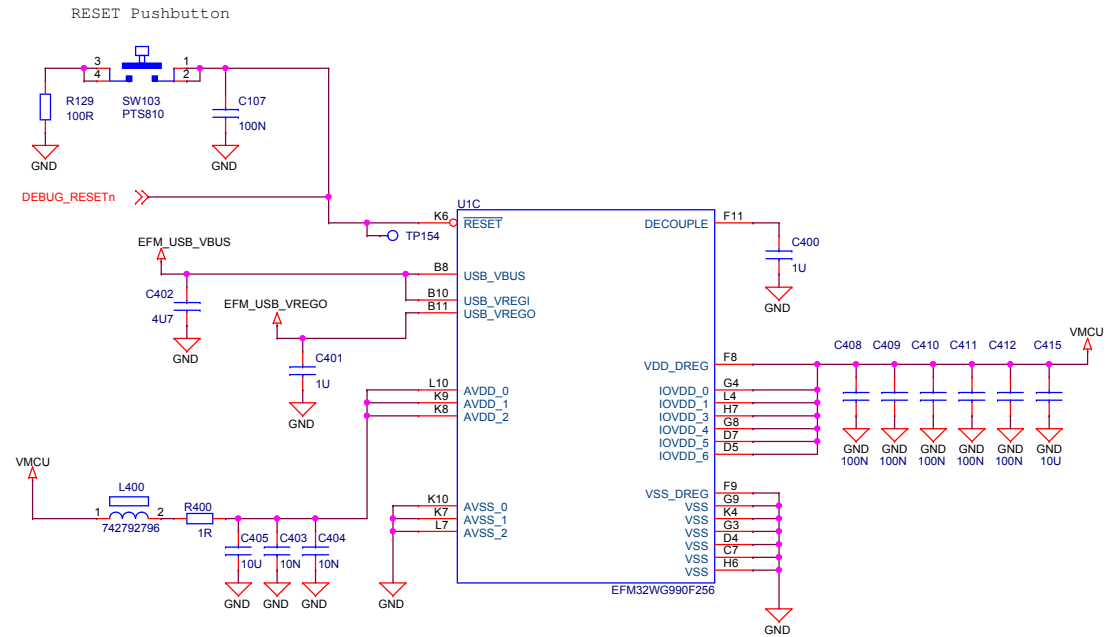


SWITCH POS	MODE DESCRIPTION
AEM	AEM Enabled, VMCU sourced from external 3.3V LDO powered by BC USB 5V supply, EXP header and breakout 5V sourced from BC USB 5V supply
USB	AEM Disabled, VMCU sourced from internal 3.3V LDO powered by MCU USB 5V supply, EXP header and breakout 5V sourced from MCU USB 5V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

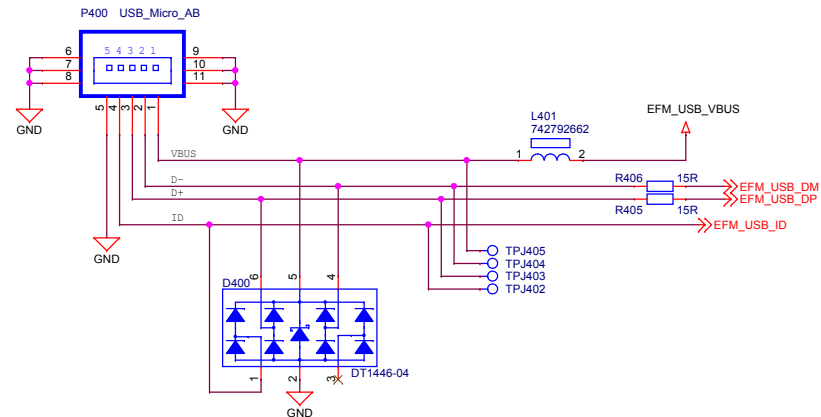
USB Host Power enable




EFM32 Power & Reset

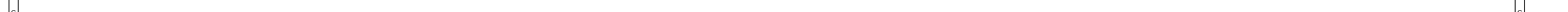
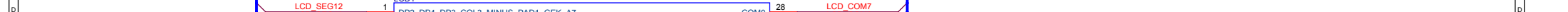


USB Connection and ESD protection

















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
5	4	3	2	1
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COMS	D10	11	10	21	20	01	00	11	10	00	00	00	00	11
-----0-----0-----10-----11-----														

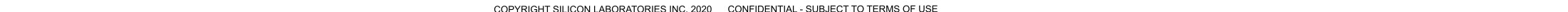

















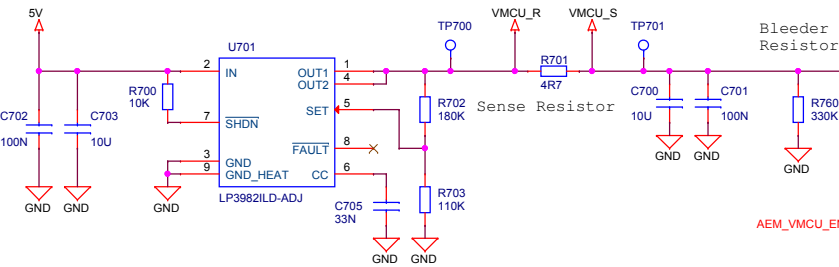
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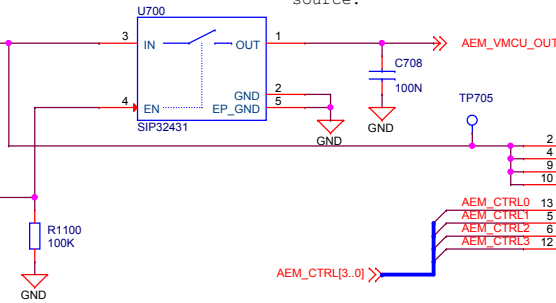
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MCU power regulator

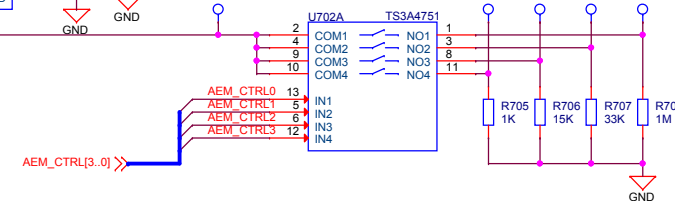


Isolation switch

This goes to the slide switch, where it can be selected as the power source.

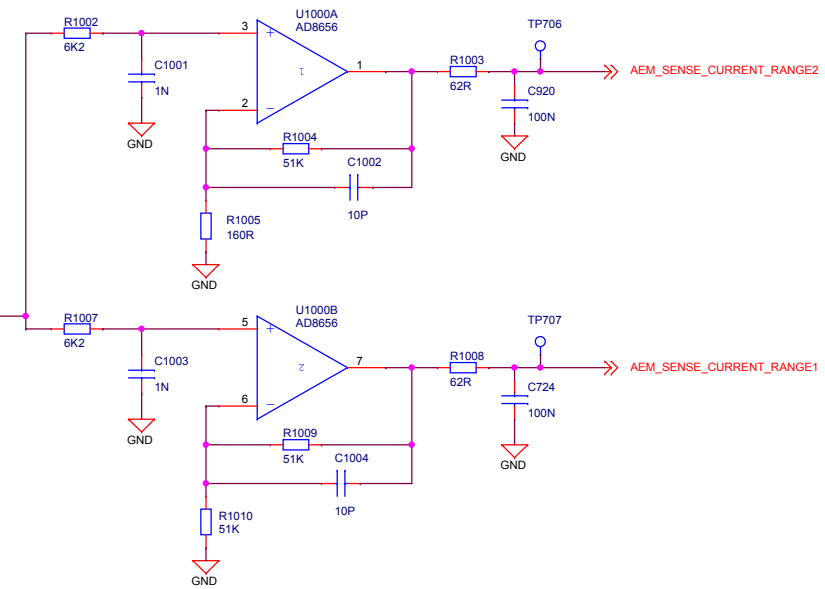
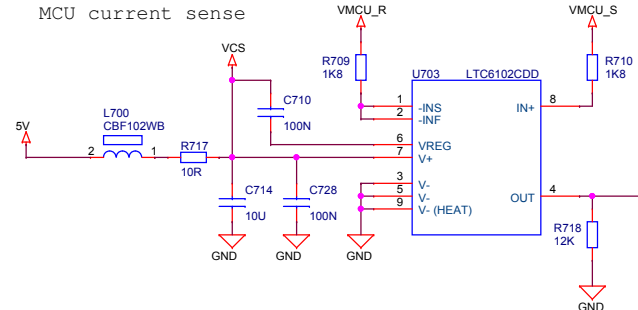


AEM Calibration

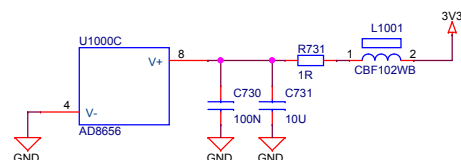
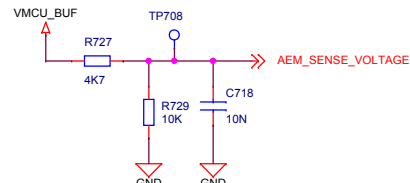


AEM_CTRL	Calibration Current
0x1	3.30 uA
0x2	100 uA
0x4	220 uA
0x6	320 uA
0x8	3.30 mA

MCU current sense



MCU Voltage Sense



SILICON LABS

Schematic Title

EFM32 Wonder Gecko Starter Kit

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Advanced Energy Monitor

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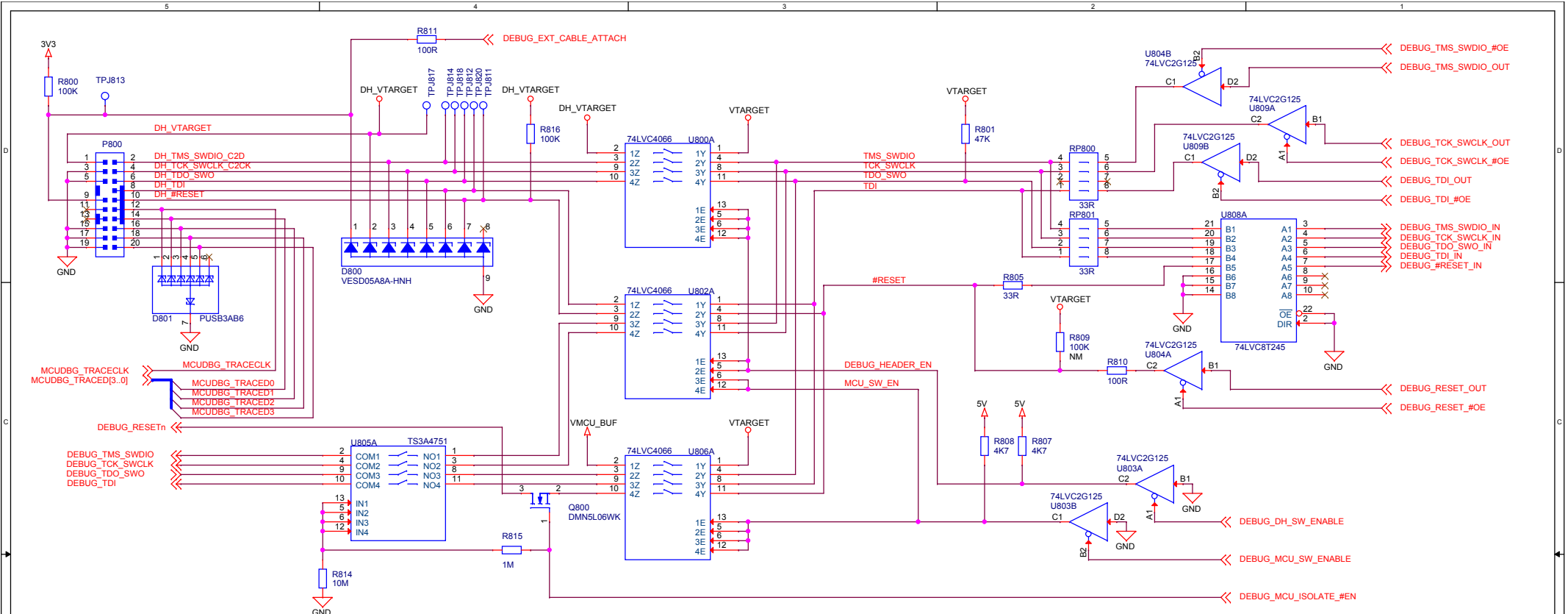
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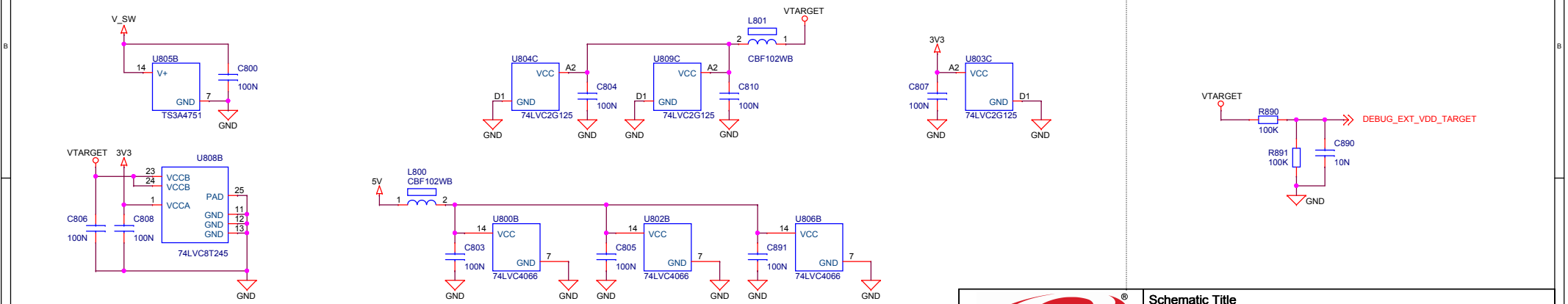
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Power & Decoupling



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	-	-



SILICON LABS

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EFM32 Wonder Gecko Starter Kit

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Debug Interface

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