




EFM32 Giant Gecko STK	
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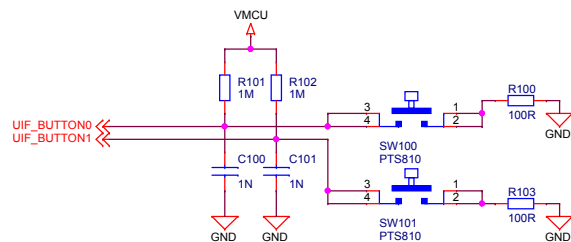
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Revision History	
Rev.	Description
C00	Updated to new STK platform

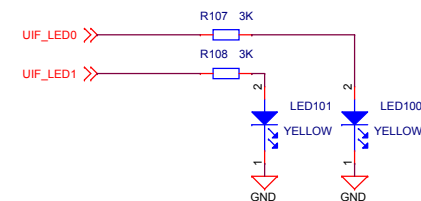
 <b>SILICON LABS</b>		Schematic Title	
		<b>EFM32 Leopard Gecko Starter Kit</b>	
Page Title		<b>Title Page</b>	
Designed:	Approved:	Document number	Revision
HEL	JSH	<b>BRD2201A</b>	<b>C00</b>
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## User Pushbuttons



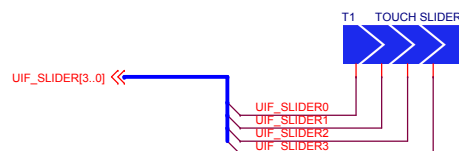
User LEDs

User LEDs

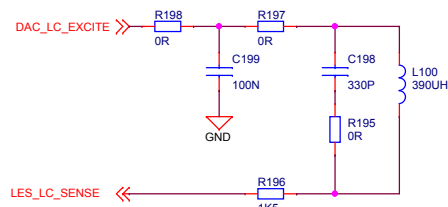


## Touch Pads

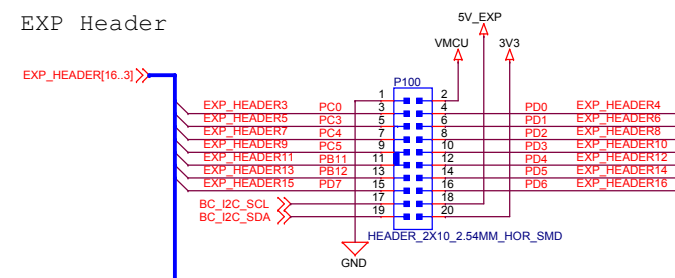
Touch slider



## LESENSE LC-Sensor



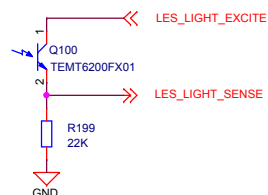
## EXP Header



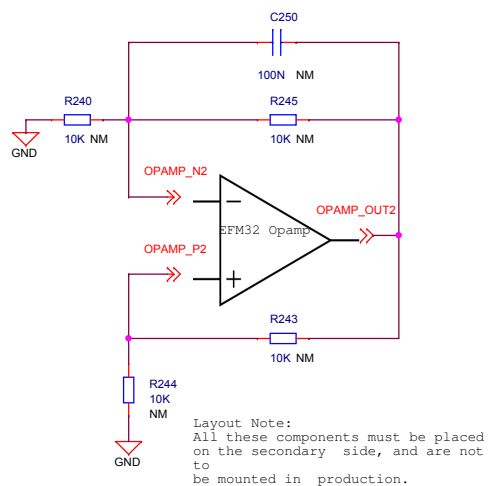
## EXP-Header Functionality


		<b>GND</b>	<b>1</b>			<b>2</b>	<b>VMCU</b>		
ACMP0_CH4		PC0	3			4	P00	US1_TX	ADC0_CH0
ACMP0_CH5		PC3	5			6	PD1	US1_RX	ADC0_CH1
ACMP1_CH4		PC4	7			8	PD2	US1_CLK	ADC0_CH2
ACMP0_CH6		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	SV		
Reserved for EXP Board identification				19		20	LV3		

# Photo Transistor

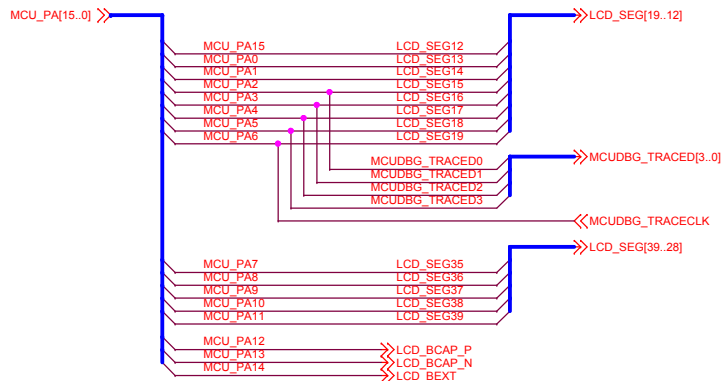


## OPAMP Connection Footprint

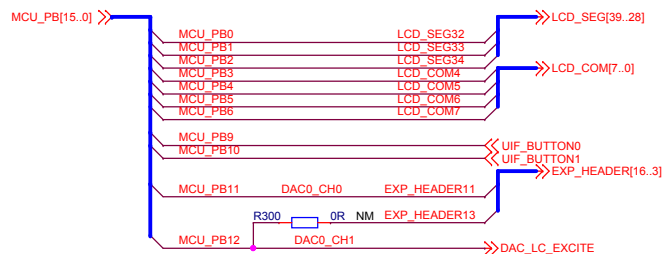


 <b>SILICON LABS</b>		<b>Schematic Title</b> <b>EFM32 Leopard Gecko Starter Kit</b>	
<b>Page Title</b> <b>User Interfaces</b>			
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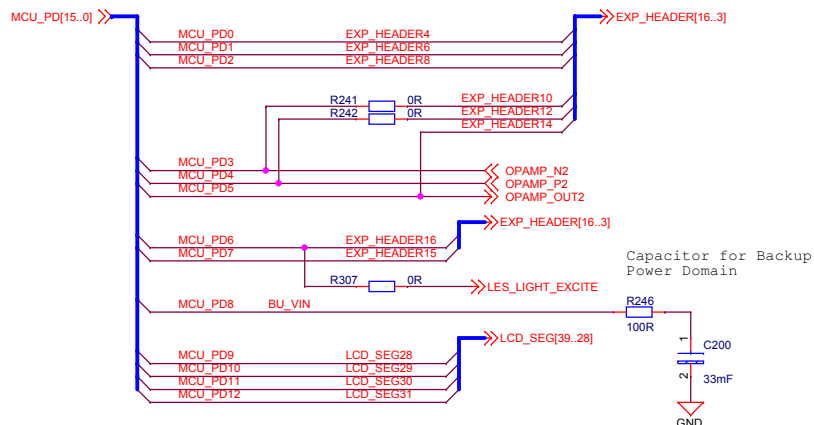
## PA Connections



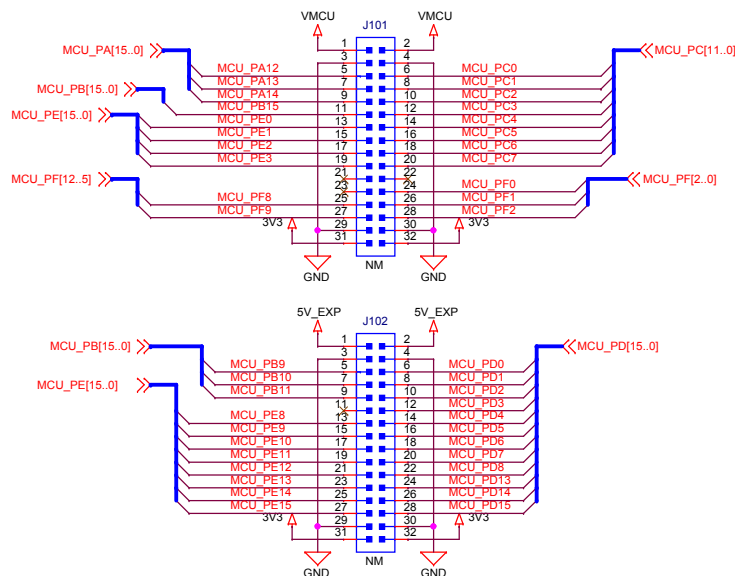
## PB Connections



## PD Connections



## Breakout connections

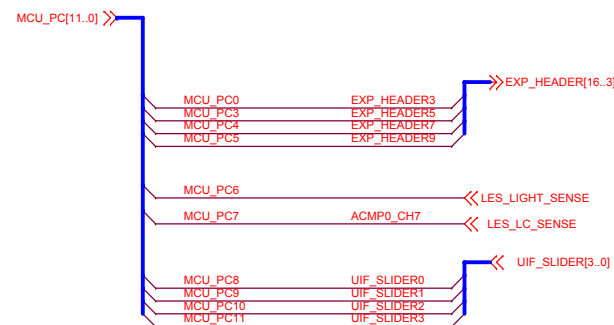


### Breakout header labels:

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



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Schematic Title

**EFM32 Leopard Gecko Starter Kit**

Page Title

**Signal Assignments**

Document number

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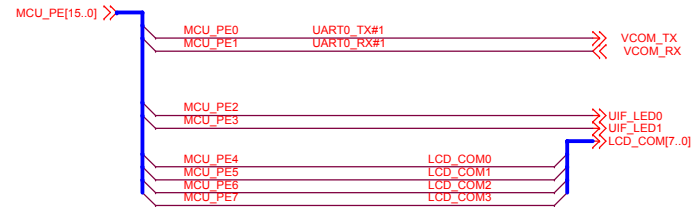
Revision

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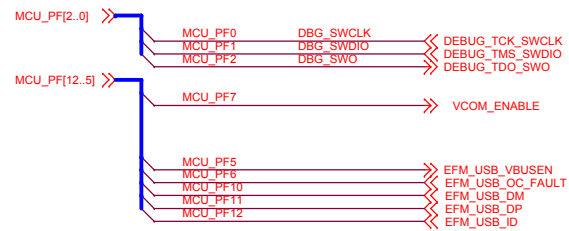
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## PE Connections



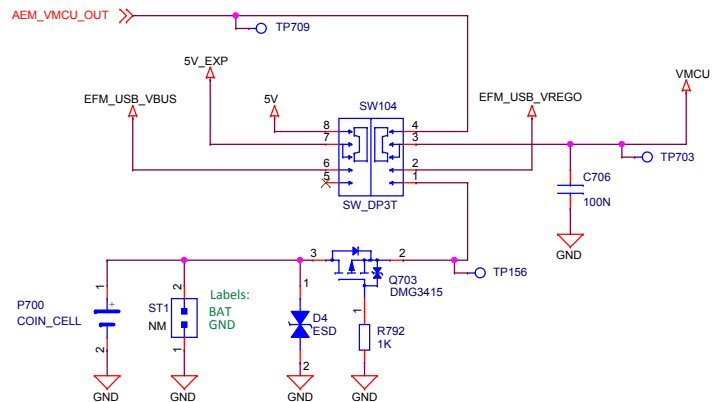
## PF Connections



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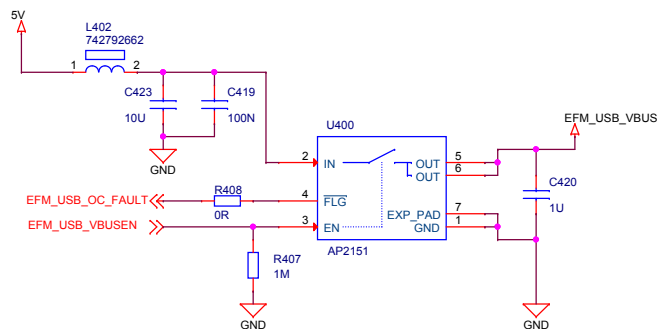


## Power Select Switch: AEM/USB/BAT

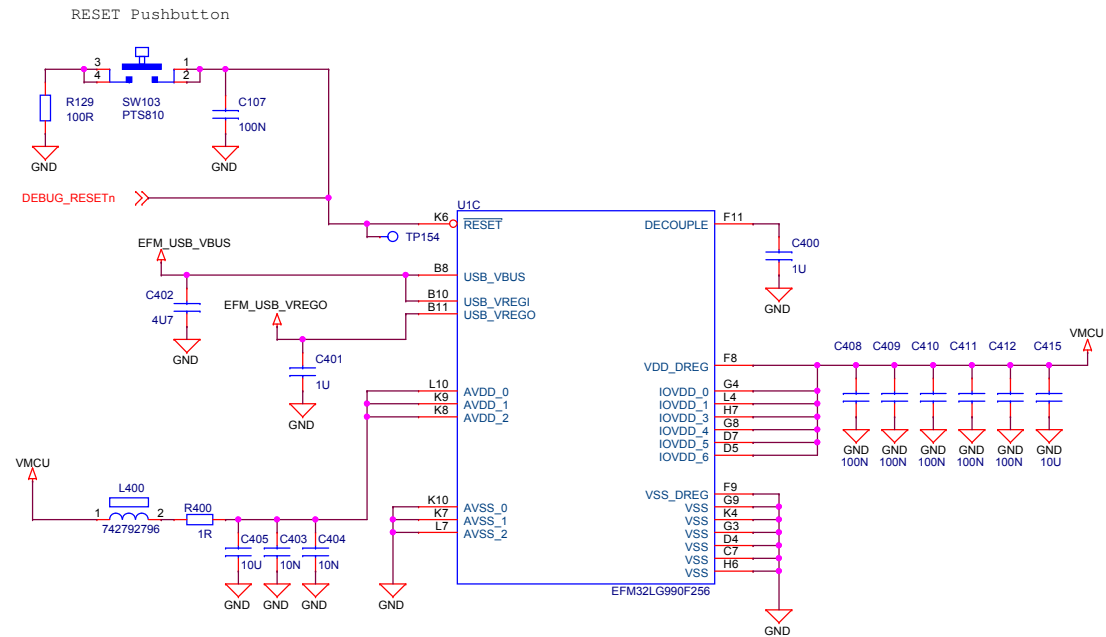


SWITCH POS	MODE DESCRIPTION
AEM	AEM Enabled, VMCU sourced from external 3.3V LDO powered by BC USB 5V supply, EXP header and breakout 5V sourced from BC USB 5V supply
USB	AEM Disabled, VMCU sourced from internal 3.3V LDO powered by MCU USB 5V supply, EXP header and breakout 5V sourced from MCU USB 5V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

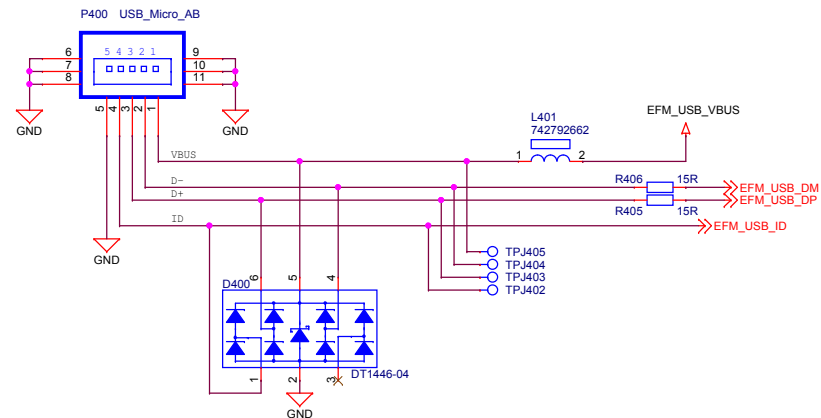
## USB Host Power enable




## EFM32 Power & Reset



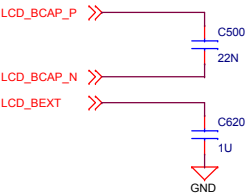
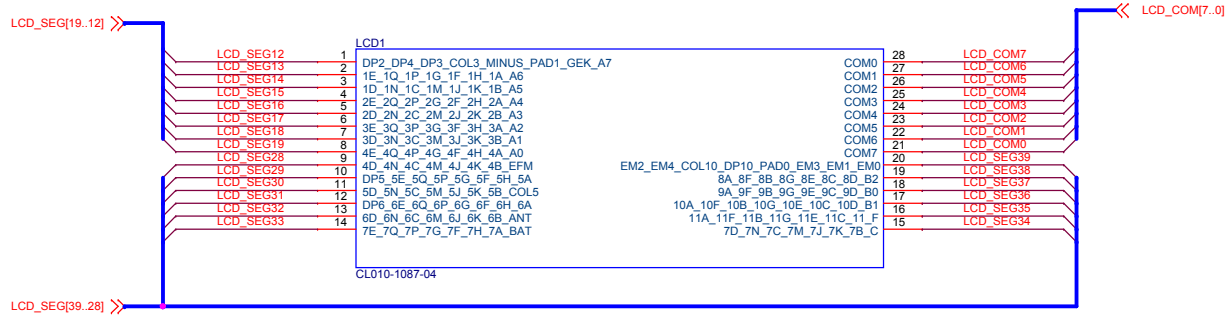
## USB Connection and ESD protection



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LCD signal connections

LCD Boost

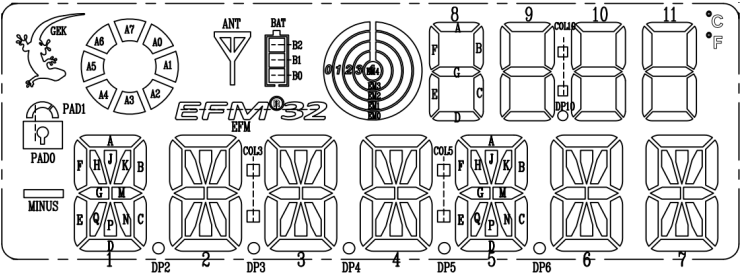


Segment names

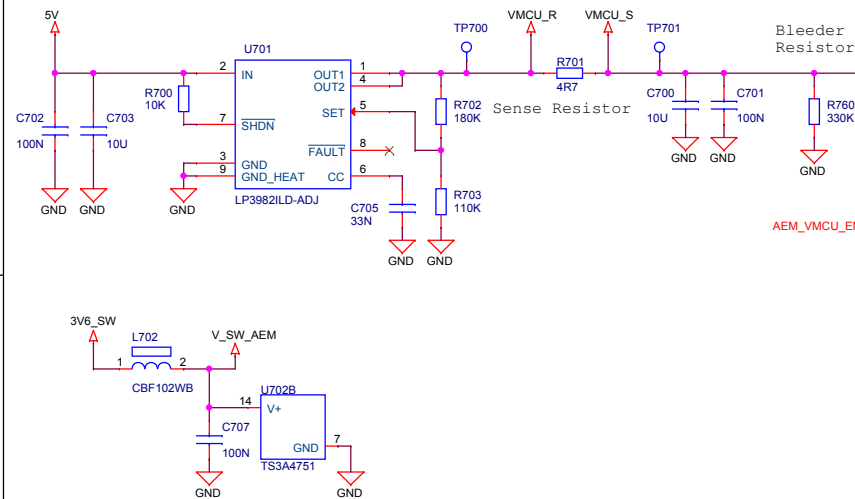
PIN	1	2	3	4	5	6	7	8	9	10	11	12	13	14
---	S0	S1	S2	S3	S4	S5	S6	S7	S8	S9	S10	S11	S12	S13
COM0	DP2	1 E	1 D	2 E	2 D	3 E	3 D	4 E	4 D	DP5	5 D	DP6	6 D	7 E
COM1	DP4	1 Q	1 N	2 Q	2 N	3 Q	3 N	4 Q	4 N	5 E	5 N	6 E	6 N	7 Q
COM2	DP3	1 P	1 C	2 P	2 C	3 P	3 C	4 P	4 C	5 Q	5 C	6 Q	6 C	7 P
COM3	COL3	1 G	1 M	2 G	2 M	3 G	3 M	4 G	4 M	5 P	5 M	6 P	6 M	7 G
COM4	MINUS	1 F	1 J	2 F	2 J	3 F	3 J	4 F	4 J	5 G	5 J	6 G	6 J	7 F
COM5	PAD1	1 H	1 K	2 H	2 K	3 H	3 K	4 H	4 K	5 F	5 K	6 F	6 K	7 H
COM6	GEK	1 A	1 B	2 A	2 B	3 A	3 B	4 A	4 B	5 H	5 B	6 H	6 B	7 A
COM7	A7	A6	A5	A4	A3	A2	A1	A0	EFM	5 A	COL5	6 A	ANT	BAT

PIN	15	16	17	18	19	20	21	22	23	24	25	26	27	28
---	S14	S15	S16	S17	S18	S19	COM7	COM6	COM5	COM4	COM3	COM2	COM1	COM0
COM0	7 D	11 A	10 A	9 A	8 A	EM2							COM1	COM0
COM1	7 N	11 F	10 F	9 F	8 F	EM4								
COM2	7 C	11 B	10 B	9 B	8 B	COL10						COM2		
COM3	7 M	11 G	10 G	9 G	8 G	DP10					COM3			
COM4	7 J	11 E	10 E	9 E	8 E	PAD0				COM4				
COM5	7 K	11 C	10 C	9 C	8 C	EM3			COM5					
COM6	7 B	11 D	10 D	9 D	8 D	EM1		COM6						
COM7	*C	*F	B1	B0	B2	EM0	COM7							

Segment placement

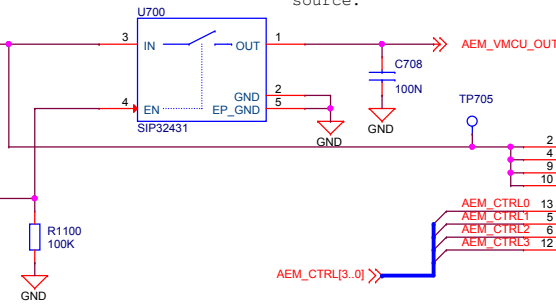


# MCU power regulator

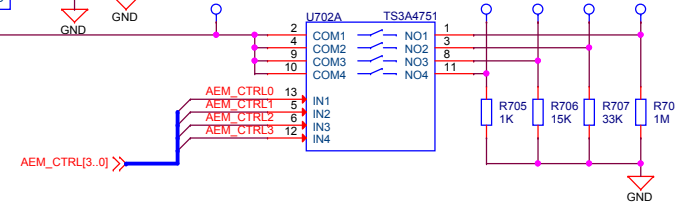


# Isolation switch

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

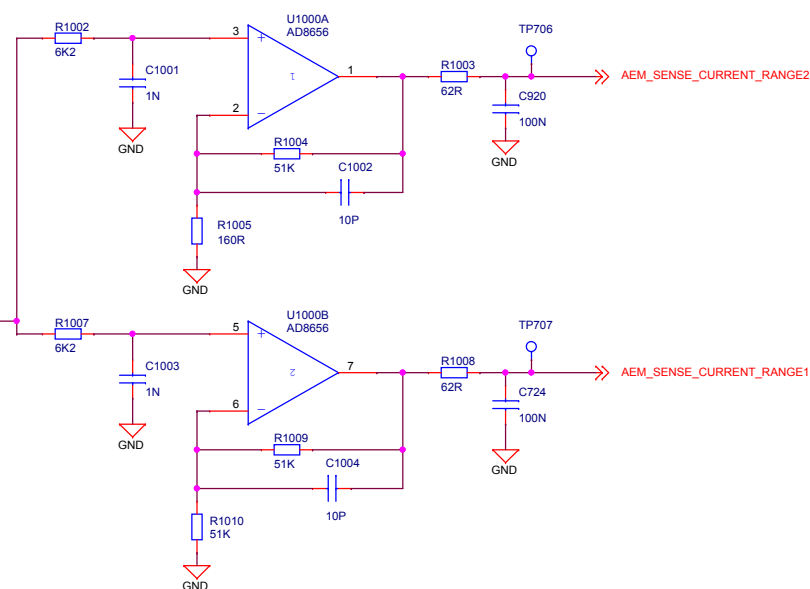
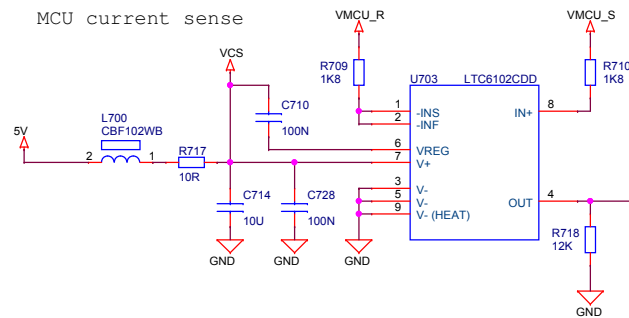


# AEM Calibration

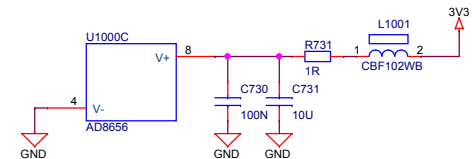
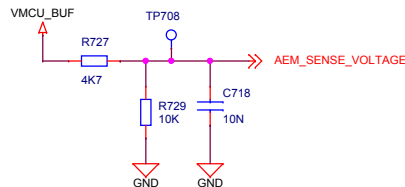


AEM_CTRL	Calibration Current
0x1	3.30 uA
0x2	100 uA
0x4	220 uA
0x6	320 uA
0x8	3.30 mA

# MCU current sense

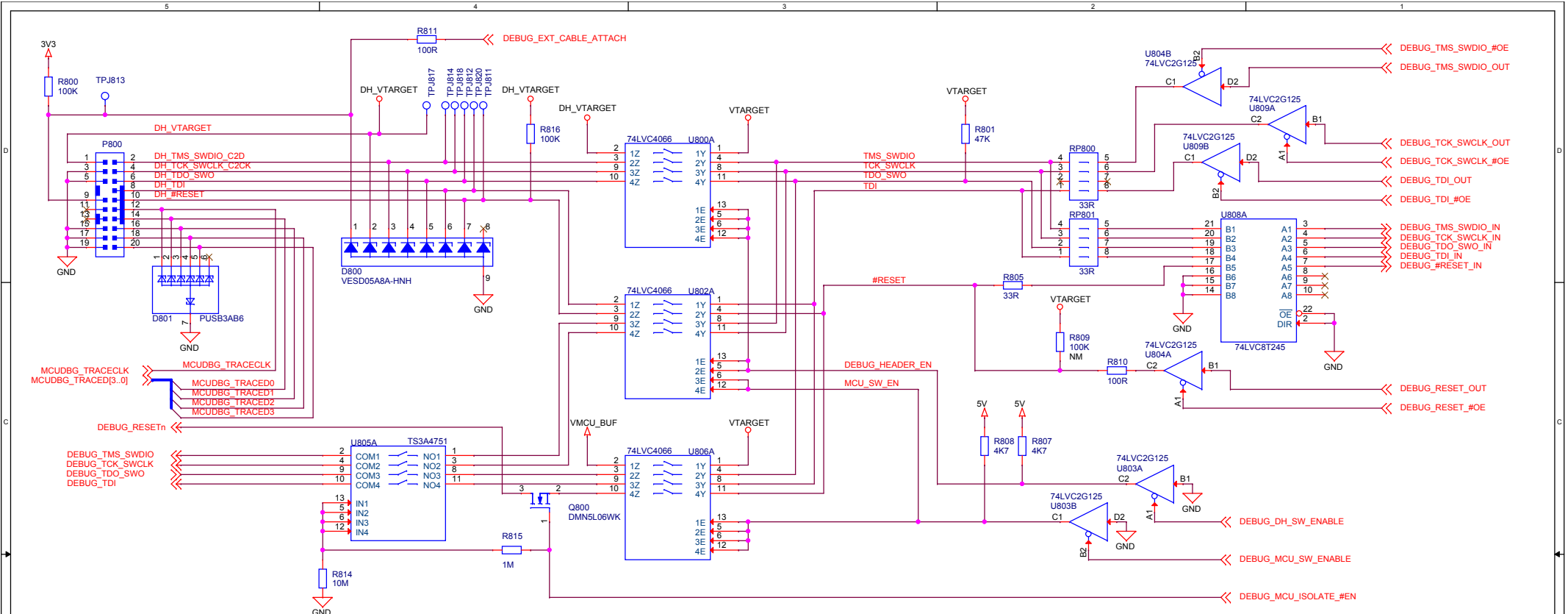


# MCU Voltage Sense

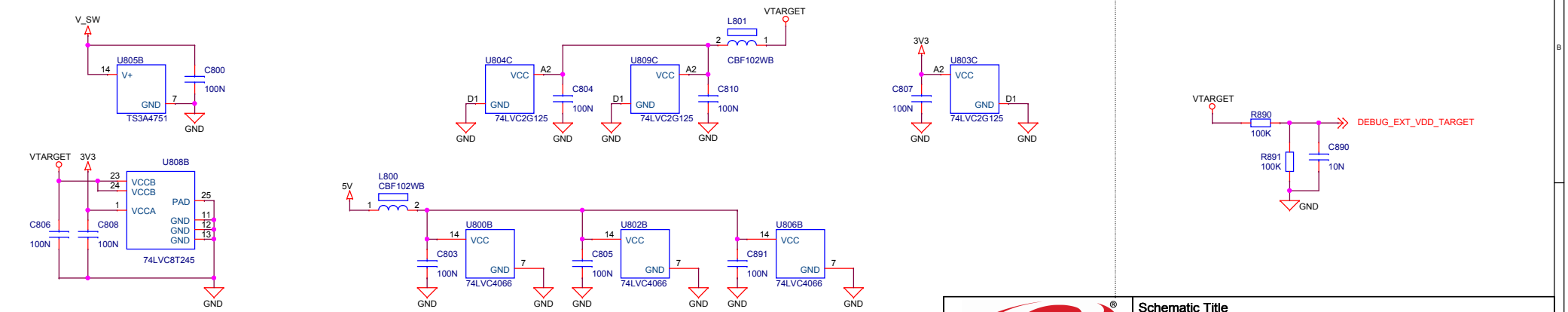


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<b>Advanced Energy Monitor</b>	
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Power & Decoupling



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**

**Schematic Title**

**EFM32 Leopard Gecko Starter Kit**

**Page Title**

**Debug Interface**

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