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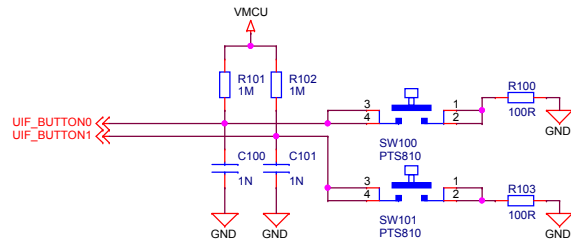
Revision History	
Rev.	Description
B00	updated to new STK platform

EFM32 Giant Gecko STK	
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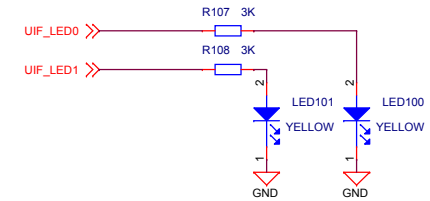
 SILICON LABS		Schematic Title EFM32 Leopard Gecko Starter Kit	
Designed: HEL		Approved: DDB	
Size A3	BOM Doc No: <Cage Code>	Page Title Title Page	
Design Created Date: Tuesday, December 06, 2016		Document number BRD2201A	Revision B02
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User Pushbuttons



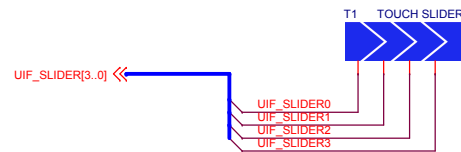
User LEDs

User LEDs

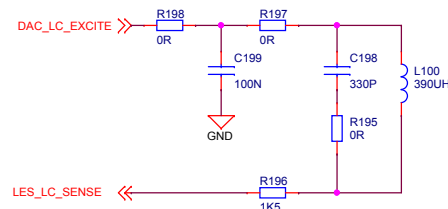


Touch Pads

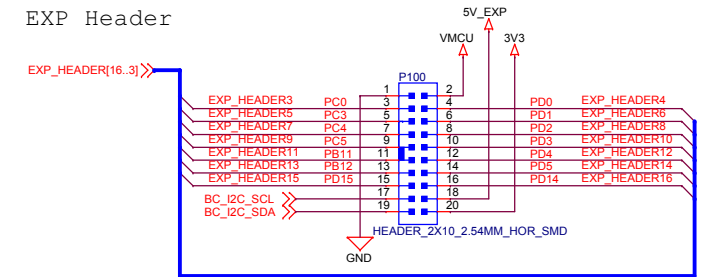
Touch slider



LESENSE LC-Sensor



EXP Header

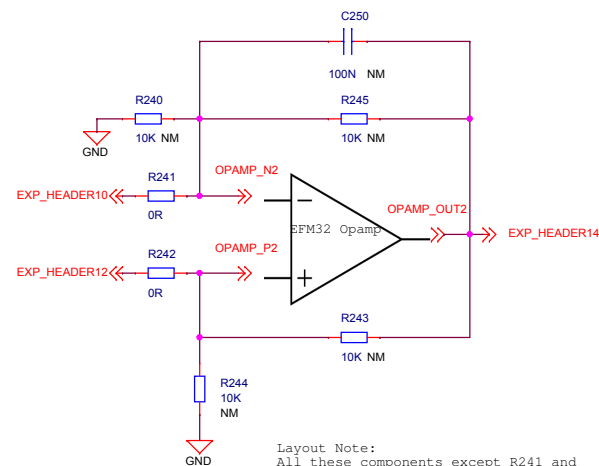


EXP-Header Functionality

1	GND		
3	PC0		ACMP0_CH4
5	PC3		ACMP0_CH5
7	PC4		ACMP1_CH4
9	PC5		ACMP0_O
11	PB11		DAC0_OUT0
13	PB12		DAC0_OUT1
15	PD15	I2C0_SCL#3	
17	Reserved for EXP Board	Identification	
19	Reserved for EXP Board	Identification	

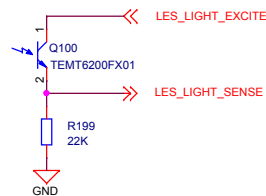
2	VMCU		
4	PD0	US1_TX	ADC0_CH0
6	PD1	US1_RX	ADC0_CH1
8	PD2	US1_CLK	ADC0_CH2
10	PD3	US1_CS	ADC0_CH3
12	PD4	LEU0_TX	ADC0_CH4
14	PD5	LEU0_RX	ADC0_CH5
16	PD6	I2C0_SDA#3	
18	5V		
20	3V3		

OPAMP Connection Footprint




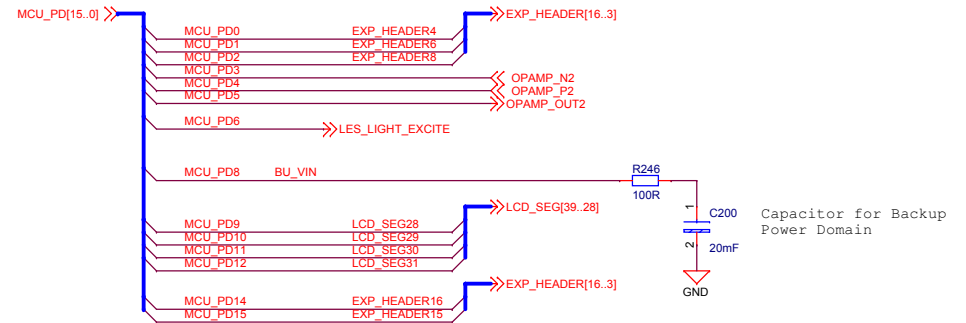
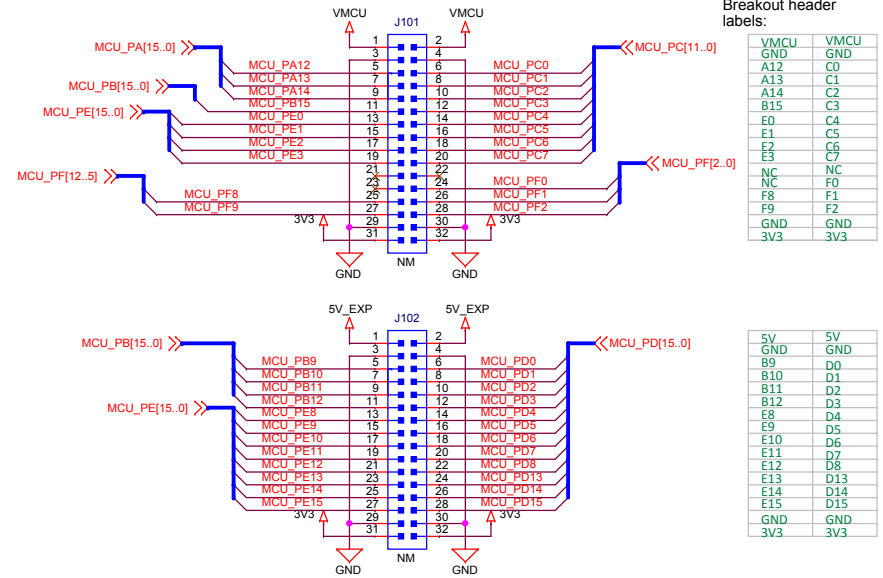
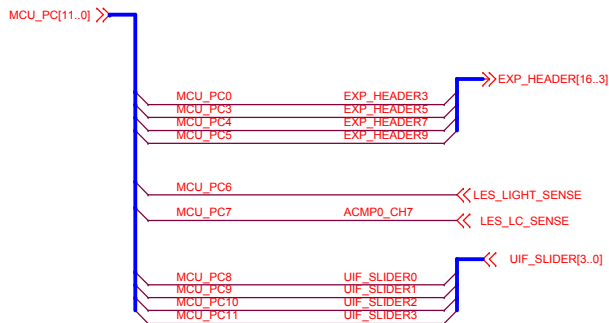
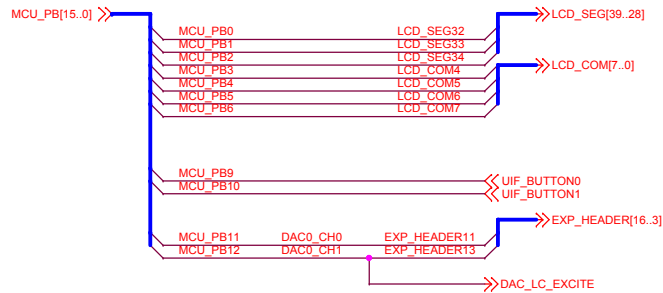
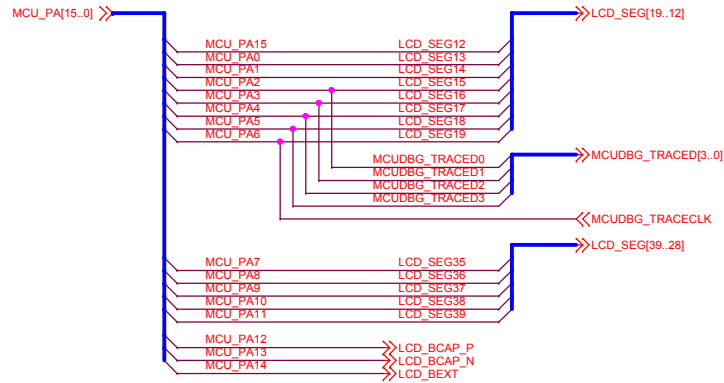
Layout Note:
All these components except R241 and R242 must be placed on the secondary side, and are not to be mounted in production.

Photo Transistor



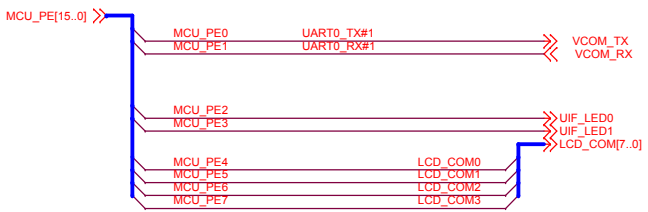
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 SILICON LABS		Schematic Title	
		EFM32 Leopard Gecko Starter Kit	
Designed: HEL		Page Title	
Size A3		User Interfaces	
BOM Doc No: <Cage Code>		Document number	
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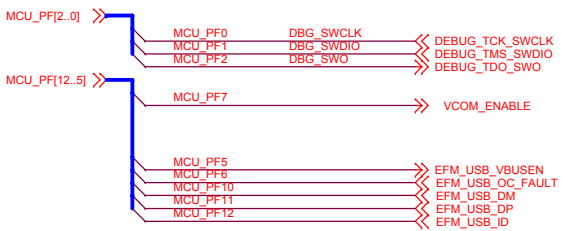


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PE Connections

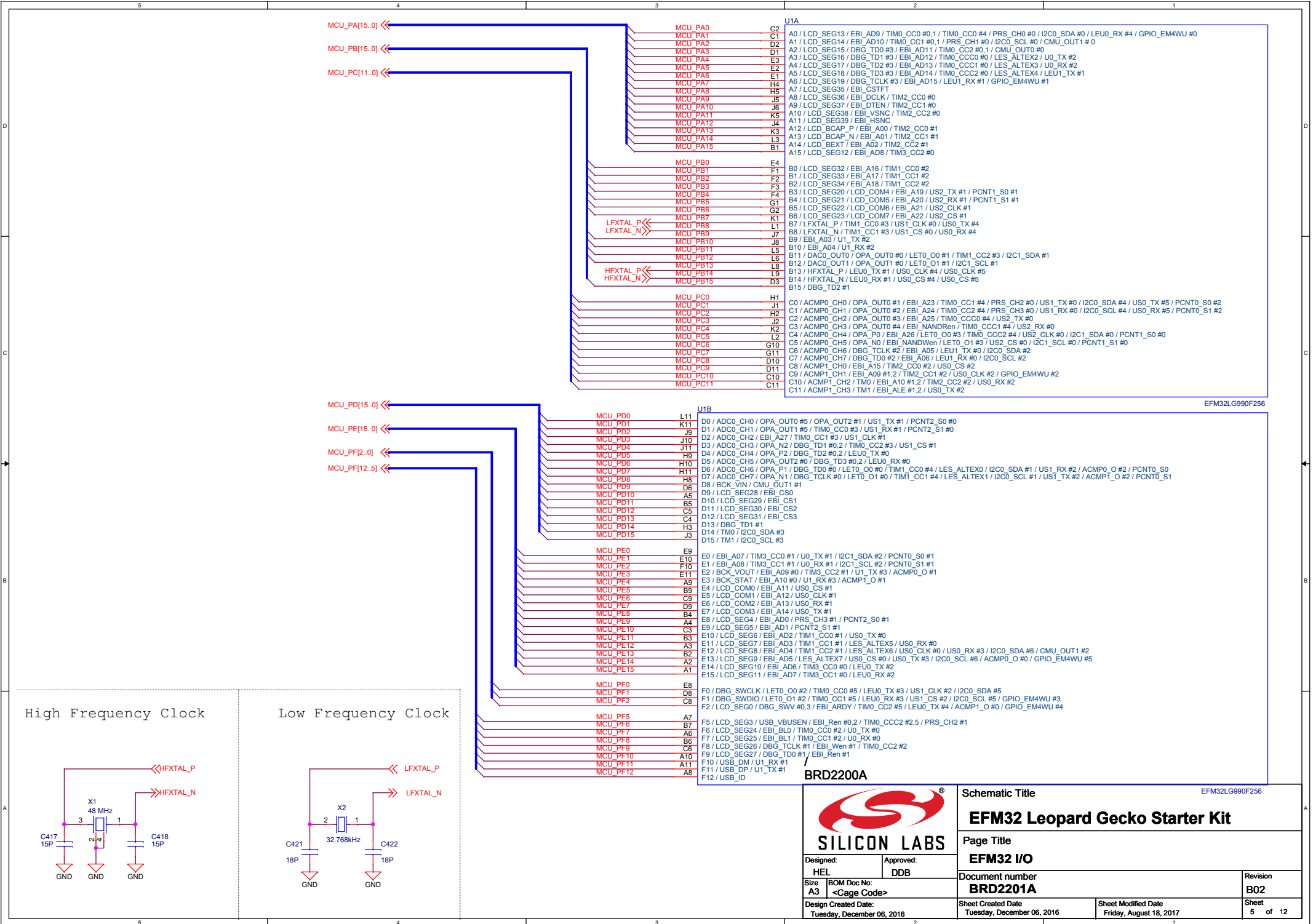


PF Connections

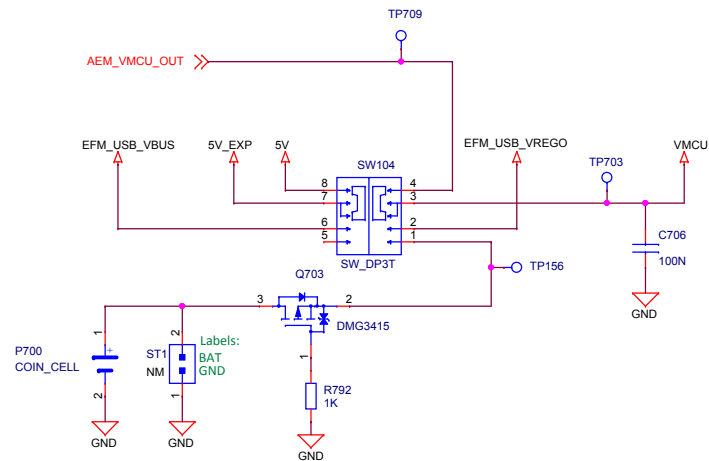


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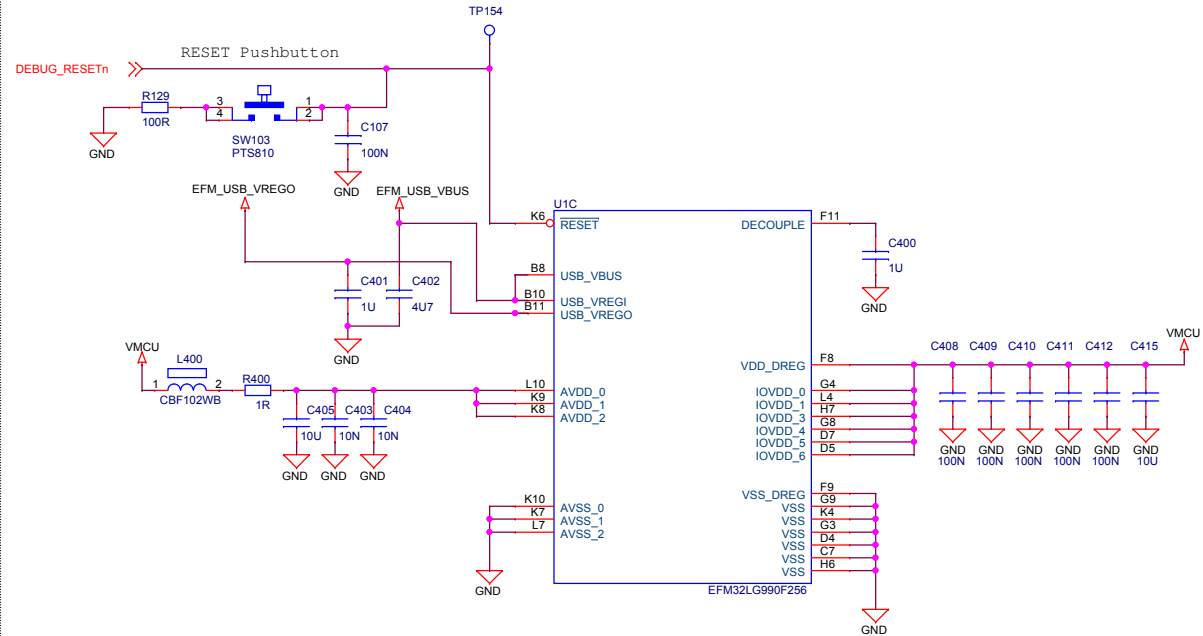
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		Page Title Signal Assignments	
Designed: HEL	Approved: DDB	Document number BRD2201A	
Size A3	BOM Doc No: <Cage Code>	Sheet Created Date Tuesday, June 20, 2017	Revision B02
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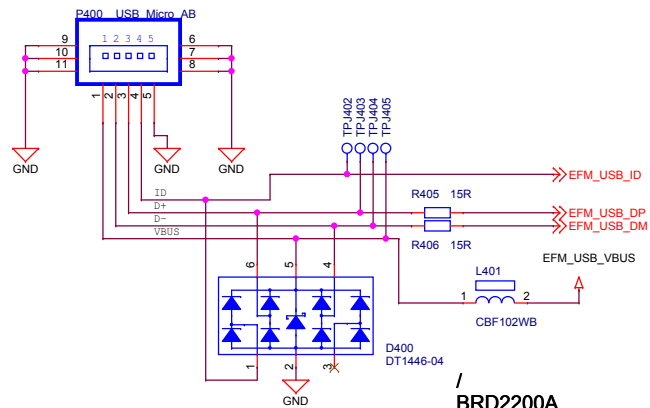
Power Select Switch: AEM/USB/BAT



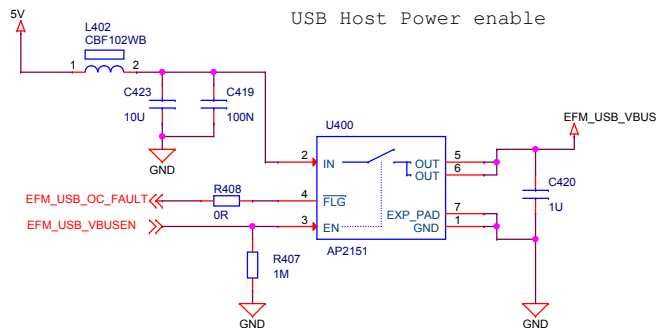
SWITCH POS	MODE DESCRIPTION
AEM	AEM Enabled, VMCU sourced from external 3.3V LDO powered by BC USB 5V supply, EXP header and breakout 5V sourced from BC USB 5V supply
USB	AEM Disabled. VMCU sourced from internal 3.3V LDO powered by MCU USB 5V supply, EXP header and breakout 5V sourced from MCU USB 5V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




USB Connection and ESD protection



USB Host Power enable

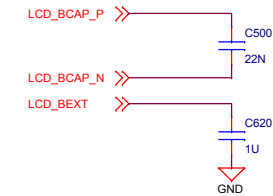
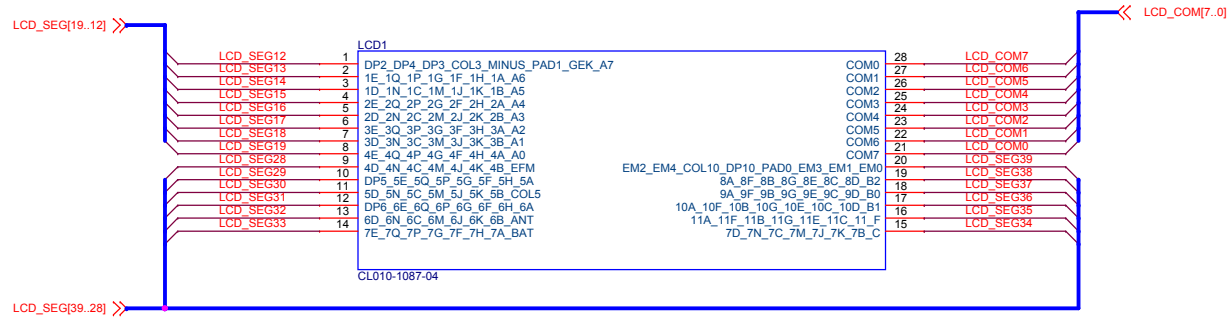


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		EFM32 Leopard Gecko Starter Kit	
Designed: HEL		Page Title	
Size A3		EFM32 Power	
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LCD signal connections

LCD Boost

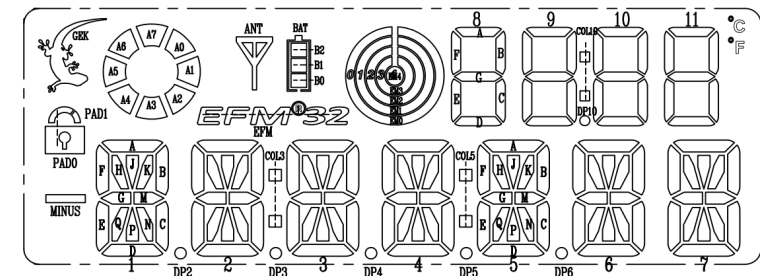


Segment names


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								COM0
COM1	7 N	11 F	10 F	9 F	8 F	EM4							COM1	
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							

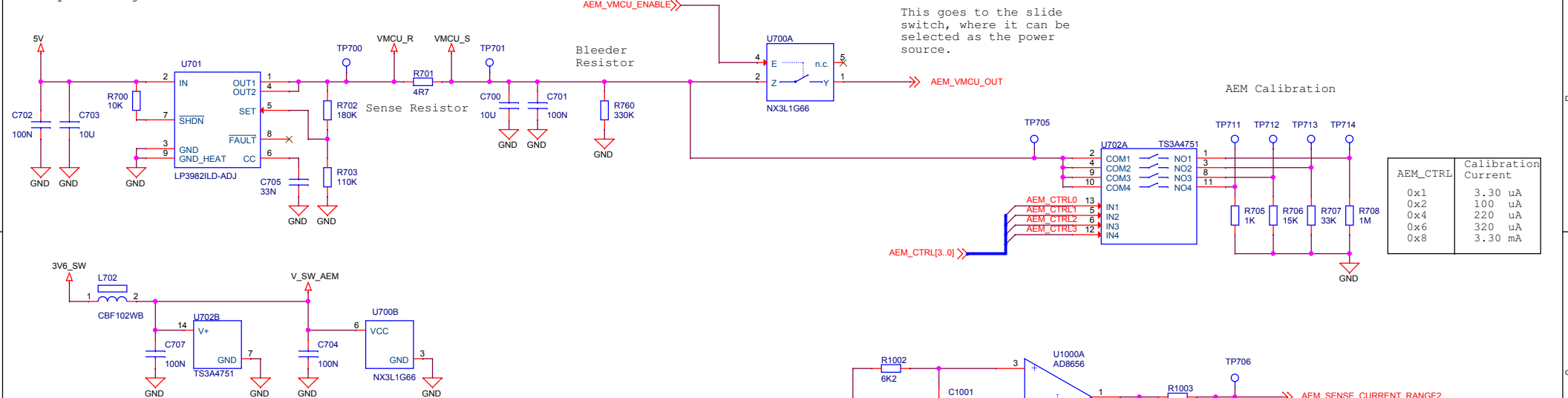
Segment placement



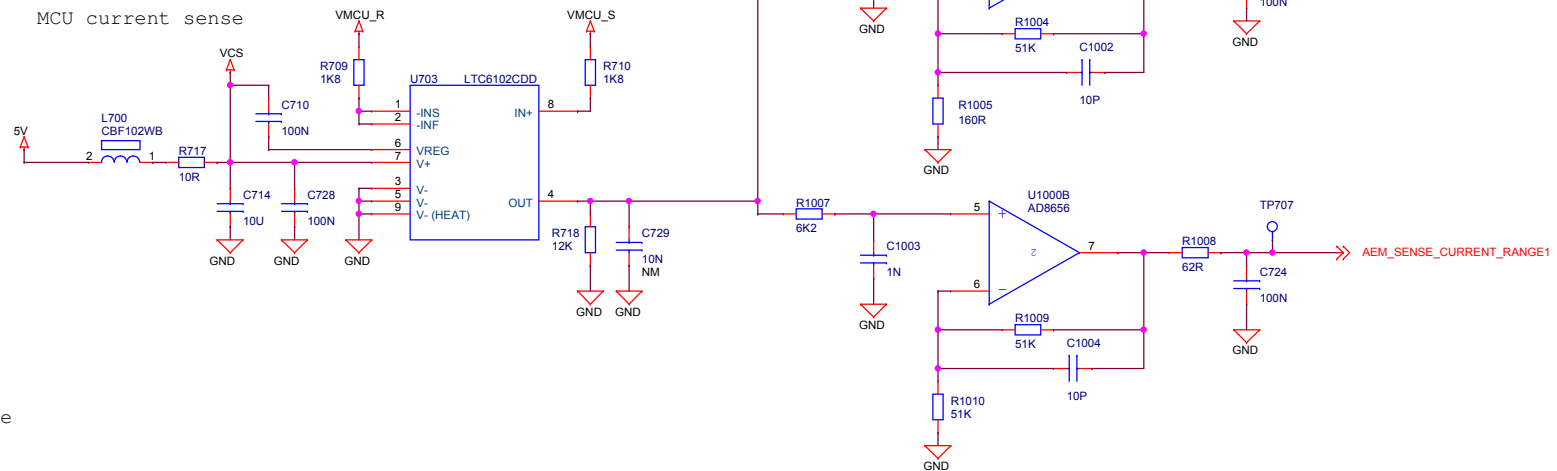
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		EFM32 Leopard Gecko Starter Kit	
Page Title		LCD	
Designed: HEL	Approved: DDB	Document number BRD2201A	
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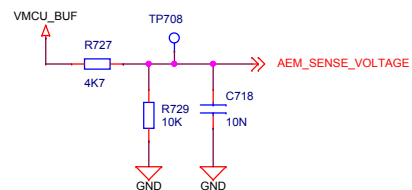
MCU power regulator




MCU current sense



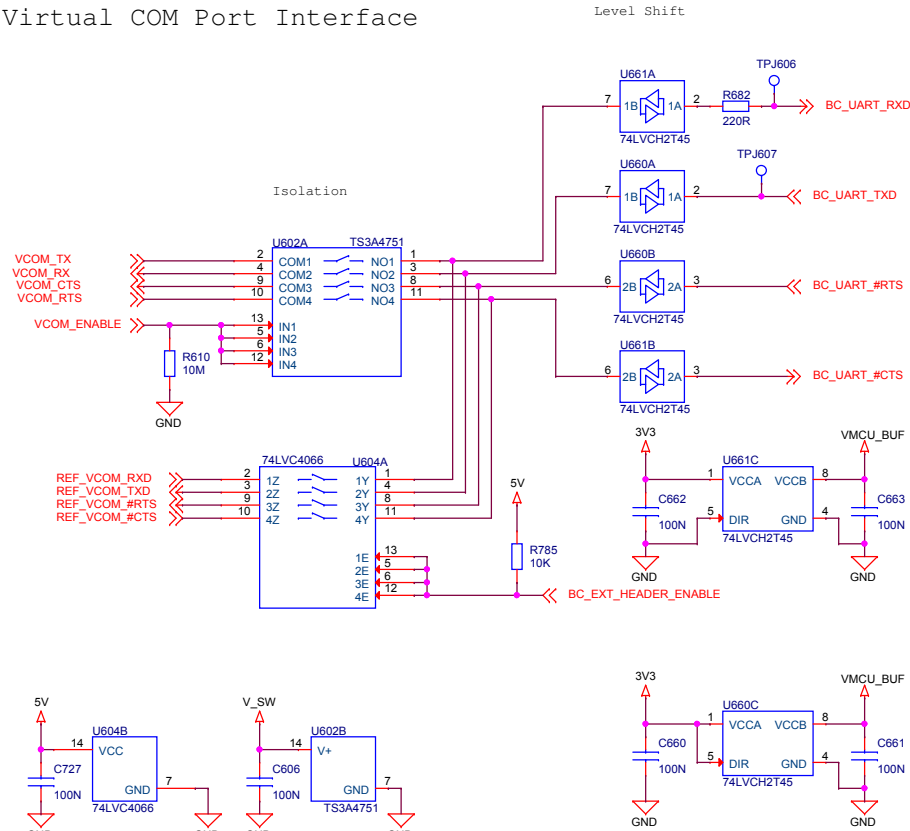
MCU Voltage Sense



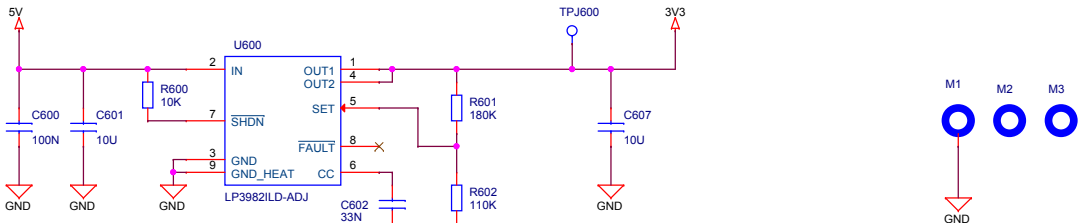
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		EFM32 Leopard Gecko Starter Kit	
Designed: HEL		Page Title	
Size A3		Advanced Energy Monitor	
BOM Doc No: <Cage Code>		Document number	Revision
Design Created Date: Tuesday, December 06, 2016		BRD2201A	B02
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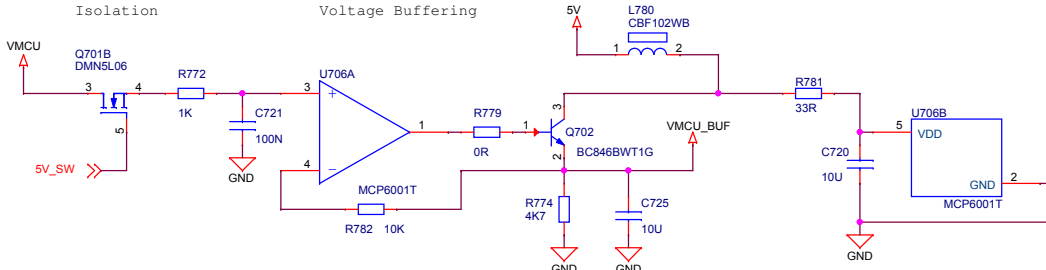
Virtual COM Port Interface



3V3 Regulator



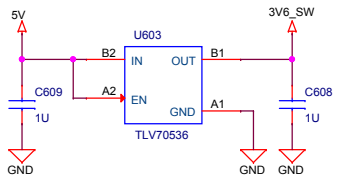
VMCU Voltage Mirror



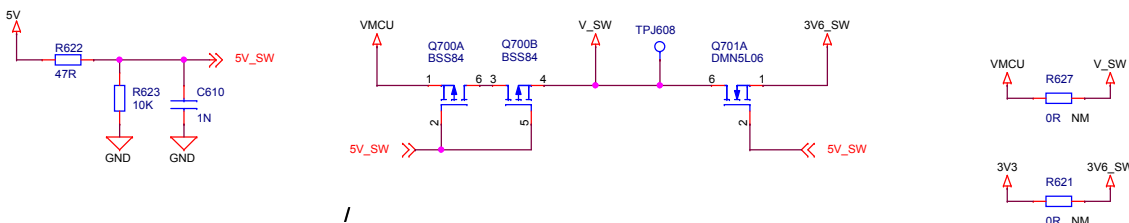
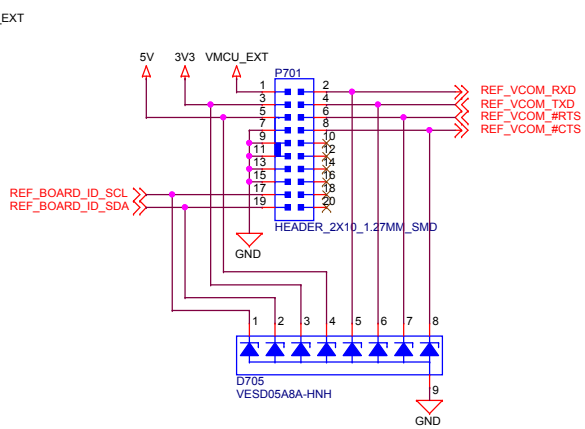
Power Supply for Analog Switches

The USB VBUS voltage is used to bias these transistors, turning the P-Channel MOSFETs (Q700) off, and the N-Channel MOSFETs (Q701) on.

J-Link USB Cable	PMOS State	NMOS State	V_SW	VMCU_SENSE
Connected	Off	ON	3.6V	VMCU
Disconnected	ON	OFF	VMCU	Isolated



EXTERNAL BOARD



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Size: A3
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Schematic Title

EFM32 Leopard Gecko Starter Kit

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Signal Assignments

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