

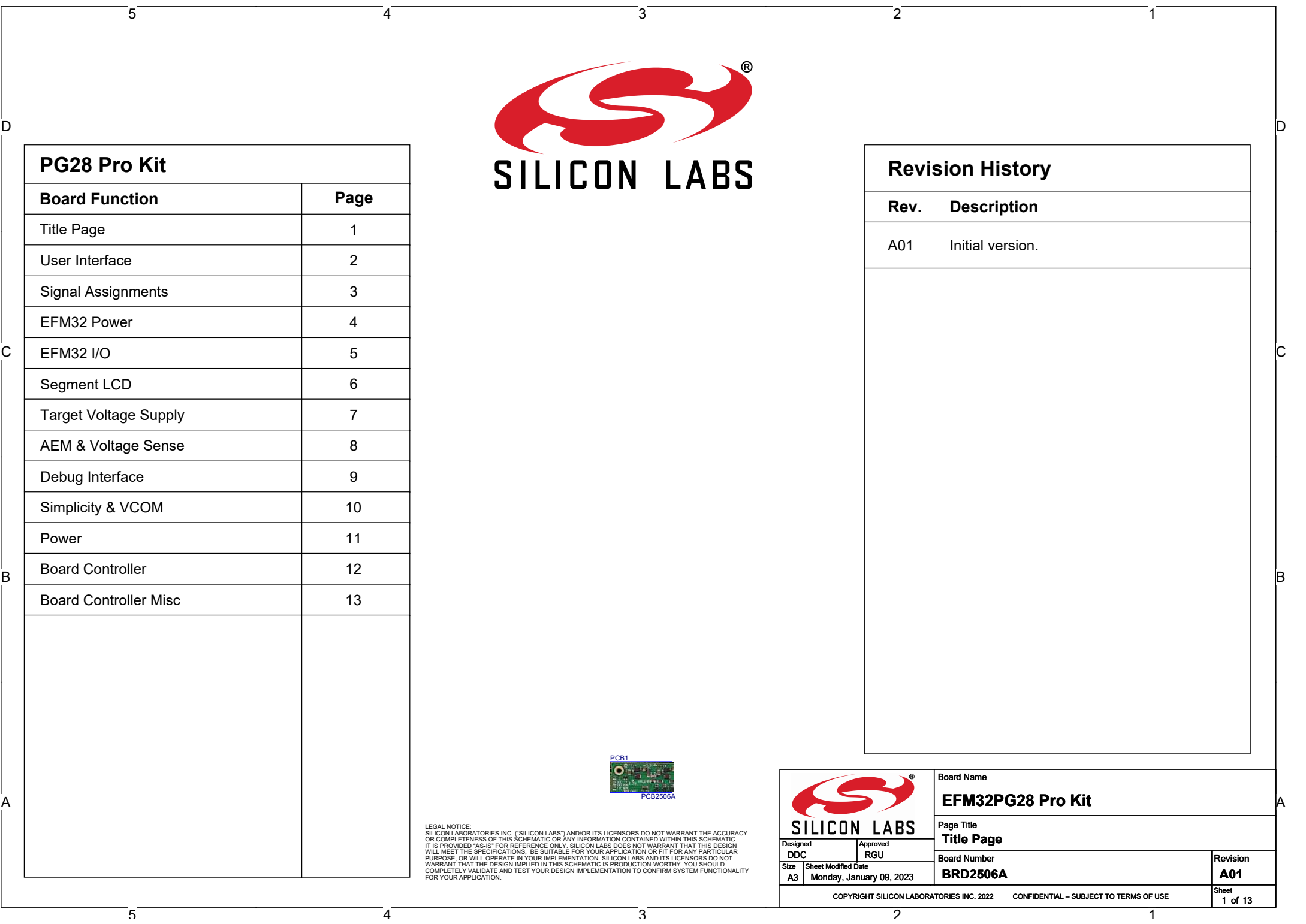



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<div>D</div> <div>C</div> <div>B</div> <div>A</div>	<div>D</div> <div>C</div> <div>B</div> <div>A</div>	<div>D</div> <div>C</div> <div>B</div> <div>A</div>	<div>D</div> <div>C</div> <div>B</div> <div>A</div>	<div>D</div> <div>C</div> <div>B</div> <div>A</div>
		<div>PCB1</div> <div>PCB2506A</div> <div>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.</div>	<div> <div>  <div> <div>Designed</div> <div>DDC</div> </div> <div> <div>Approved</div> <div>RGU</div> </div> </div> <div> <div> <div>Size</div> <div>A3</div> </div> <div> <div>Sheet Modified Date</div> <div>Monday, January 09, 2023</div> </div> </div> <div> <div>Board Name</div> <div>EFM32PG28 Pro Kit</div> </div> <div> <div>Page Title</div> <div>Title Page</div> </div> <div> <div>Board Number</div> <div>BRD2506A</div> </div> <div> <div>Revision</div> <div>A01</div> </div> <div> <div>COPYRIGHT SILICON LABORATORIES INC. 2022</div> <div>CONFIDENTIAL - SUBJECT TO TERMS OF USE</div> </div> <div> <div>Sheet</div> <div>1 of 13</div> </div> </div>	

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<div>D</div> <div>C</div> <div>B</div> <div>A</div>	<div>D</div> <div>C</div> <div>B</div> <div>A</div>	<div>D</div> <div>C</div> <div>B</div> <div>A</div>	<div>D</div> <div>C</div> <div>B</div> <div>A</div>	<div>D</div> <div>C</div> <div>B</div> <div>A</div>
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<div>D</div> <div>C</div> <div>B</div> <div>A</div>	<div>D</div> <div>C</div> <div>B</div> <div>A</div>	<div>D</div> <div>C</div> <div>B</div> <div>A</div>	<div>D</div> <div>C</div> <div>B</div> <div>A</div>	<div>D</div> <div>C</div> <div>B</div> <div>A</div>
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PG28 Pro Kit


Board Function	Page
Title Page	1
User Interface	2
Signal Assignments	3
EFM32 Power	4
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Segment LCD	6
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PCB1



PCB2506A


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SILICON LABS®

Revision History

Rev.	Description
A01	Initial version.



SILICON LABS®

Designed	Approved
DDC	RGU
Size	Sheet Modified Date
A3	Monday, January 09, 2023

Board Name

EFM32PG28 Pro Kit

Page Title

Title Page

Board Number

BRD2506A

Revision

A01

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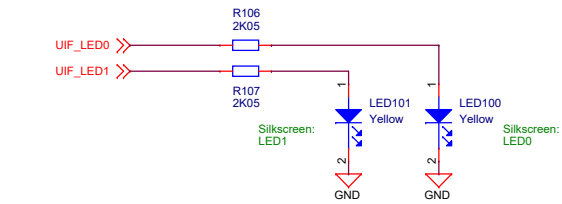
3

2

1

The image displays three circuit diagrams for the VMCU board, each with a title and a component count in the top right corner.

- Push Buttons** (5 components): This diagram shows the connection of two push buttons, SW100 and SW101, to the VMCU. Each button is connected to a 1MΩ resistor (R100, R101) and a 1N capacitor (C102, C103) to GND. The buttons are also connected to 100Ω resistors (R104, R105) leading to GND. The silkscreen labels for the buttons are BTN0 and BTN1.
- LEDs** (3 components): This diagram shows the connection of two LEDs, LED100 and LED101, to the VMCU. Each LED is connected to a 2K05 resistor (R106, R107) and a 1N capacitor (C102, C103) to GND. The LEDs are also connected to 100Ω resistors (R104, R105) leading to GND. The silkscreen labels for the LEDs are LED1 and LED0.
- LESENSE LC-Sensor** (1 component): This diagram shows the connection of the LESENSE LC-Sensor to the VMCU. The sensor is connected to a 100Ω resistor (R121) and a 100N capacitor (C123) to GND. The sensor is also connected to a 1K5 resistor (R126) leading to GND. The silkscreen label for the sensor is LC Sense.



Silkscreen: LC Sense

Breakout Pads

EXP Header

Bottom Row		
1	GND	
3	AIN1	
5	B0	GPIO
7	B7	GPIO
9	B1	GPIO
11	NC	
13	C11	GPIO
15	D10	I2C_SCL
17	Reserved for EXP Board Identification	
19	Reserved for EXP Board Identification	

Top Row		
2	VMCU	
4	D11	SPI_MOSI
6	D12	SPI_MISO
8	D13	SPI_CLK
10	D14	SPI_CS
12	D7	UART_TX
14	D8	UART_RX
16	D9	I2C_SDA
18	5V	
20	3V3	

ADC VREF

SMA Connector

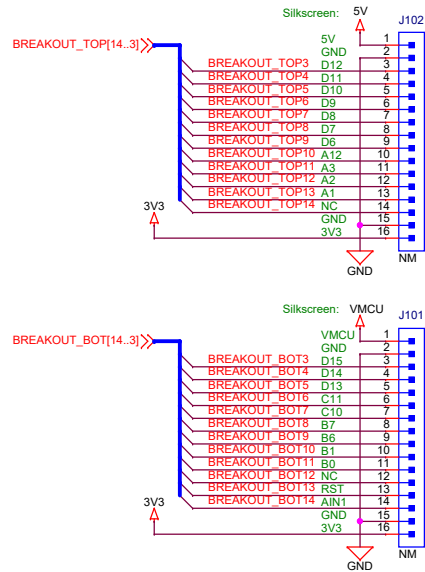
EXP Header Functionality

Bottom Row		
1	GND	
3	AIN1	
5	B0	GPIO
7	B7	GPIO
9	B1	GPIO
11	NC	
13	C11	GPIO
15	D10	I2C_SCL
17	Reserved for EXP Board Identification	
19	Reserved for EXP Board Identification	

Top Row		
2	VMCU	
4	D11	SPI_MOSI
6	D12	SPI_MISO
8	D13	SPI_CLK
10	D14	SPI_CS
12	D7	UART_TX
14	D8	UART_RX
16	D9	I2C_SDA
18	5V	
20	3V3	

ADC VREF

SMA Connector



Bottom Row	
1	GND
3	AIN1
5	B0 GPIO
7	B7 GPIO
9	B1 GPIO
11	NC
13	C11 GPIO
15	D10 I2C_SCL
17	Reserved for EXP Board Identification
19	Reserved for EXP Board Identification

Top Row	
2	VMCU
4	D11 SPI_MOSI
6	D12 SPI_MISO
8	D13 SPI_CLK
10	D14 SPI_CS
12	D7 UART_TX
14	D8 UART_RX
16	D9 I2C_SDA
18	5V
20	3V3

EXP_HEADER[16..31]

 EXP_HEADER3

 EXP_HEADER5

 EXP_HEADER7

 EXP_HEADER9

 EXP_HEADER11

 EXP_HEADER13

 EXP_HEADER15

 BC_I2C_EXP_SCL

 BC_I2C_EXP_SDA

 GND

 P101

 1

 2

 3

 4

 5

 6

 7

 8

 9

 10

 11

 12

 13

 14

 15

 16

 17

 18

 19

 20

 VMCU 5V

 3V3

 EXP_HEADER4

 EXP_HEADER6

 EXP_HEADER8

 EXP_HEADER10

 EXP_HEADER12

 EXP_HEADER14

 EXP_HEADER16

 HEADER_2X10_2.54MM_TH

Relative Humidity & Temperature Sensor

SENOR/ADC Power Isolation

VMCU

SENSOR_I2C_SCL

SENSOR_I2C_SDA

SENSOR_ENABLE

ADC_VREF_ENABLE

VMCU

R118 10K NM

R112 10M

R985 10M

U103A TS3A4751

COM1

COM2

COM3

COM4

NO1

NO2

NO3

NO4

U102 Si7021-A20

SCL

SDA

VDD

GND

DNC

DNC

V_SENSOR

V_ADC

R108 4K7

R109 4K7

C110 100N

V_SENSOR

V_SW

C952 100N

U103B TS3A4751

V+

GND

P100 SMA

C127 4U7

R128 549R

R129 14R

C130 10N

ADC_SMA_IN

0V - VMCU

5

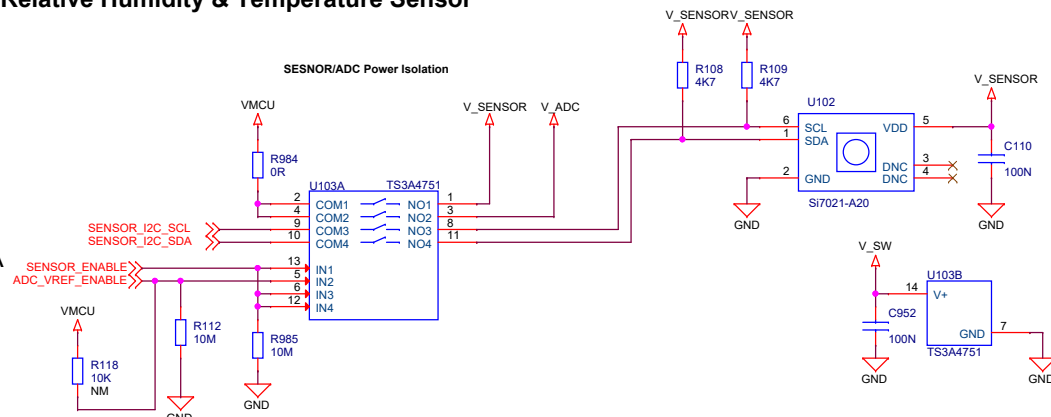
4

3

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1

 SILICON LABS		Board Name	
		EFM32PG28 Pro Kit	
Designed DDC Approved RGU		Page Title	
		User Interface	
Size	Sheet Modified Date	Board Number	Revision
A3	Wednesday, January 04, 2023	BRD2506A	A01
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Silkscreen:
ADC Input
0V - VMCU

2
3
4
5

P100
SMA

1

C127
4U7

R128
549R

R129
14R

C130
10N

ADC_SMA_IN

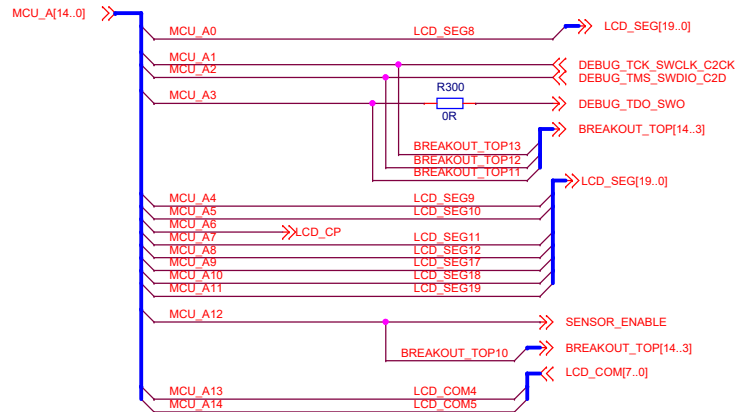
GND

GND

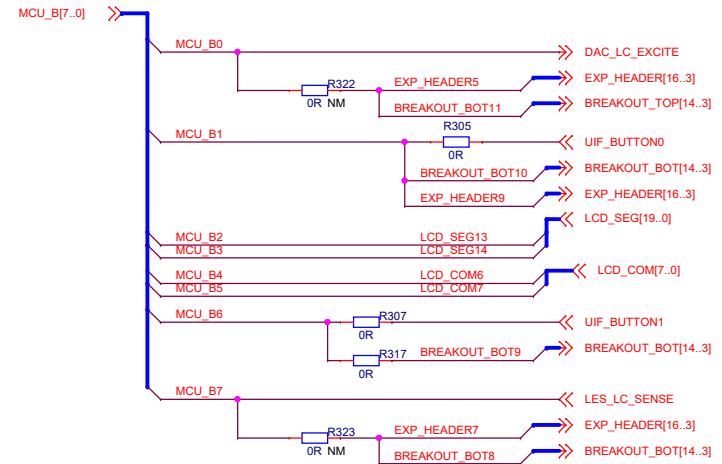
GND

 SILICON LABS		Board Name	
		EFM32PG28 Pro Kit	
		Page Title	
		User Interface	
Designed DDC		Approved RGU	
Size A3	Sheet Modified Date Wednesday, January 04, 2023		Board Number BRD2506A
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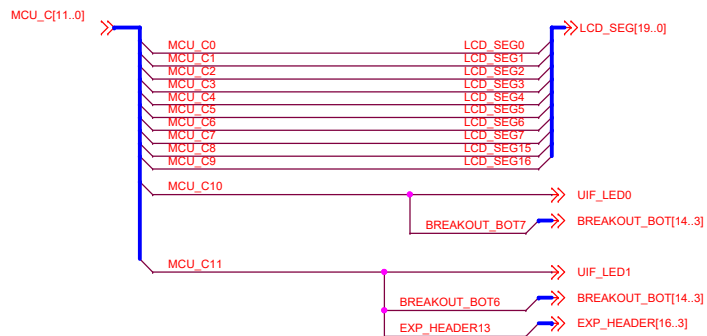
PA Connections



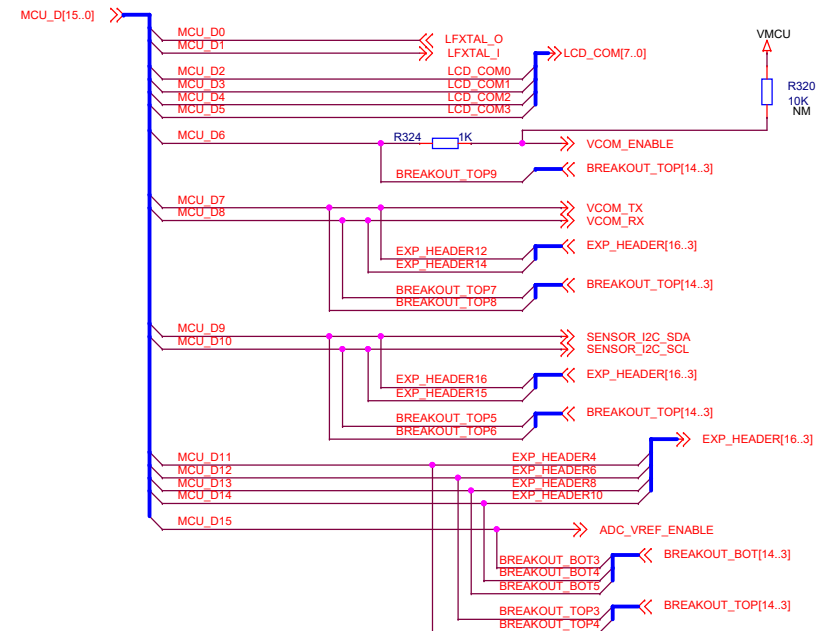
PB Connections



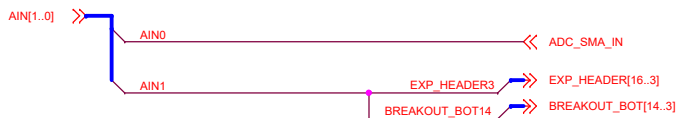
PC Connections




PD Connections

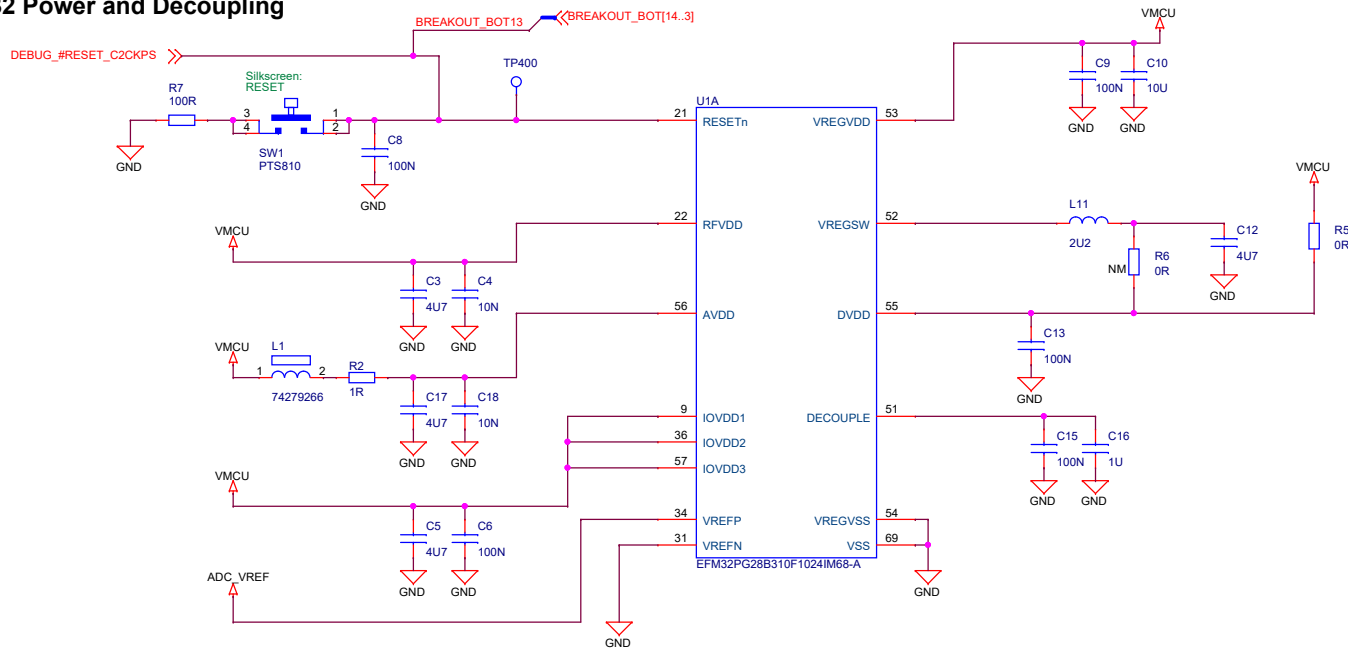


ADC Connections



		Board Name	
		EFM32PG28 Pro Kit	
Designed DDC		Page Title	
Approved RGU		Signal Assignments	
Size A3		Board Number	
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		Sheet 3 of 13	

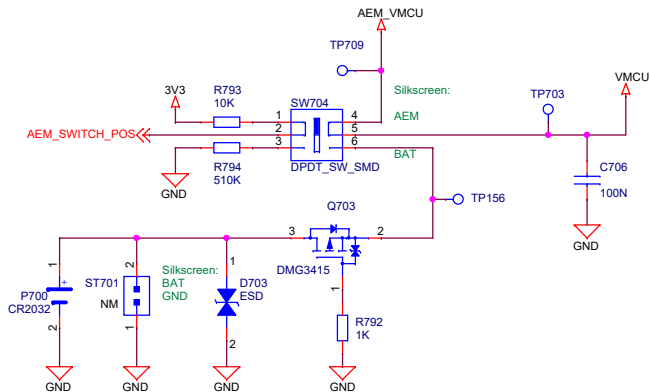
EFM32 Power and Decoupling



Note:
External Power supplies DVDD when R5 is mounted
For the internal regulator to supply VDD, mount R6 and demount R5

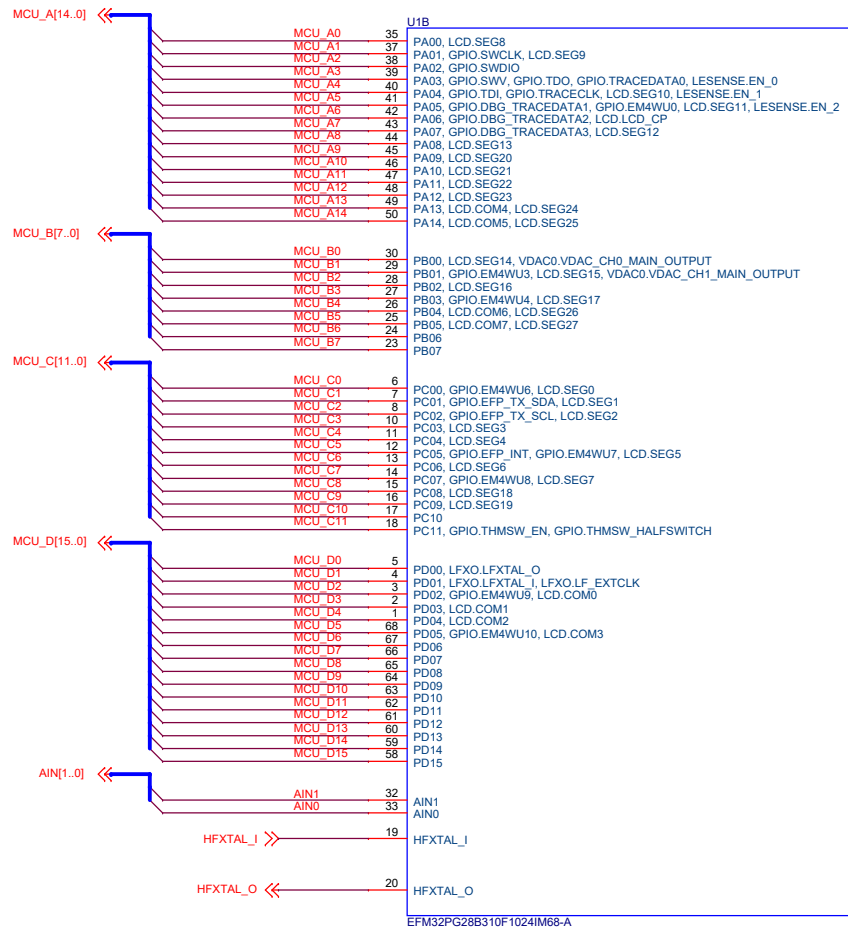
Power Select Switch: AEM/BAT

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

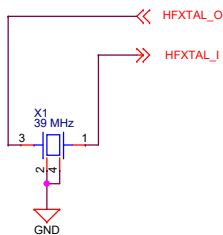


		Board Name EFM32PG28 Pro Kit	
		Page Title EFM32 Power	
Designed DDC	Approved RGU	Board Number BRD2506A	Revision A01
Size A3	Sheet Modified Date Tuesday, January 03, 2023	Copyright Silicon Laboratories Inc. 2022 CONFIDENTIAL – SUBJECT TO TERMS OF USE	
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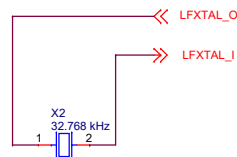
EFM32 MCU



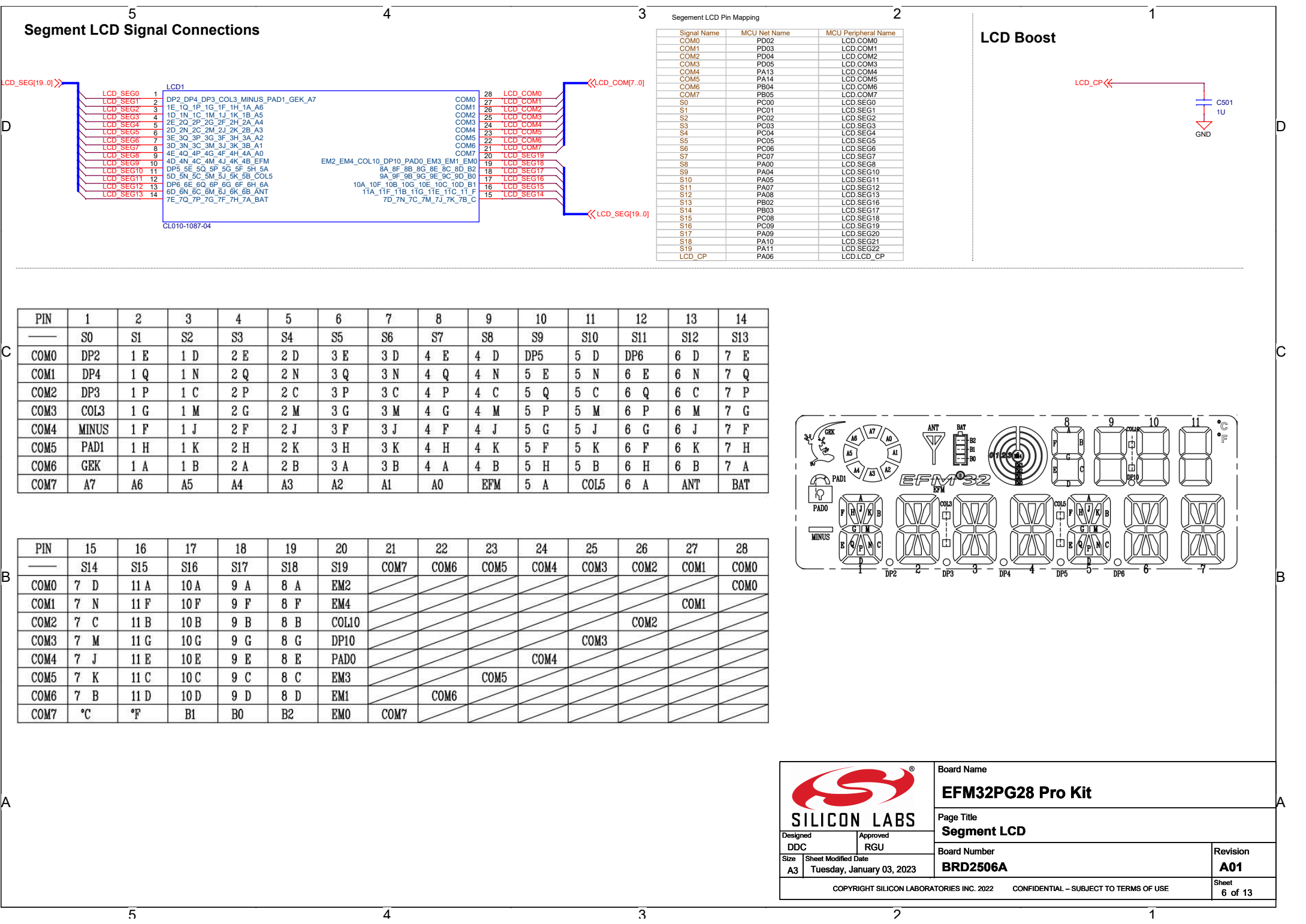
High Frequency Clock



Low Frequency Clock



		Board Name	
		EFM32PG28 Pro Kit	
Designed DDC		Page Title	
Size A3		EFM32 I/O	
Sheet Modified Date		Board Number	
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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	PADO				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							

EFM32

ANT

BAT

DP2

DP3

DP4

DP5

DP6

7

8

9

10

11

°C

°F

MINUS

PAD1

PADO

COL5

COL3

COL10

DP10

EM3

EM4

EM2

EM1

EM0

COM7

COM6

COM5

COM4

COM3

COM2

COM1

COM0

SILICON LABS

Designed DDC

Size A3

Approved RGU

Sheet Modified Date Tuesday, January 03, 2023

Board Name EFM32PG28 Pro Kit

Page Title Segment LCD

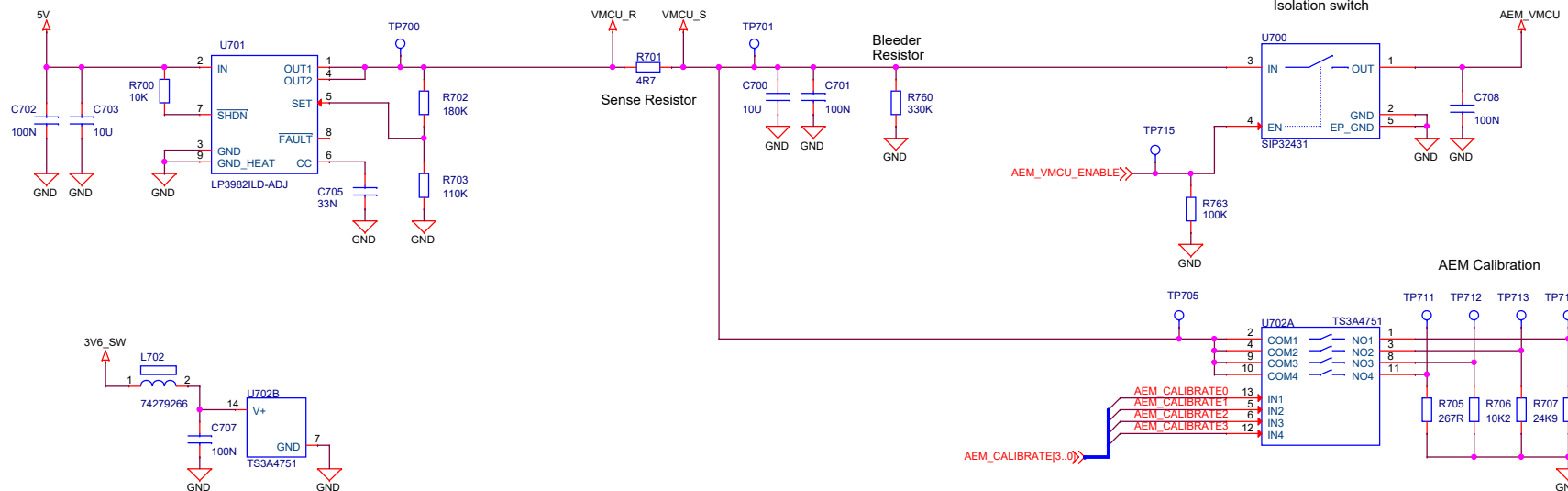
Board Number BRD2506A

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Revision A01

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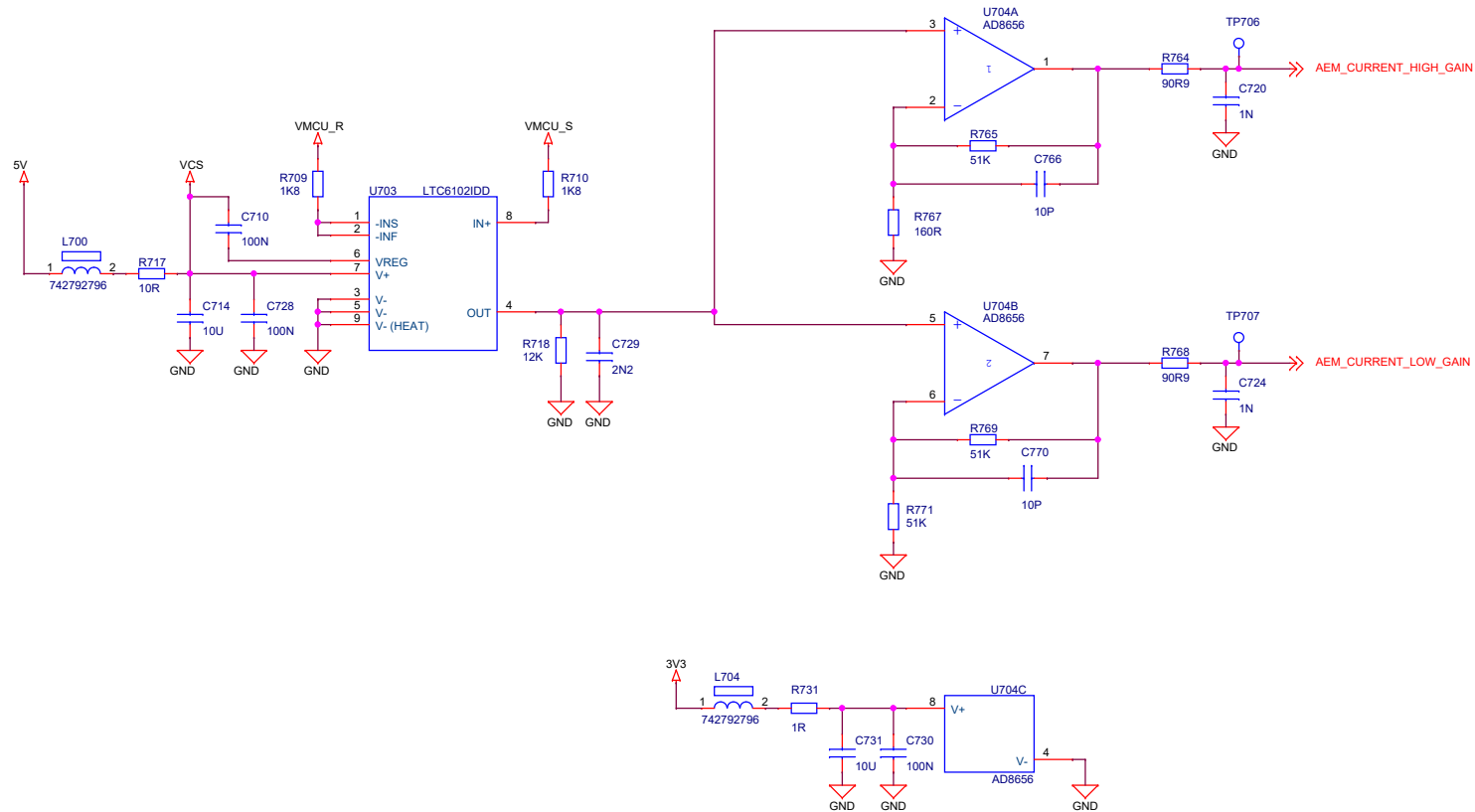
MCU Power Regulator



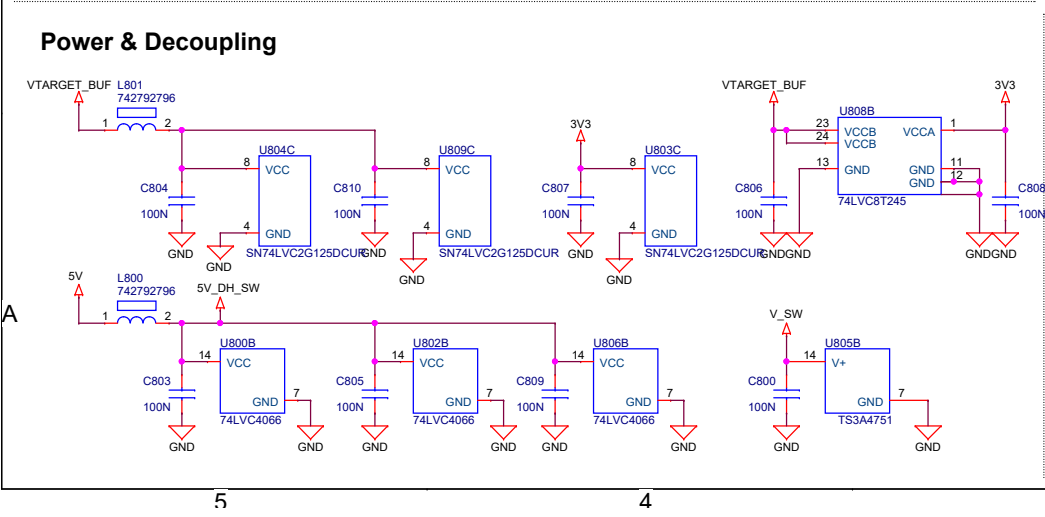
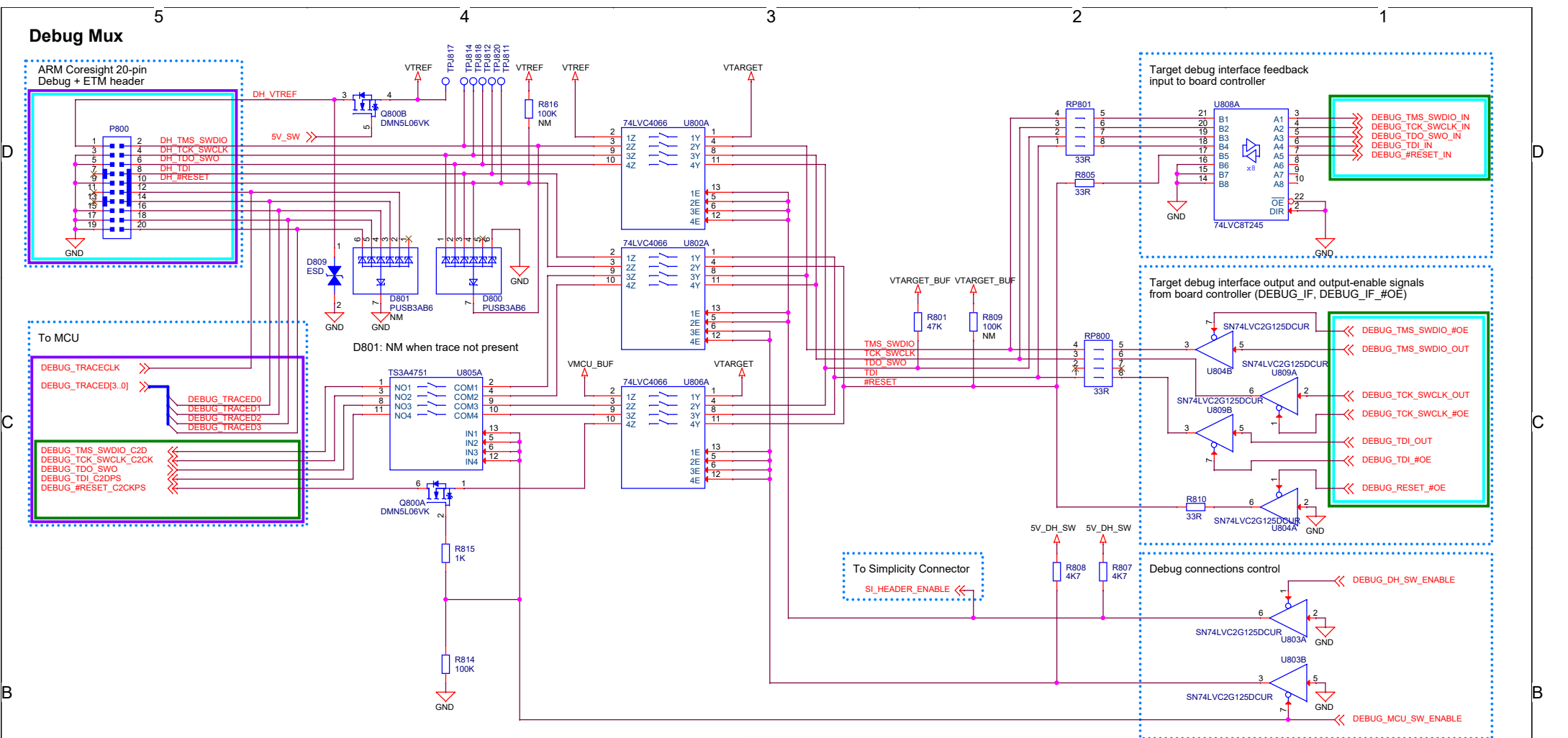
This goes to the slide switch, where it can be selected as the power source.

CALIBRATE	Calibration Current
0x1	3.30 uA
0x2	132.5 uA
0x4	323.5 uA
0x6	456.1 uA
0x8	12.36 mA

MCU Current Sense




		Board Name	
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A3		AEM	
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Mode	DEBUG_DH_SW_ENABLE	DEBUG_MCU_SW_ENABLE	DEBUG_IF_#OE	VTREF	VTARGET
Debug Out	1	0	0/1	External voltage	External voltage
MCU Debug	0	1	0/1	Disconnected	VMCU
Debug In	1	1	1	VMCU	VMCU
Debug Off	0	0	1	-	-

Color coded frames indicates which groups of signal nodes that are active in a given debug mode



SILICON LABS

Board Name
EFM32PG28 Pro Kit

Page Title
Debug Interface

Board Number
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Revision
A01

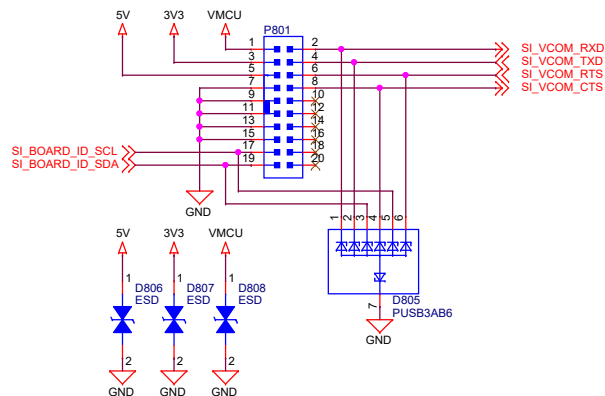
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Approved RGU

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Sheet Modified Date
Tuesday, January 03, 2023

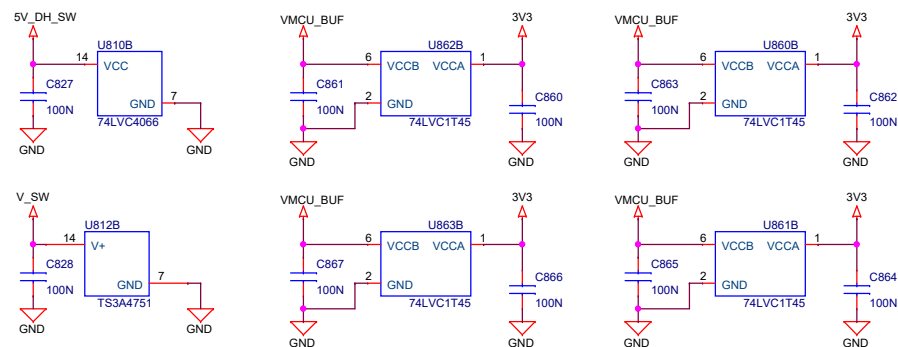
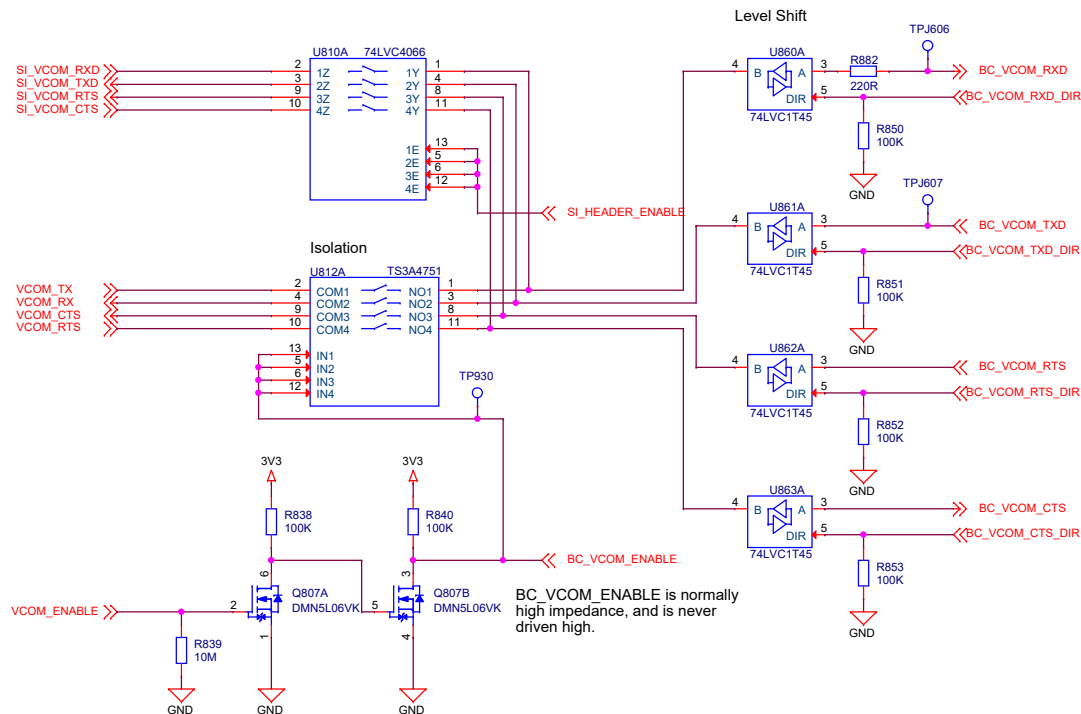
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Simplicity Connector



VCOM Interface



		Board Name	
		EFM32PG28 Pro Kit	
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Approved RGU		Simplicity & VCOM	
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The image contains three circuit diagrams, labeled 1, 2, and 3, showing different USB to J-Link adapter configurations.

Diagram 1 (Left): This diagram shows a USB to J-Link adapter using a P601 AMPH 10137065 chip. The chip is a 28-pin DIP package. The connections are as follows:

- Pin 1 (A12):** GND
- Pin 2 (A11):** RX2+
- Pin 3 (A10):** RX2-
- Pin 4 (A9):** VBUS
- Pin 5 (A8):** SBU1
- Pin 6 (A7):** D-
- Pin 7 (A6):** D+
- Pin 8 (A5):** CC1
- Pin 9 (A4):** VBUS
- Pin 10 (A3):** TX1-
- Pin 11 (A2):** TX1+
- Pin 12 (A1):** GND
- Pin 13 (B1):** GND
- Pin 14 (B2):** TX2+
- Pin 15 (B3):** TX2-
- Pin 16 (B4):** VBUS
- Pin 17 (B5):** CC2
- Pin 18 (B6):** D+
- Pin 19 (B7):** D-
- Pin 20 (B8):** SBU2
- Pin 21 (B9):** VBUS
- Pin 22 (B10):** TX1-
- Pin 23 (B11):** TX1+
- Pin 24 (B12):** GND
- Pin 25:** SHIELD
- Pin 26:** SHIELD
- Pin 27:** SHIELD
- Pin 28:** GND

The external connections are:

- USB_DM:** Connected to A10 and B10.
- USB_DP:** Connected to A9 and B9.
- USBC_CC1:** Connected to A8 and B8.
- USBC_VBUS:** Connected to A4 and B4.
- TPJ614:** Connected to B12.

Diagram 2 (Middle): This diagram shows a USB to J-Link adapter using a D600 DT1446-04 chip. The chip is a 16-pin DIP package. The connections are as follows:

- Pin 1:** GND
- Pin 2:** GND
- Pin 3:** GND
- Pin 4:** GND
- Pin 5:** GND
- Pin 6:** GND
- Pin 7:** GND
- Pin 8:** GND
- Pin 9:** GND
- Pin 10:** GND
- Pin 11:** GND
- Pin 12:** GND
- Pin 13:** GND
- Pin 14:** GND
- Pin 15:** GND
- Pin 16:** GND

The external connections are:

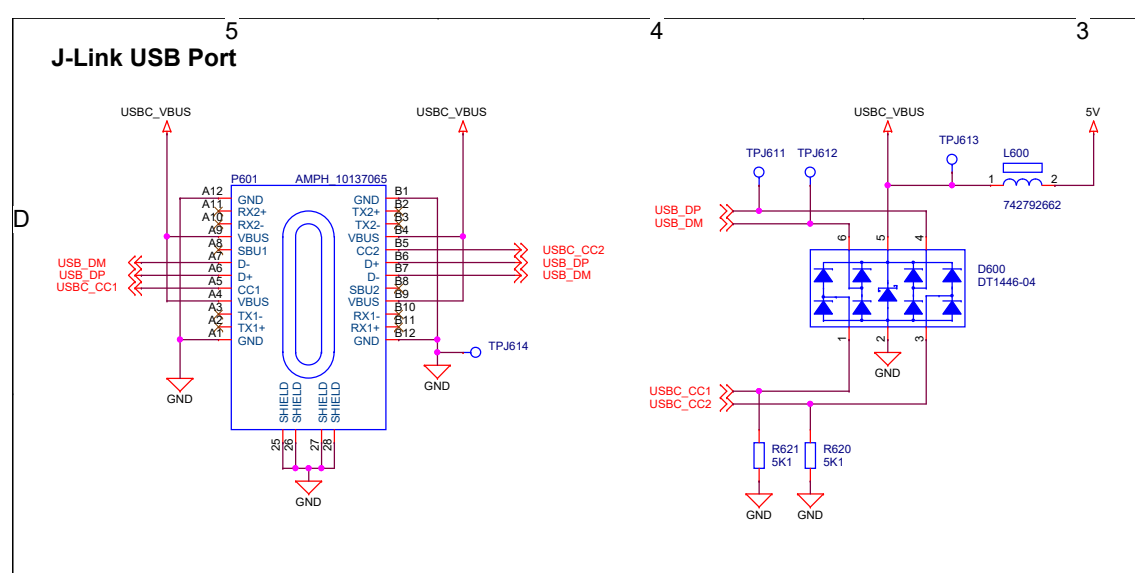
- USB_DM:** Connected to Pin 1 and Pin 16.
- USB_DP:** Connected to Pin 2 and Pin 15.
- USBC_CC1:** Connected to Pin 3 and Pin 14.
- USBC_VBUS:** Connected to Pin 4 and Pin 13.
- TPJ611:** Connected to Pin 5.
- TPJ612:** Connected to Pin 6.
- TPJ613:** Connected to Pin 7.
- L600:** Connected to Pin 8 and Pin 9.
- 742792662:** Connected to Pin 10 and Pin 11.

Diagram 3 (Right): This diagram shows a USB to J-Link adapter using a D600 DT1446-04 chip. The chip is a 16-pin DIP package. The connections are as follows:

- Pin 1:** GND
- Pin 2:** GND
- Pin 3:** GND
- Pin 4:** GND
- Pin 5:** GND
- Pin 6:** GND
- Pin 7:** GND
- Pin 8:** GND
- Pin 9:** GND
- Pin 10:** GND
- Pin 11:** GND
- Pin 12:** GND
- Pin 13:** GND
- Pin 14:** GND
- Pin 15:** GND
- Pin 16:** GND

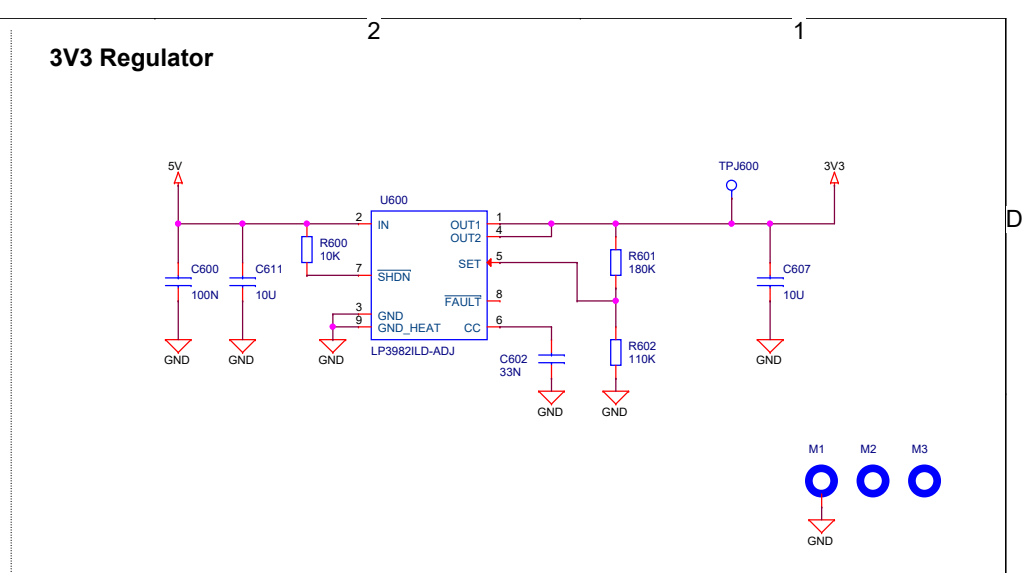
The external connections are:

- USB_DM:** Connected to Pin 1 and Pin 16.
- USB_DP:** Connected to Pin 2 and Pin 15.
- USBC_CC1:** Connected to Pin 3 and Pin 14.
- USBC_VBUS:** Connected to Pin 4 and Pin 13.
- TPJ611:** Connected to Pin 5.
- TPJ612:** Connected to Pin 6.
- TPJ613:** Connected to Pin 7.
- L600:** Connected to Pin 8 and Pin 9.
- 742792662:** Connected to Pin 10 and Pin 11.



3V3 Regulator

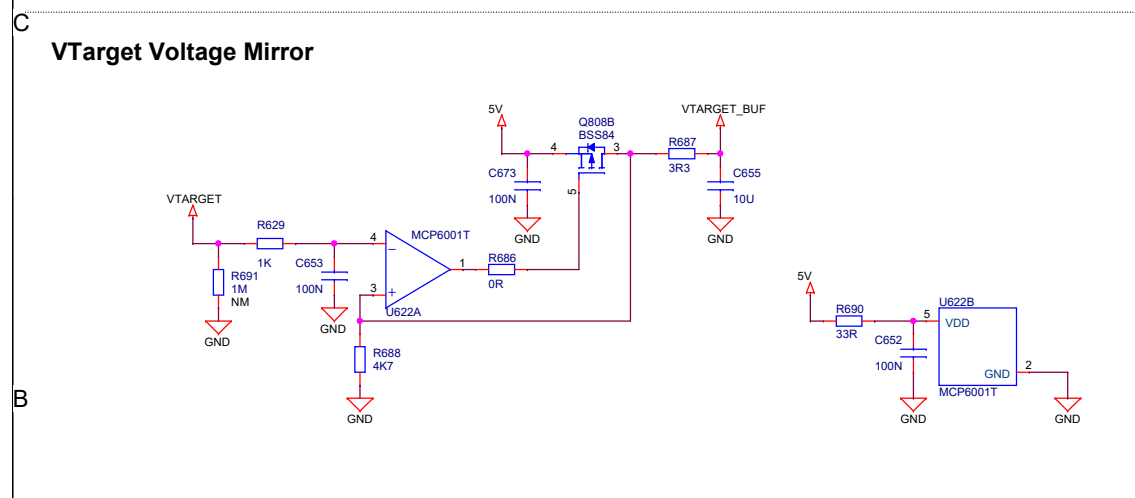
The schematic diagram illustrates a 3V3 Regulator circuit. The central component is the LP3982ILD-ADJ (U600) regulator. The input (IN) is connected to a 5V supply through a 100nF capacitor (C600) and a 10uF capacitor (C611). The input is also connected to the regulator's IN pin (pin 2) through a 10k resistor (R600). The regulator's SHDN pin (pin 7) is connected to GND. The regulator's GND pins (pins 3 and 9) are connected to GND. The regulator's OUT1 pin (pin 1) is connected to the 3V3 output. The regulator's SET pin (pin 5) is connected to the 3V3 output through a 180k resistor (R601). The regulator's FAULT pin (pin 8) is connected to GND through a 33nF capacitor (C602). The regulator's CC pin (pin 6) is connected to GND through a 110k resistor (R602). The 3V3 output is connected to a TPJ600 test point and a 10uF capacitor (C607) to GND. Three LEDs (M1, M2, M3) are connected to GND.



B

VTARGET Voltage Mirror

The diagram illustrates the VTARGET Voltage Mirror circuit. It features two operational amplifiers, MCP6001T (U622A and U622B), and a BSS84 transistor (Q808B). The circuit is powered by a 5V supply and ground (GND). Key components include resistors R629 (1K), R691 (1M), R686 (0R), R688 (4K7), R690 (33R), and R687 (3R3), and capacitors C653 (100N), C655 (10U), and C652 (100N). The output of the first stage is VTARGET, and the output of the second stage is VTARGET_BUF.



Power Supply for Analog Switches

Analog switches used for isolation are powered by 3V6_SW when the USB cable is connected, otherwise by VMCU.

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

The diagram illustrates the power supply for analog switches. It shows a 5V input connected to a 47R resistor (R622). The circuit includes three MOSFETs: Q600A (BSS84), Q600B (BSS84), and Q601A (DMN5L06VK). The gates of Q600A and Q600B are connected to VMCU, and the gate of Q601A is connected to 3V6_SW. The drains of Q600A and Q600B are connected to V_SW, and the drain of Q601A is connected to 3V6_SW. The source of Q600A is connected to GND, and the source of Q600B is connected to V_SW. The source of Q601A is connected to GND. A detailed inset shows the TLV70536 analog switch (U603) with its pins connected to 5V, GND, and the 3V6_SW line.

Power Supply for Analog Switches

Analog switches used for isolation are powered by 3V6_SW when the USB cable is connected, otherwise by VMCU.

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

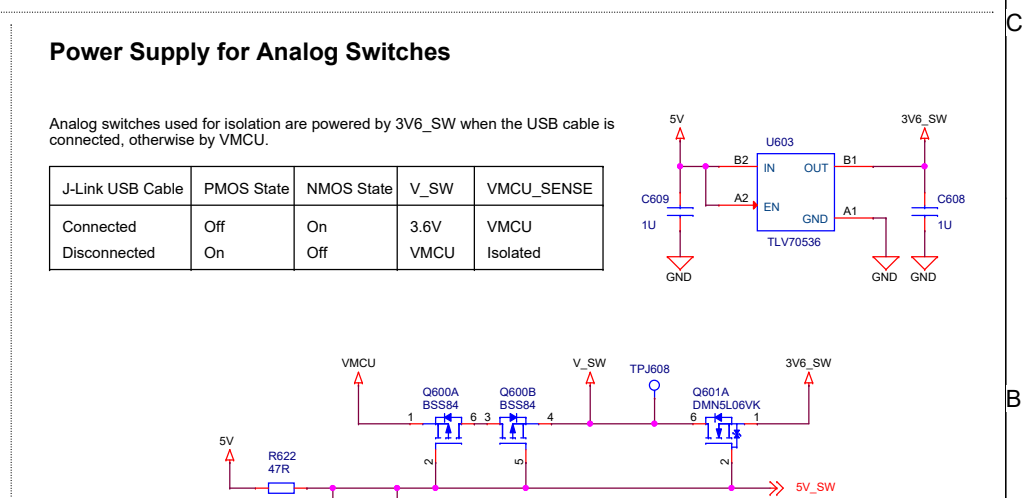
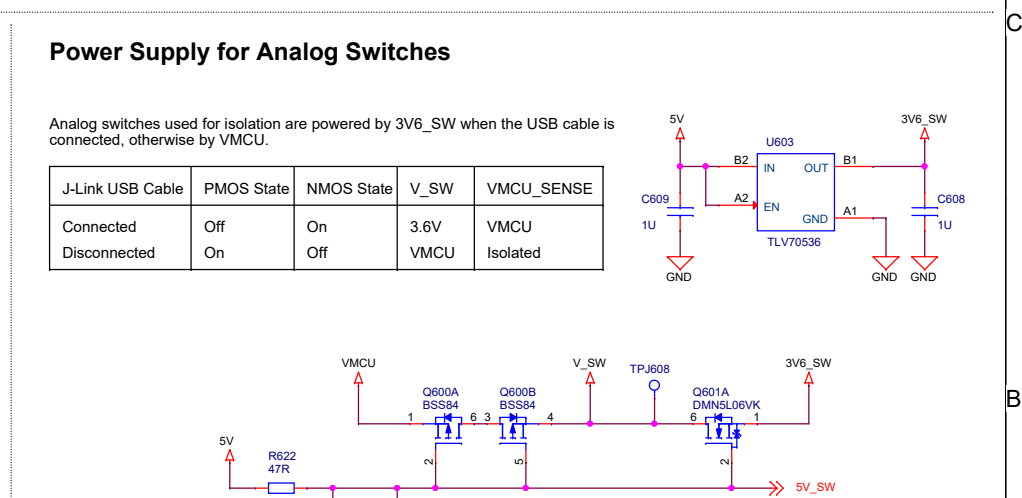
The diagram illustrates the power supply for analog switches. It shows a 5V input connected to a 47R resistor (R622). The circuit includes three MOSFETs: Q600A (BSS84), Q600B (BSS84), and Q601A (DMN5L06VK). The gates of Q600A and Q600B are connected to VMCU, and the gates of Q600B and Q601A are connected to 3V6_SW. The drains of Q600A and Q600B are connected to V_SW, and the drain of Q601A is connected to TPJ608. The source of Q600A is connected to 5V, and the source of Q601A is connected to 5V_SW. A detailed inset shows the TLV70536 (U603) logic level shifter circuit, which translates the 5V VMCU signal to the 3.6V level required by the analog switch.

Power Supply for Analog Switches

Analog switches used for isolation are powered by 3V6_SW when the USB cable is connected, otherwise by VMCU.

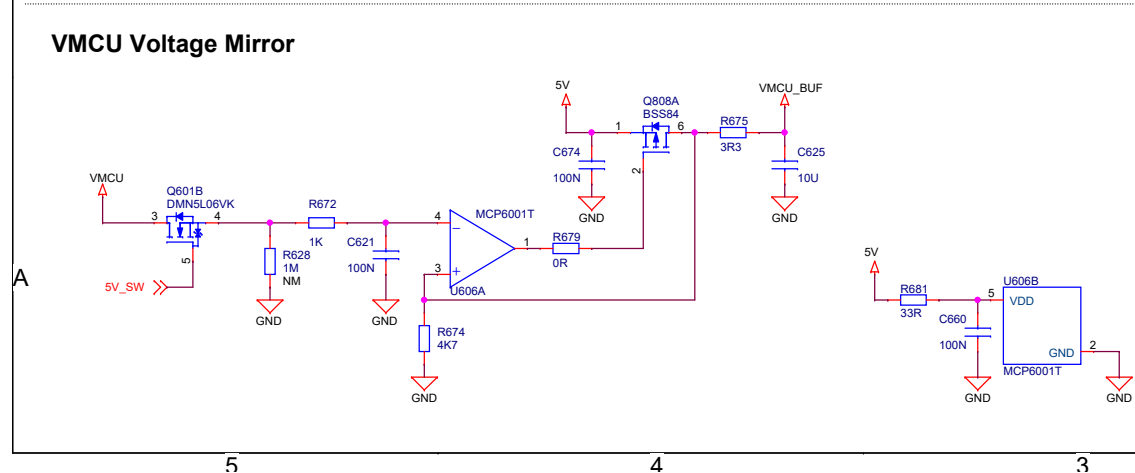
J-Link USB Cable	PMOS State	NMOS State	V_SW	VMCU_SENSE
Connected	Off	On	3.6V	VMCU
Disconnected	On	Off	VMCU	Isolated

The diagram illustrates the power supply for analog switches. It shows a 5V input connected to a 47R resistor (R622). The circuit includes three MOSFETs: Q600A (BSS84), Q600B (BSS84), and Q601A (DMN5L06VK). The gates of Q600A and Q600B are connected to VMCU, and the gates of Q600B and Q601A are connected to 3V6_SW. The drains of Q600A and Q600B are connected to V_SW, and the drain of Q601A is connected to TPJ608. The source of Q601A is connected to 5V_SW. A detailed inset shows the TLV70536 (U603) logic level shifter circuit, which translates the 5V VMCU signal to the 3.6V level required by the analog switch.



VMCU Voltage Mirror

The schematic diagram illustrates the VMCU Voltage Mirror circuit. It features two MOSFETs, Q601B (DMN5L06VK) and Q808A (BSS84), and an MCP6001T op-amp. The input 5V_SW is connected to the gate of Q601B. The drain of Q601B is connected to the VMCU output. The source of Q601B is connected to the non-inverting input of the MCP6001T op-amp. The op-amp's inverting input is connected to ground through a 4K7 resistor (R674) and to its output through a 1K resistor (R672). The op-amp's output is connected to the gate of Q808A. The drain of Q808A is connected to a 5V supply through a 100N resistor (C674) and to the VMCU_BUF output through a 3R3 resistor (R675). The source of Q808A is connected to ground through a 100N resistor (C621) and to the VMCU_BUF output through a 10U capacitor (C625). The op-amp is powered by a 5V supply through a 33R resistor (R681) and a 100N capacitor (C660). The op-amp's ground pin is connected to ground through a 2 ohm resistor (R679).



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Board Controller

The diagram illustrates the internal wiring of the Board Controller, featuring three microcontrollers (U900A, U900B, U900C) and their connections to various components:

- U900A (Left):**
 - Connected to a 48MHz crystal (X900) and a 10MHz reference clock input (TPJ912).
 - Includes a 10MHz reference clock input (TPJ912) and a 10MHz reference clock input (TPJ913).
 - Connected to U900B via I2C and SPI.
 - Connected to U900C via I2C and SPI.
 - Includes a 10MHz reference clock input (TPJ912) and a 10MHz reference clock input (TPJ913).
- U900B (Middle):**
 - Connected to U900A via I2C and SPI.
 - Connected to U900C via I2C and SPI.
 - Includes a 10MHz reference clock input (TPJ912) and a 10MHz reference clock input (TPJ913).
- U900C (Right):**
 - Connected to U900A via I2C and SPI.
 - Connected to U900B via I2C and SPI.
 - Includes a 10MHz reference clock input (TPJ912) and a 10MHz reference clock input (TPJ913).
- Other Components:**
 - TPJ900, TPJ901, TPJ902, TPJ903, TPJ904, TPJ905, TPJ906, TPJ907, TPJ908, TPJ909, TPJ910, TPJ911, TPJ912, TPJ913:** Various test points and connectors.
 - R902, R903, R904, R905, R906, R907, R908, R909, R910, R911, R912, R913, R914, R915, R916, R917, R918, R919, R920, R921, R922, R923, R924, R925, R926, R927, R928, R929, R930, R931, R932, R933, R934, R935, R936, R937, R938, R939, R940, R941, R942, R943, R944, R945, R946, R947, R948, R949, R950, R951, R952, R953, R954, R955, R956, R957, R958, R959, R960, R961, R962, R963, R964, R965, R966, R967, R968, R969, R970, R971, R972, R973, R974, R975, R976, R977, R978, R979, R980, R981, R982, R983, R984, R985, R986, R987, R988, R989, R990, R991, R992, R993, R994, R995, R996, R997, R998, R999, R1000, R1001, R1002, R1003, R1004, R1005, R1006, R1007, R1008, R1009, R1010, R1011, R1012, R1013, R1014, R1015, R1016, R1017, R1018, R1019, R1020, R1021, R1022, R1023, R1024, R1025, R1026, R1027, R1028, R1029, R1030, R1031, R1032, R1033, R1034, R1035, R1036, R1037, R1038, R1039, R1040, R1041, R1042, R1043, R1044, R1045, R1046, R1047, R1048, R1049, R1050, R1051, R1052, R1053, R1054, R1055, R1056, R1057, R1058, R1059, R1060, R1061, R1062, R1063, R1064, R1065, R1066, R1067, R1068, R1069, R1070, R1071, R1072, R1073, R1074, R1075, R1076, R1077, R1078, R1079, R1080, R1081, R1082, R1083, R1084, R1085, R1086, R1087, R1088, R1089, R1090, R1091, R1092, R1093, R1094, R1095, R1096, R1097, R1098, R1099, R1100, R1101, R1102, R1103, R1104, R1105, R1106, R1107, R1108, R1109, R1110, R1111, R1112, R1113, R1114, R1115, R1116, R1117, R1118, R1119, R1120, R1121, R1122, R1123, R1124, R1125, R1126, R1127, R1128, R1129, R1130, R1131, R1132, R1133, R1134, R1135, R1136, R1137, R1138, R1139, R1140, R1141, R1142, R1143, R1144, R1145, R1146, R1147, R1148, R1149, R1150, R1151, R1152, R1153, R1154, R1155, R1156, R1157, R1158, R1159, R1160, R1161, R1162, R1163, R1164, R1165, R1166, R1167, R1168, R1169, R1170, R1171, R1172, R1173, R1174, R1175, R1176, R1177, R1178, R1179, R1180, R1181, R1182, R1183, R1184, R1185, R1186, R1187, R1188, R1189, R1190, R1191, R1192, R1193, R1194, R1195, R1196, R1197, R1198, R1199, R1200, R1201, R1202, R1203, R1204, R1205, R1206, R1207, R1208, R1209, R1210, R1211, R1212, R1213, R1214, R1215, R1216, R1217, R1218, R1219, R1220, R1221, R1222, R1223, R1224, R1225, R1226, R1227, R1228, R1229, R1230, R1231, R1232, R1233, R1234, R1235, R1236, R1237, R1238, R1239, R1240, R1241, R1242, R1243, R1244, R1245, R1246, R1247, R1248, R1249, R1250, R1251, R1252, R1253, R1254, R1255, R1256, R1257, R1258, R1259, R1260, R1261, R1262, R1263, R1264, R1265, R1266, R1267, R1268, R1269, R1270, R1271, R1272, R1273, R1274, R1275, R1276, R1277, R1278, R1279, R1280, R1281, R1282, R1283, R1284, R1285, R1286, R1287, R1288, R1289, R1290, R1291, R1292, R1293, R1294, R1295, R1296, R1297, R1298, R1299, R1300, R1301, R1302, R1303, R1304, R1305, R1306, R1307, R1308, R1309, R1310, R1311, R1312, R1313, R1314, R1315, R1316, R1317, R1318, R1319, R1320, R1321, R1322, R1323, R1324, R1325, R1326, R1327, R1328, R1329, R1330, R1331, R1332, R1333, R1334, R1335, R1336, R1337, R1338, R1339, R1340, R1341, R1342, R1343, R1344, R1345, R1346, R1347, R1348, R1349, R1350, R1351, R1352, R1353, R1354, R1355, R1356, R1357, R1358, R1359, R1360, R1361, R1362, R1363, R1364, R1365, R1366, R1367, R1368, R1369, R1370, R1371, R1372, R1373, R1374, R1375, R1376, R1377, R1378, R1379, R1380, R1381, R1382, R1383, R1384, R1385, R1386, R1387, R1388, R1389, R1390, R1391, R1392, R1393, R1394, R1395, R1396, R1397, R1398, R1399, R1400, R1401, R1402, R1403, R1404, R1405, R1406, R1407, R1408, R1409, R1410, R1411, R1412, R1413, R1414, R1415, R1416, R1417, R1418, R1419, R1420, R1421, R1422, R1423, R1424, R1425, R1426, R1427, R1428, R1429, R1430, R1431, R1432, R1433, R1434, R1435, R1436, R1437, R1438, R1439, R1440, R1441, R1442, R1443, R1444, R1445, R1446, R1447, R1448, R1449, R1450, R1451, R1452, R1453, R1454, R1455, R1456, R1457, R1458, R1459, R1460, R1461, R1462, R1463, R1464, R1465, R1466, R1467, R1468, R1469, R1470, R1471, R1472, R1473, R1474, R1475, R1476, R1477, R1478, R1479, R1480, R**

[illegible]

Board ID & Button Isolation

BOARD_ID_SDA
BOARD_ID_SCL
3V3
3V3
R907 4K7
R908 4K7
U901A M24C02
SDA
SCL
A0
A1
A2
WP
GND
3V3
R909 10K
BOARD_ID_WP
U950A TS3A4751
COM1
COM2
COM3
COM4
NO1
NO2
NO3
NO4
IN1
IN2
IN3
IN4
BC_I2C_EXP_ENABLE
BC_BUTTON_ENABLE
R951 100K NM
R952 100K NM
R950 100K
R981 100K
GND
GND
3V3
3V3
BC_UIF_BUTTON0
BC_UIF_BUTTON1
TPJ650 TPJ651
SI_BOARD_ID_SDA
SI_BOARD_ID_SCL
BC_I2C_EXP_SDA
BC_I2C_EXP_SCL
TPJ652 TPJ653
UIF_BUTTON0
UIF_BUTTON1

BC Serial Flash

3V3
3V3
BC_SPI_COP1
BC_SPI_SCLK
BC_SPI_CS
BC_SPI_CIP0
U902A MX25R8035F
SI / SIO0
SO / SIO1
CS#
WP# / SIO2
RESET# / SIO3
R906 10K
3V3
U902B MX25R8035F
VCC
GND
C914 100N
GNDGND

Board Version

BOARD_VER0
BOARD_VER1
R931 1K
R930 1K
GND
GND

SILICON LABS

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Board Name
EFM32PG28 Pro Kit

Page Title
Board Controller

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BC Serial Flash

BC_SPI_COP1
BC_SPI_SCLK
3V3
R906 10K
BC_SPI_CS
BC_SPI_CPO
U902A
SI / SIO0
SCLK
CS#
WP# / SIO2
RESET# / SIO3
MX25R8035F
3V3
C914 100N
GND
U902B
VCC
GND
MX25R8035F
BOARD_VER0
BOARD_VER1
R931 1K
R930 1K
GND
GND

Board Version

BOARD_VER0
BOARD_VER1
R931 1K
R930 1K
GND
GND

Board Number

BOARD_NUMBER

FM32PG28 Pro Kit

Title

Board Controller

Board Number

RD2506A

Revision

A01

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BC Serial Flash

BC_SPI_COP1
BC_SPI_SCLK
3V3
R906 10K
BC_SPI_CS
BC_SPI_CPO
U902A
SI / SIO0
SCLK
CS#
WP# / SIO2
RESET# / SIO3
MX25R8035F
3V3
C914 100N
GND
U902B
VCC
GND
MX25R8035F
BOARD_VER0
BOARD_VER1
R931 1K
R930 1K
GND
GND

Board Version

BOARD_VER0
BOARD_VER1
R931 1K
R930 1K
GND
GND

Board Number

BOARD_NUMBER

FM32PG28 Pro Kit

Title

Board Controller

Board Number

RD2506A

Revision

A01

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Board Name EFM32PG28 Pro Kit		A
Page Title Board Controller		
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Board Name EFM32PG28 Pro Kit		A
Page Title Board Controller		
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Board Name EFM32PG28 Pro Kit		A
Page Title Board Controller		
Board Number BRD2506A		Revision A01
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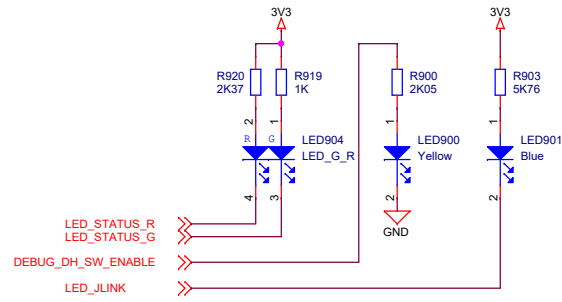
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Page Title Board Controller		
Board Number BRD2506A		Revision A01
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Board Name EFM32PG28 Pro Kit		A
Page Title Board Controller		
Board Number BRD2506A		Revision A01
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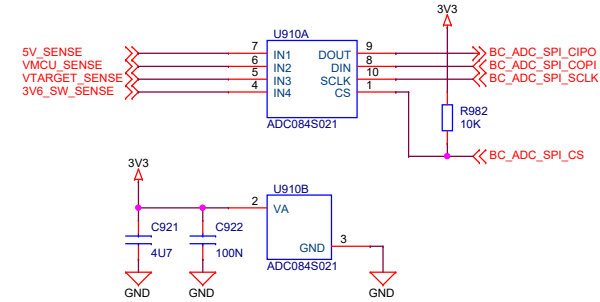
Board Name EFM32PG28 Pro Kit		A
Page Title Board Controller		
Board Number BRD2506A		Revision A01
LABORATORIES INC. 2022 CONFIDENTIAL – SUBJECT TO TERMS OF USE		Sheet 12 of 13

 SILICON LABS	Board Name		EFM32PG28 Pro Kit	A
	Page Title			
	Designed DDC	Approved RGU	Board Controller	
	Size A3	Sheet Modified Date Tuesday, January 03, 2023		
Board Number			Revision	
BRD2506A			A01	
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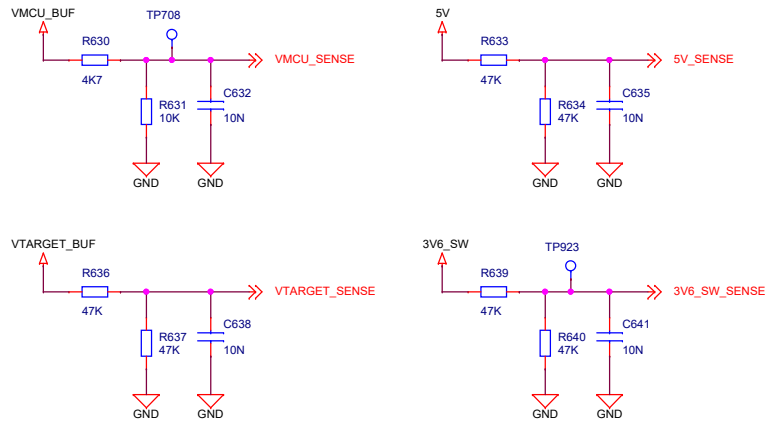
Indicator LEDs



BC Voltage Sense ADC



BC Voltage Sense



		Board Name	
		EFM32PG28 Pro Kit	
Designed DDC		Page Title	
Size A3		Board Controller Misc	
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