


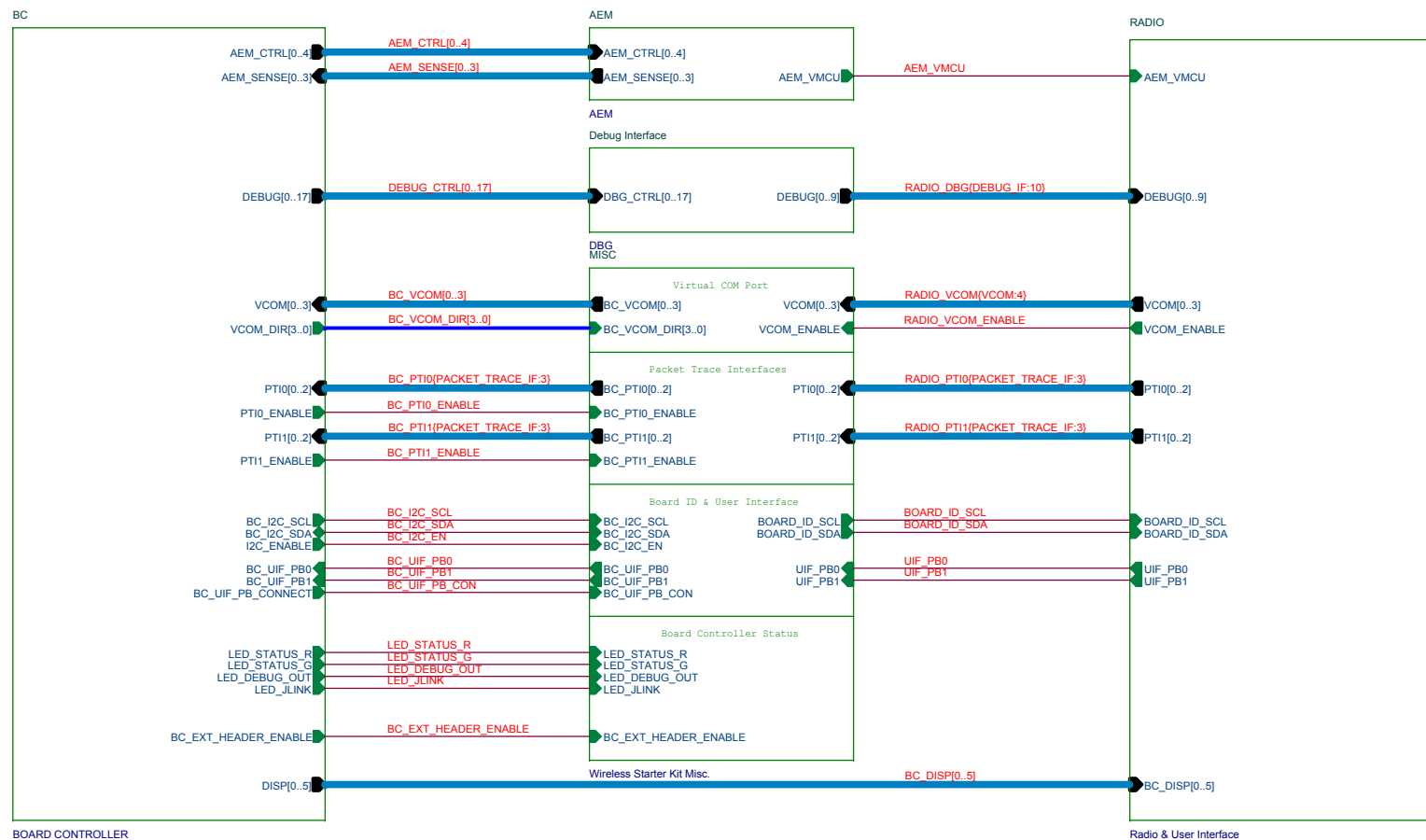


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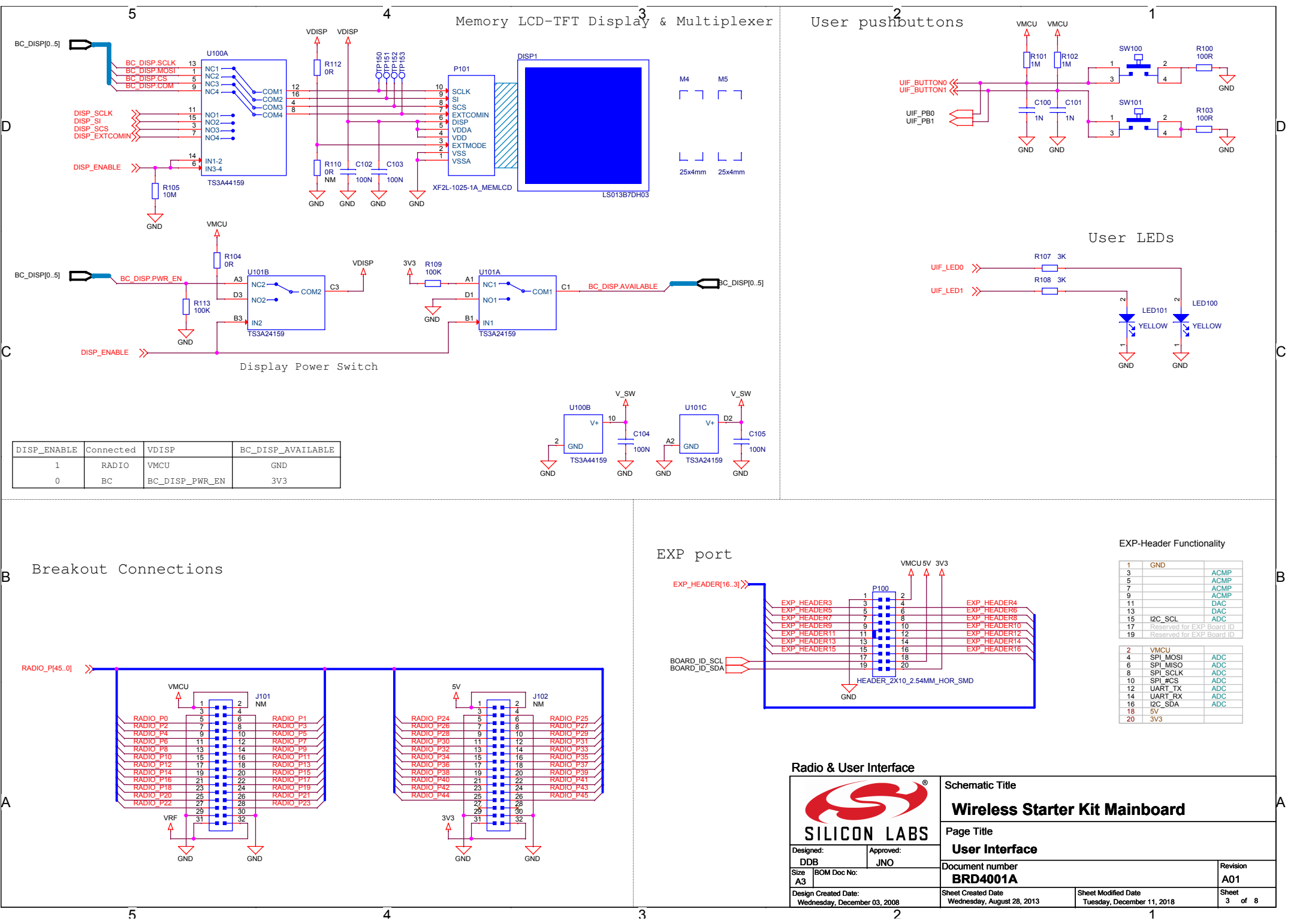
Revision History	
Rev.	Description
A00	Initial prodcution version.
A01	Minor updates for pre-production version.

 <p><b>SILICON LABS</b></p>		<p>Schematic Title</p> <p><b>Wireless Starter Kit Mainboard</b></p>	
<p>Designed: DDB</p> <p>Approved: JNO</p>		<p>Page Title</p> <p><b>Title Page</b></p>	
<p>Size: A3</p>	<p>BOM Doc No:</p>	<p>Document number</p> <p><b>BRD4001A</b></p>	<p>Revision</p> <p><b>A01</b></p>
<p>Design Created Date:</p> <p>Wednesday, December 03, 2008</p>		<p>Sheet Created Date</p> <p>Saturday, March 21, 2009</p>	<p>Sheet Modified Date</p> <p>Wednesday, December 12, 2018</p>
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## Wireless STK

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		<b>Wireless Starter Kit Mainboard</b>	
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Size A3		<b>Top Level Hierarchy</b>	
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DISP_ENABLE	Connected	VDISP	BC_DISP_AVAILABLE
1	RADIO	VMCU	GND
0	BC	BC_DISP_PWR_EN	3V3

EXP-Header Functionality			
1	GND		
3		ACMP	
5		ACMP	
7		ACMP	
9		ACMP	
11		DAC	
13		DAC	
15	I2C_SCL	ADC	
17	Reserved for EXP Board ID		
19	Reserved for EXP Board ID		
2	VMCU		
4	SPI_MOSI	ADC	
6	SPI_MISO	ADC	
8	SPI_SCLK	ADC	
10	SPI_CS	ADC	
12	UART_TX	ADC	
14	UART_RX	ADC	
16	I2C_SDA	ADC	
18	5V		
20	3V3		



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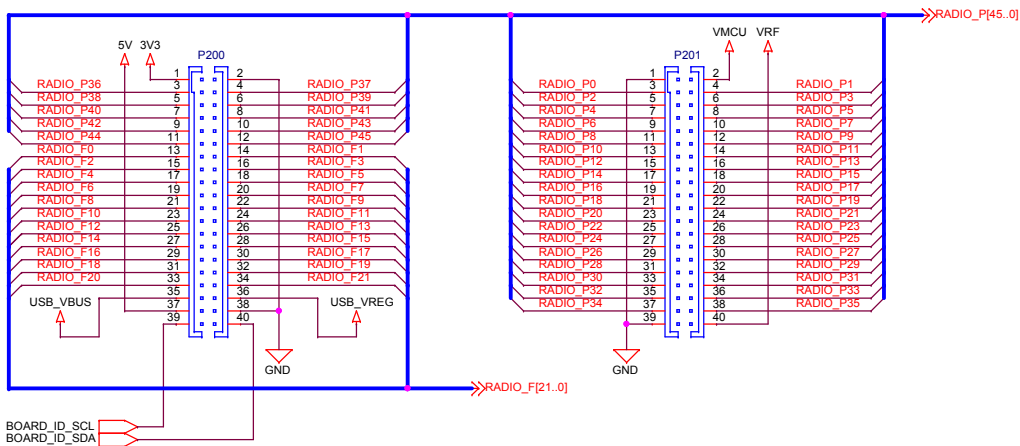
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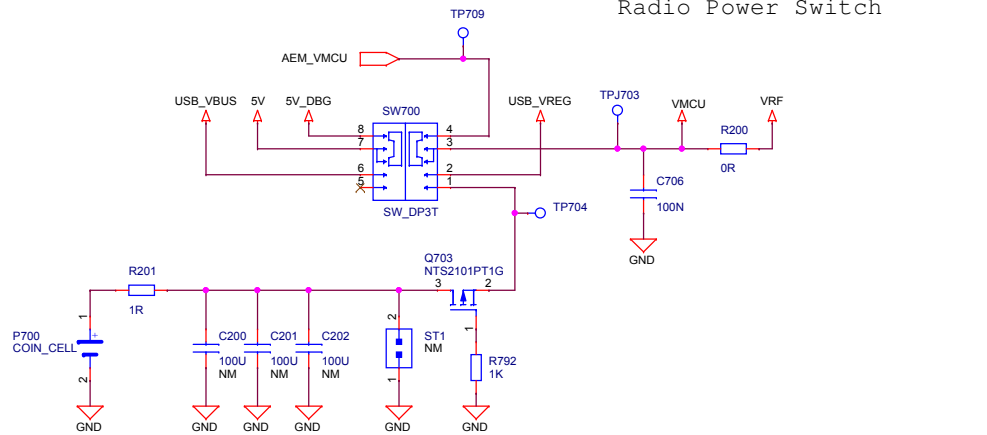
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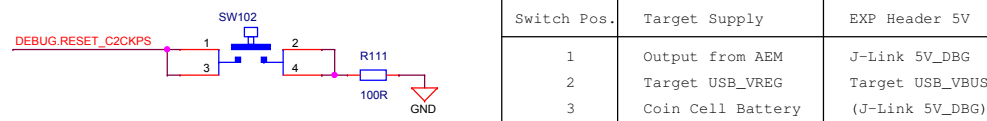
## Radio Board Connectors



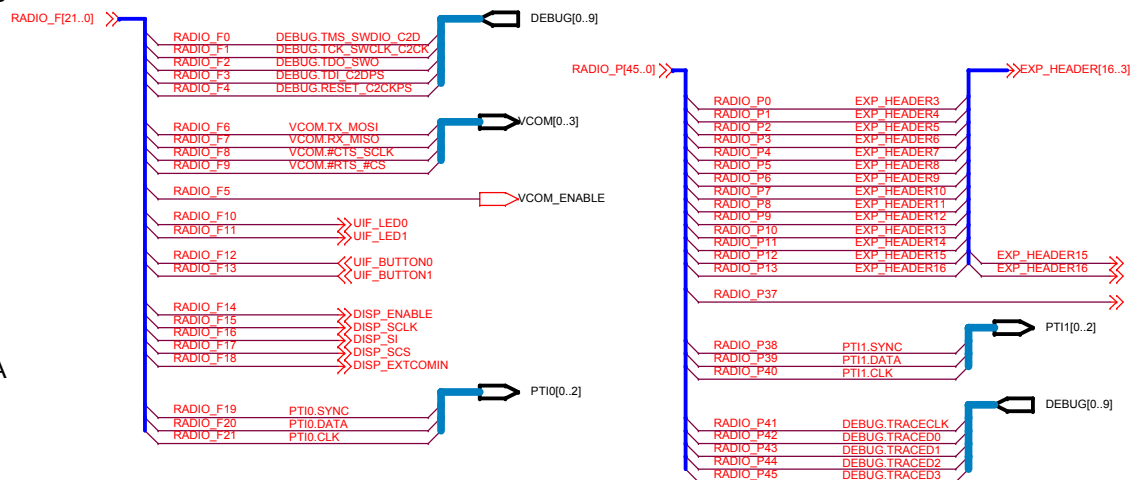
## Radio Power Switch



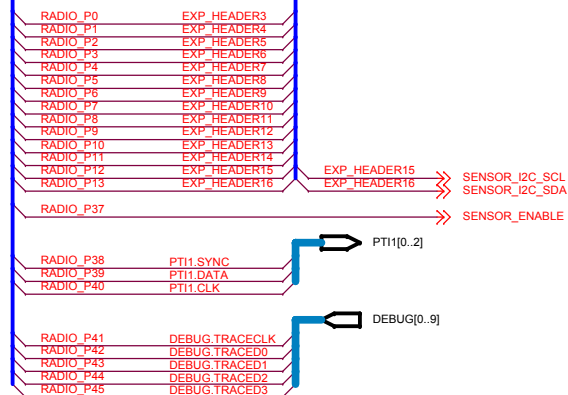
## Radio Reset



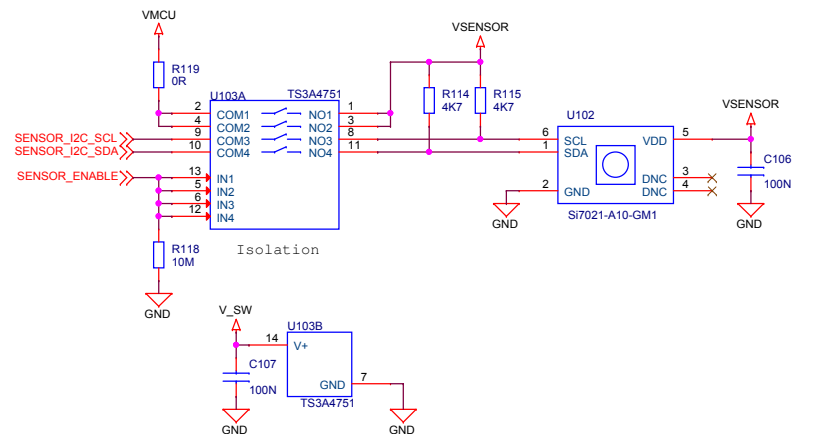
## Dedicated functions on RF Board Connectors




## Functions shared with breakout pins on RF Board Connectors



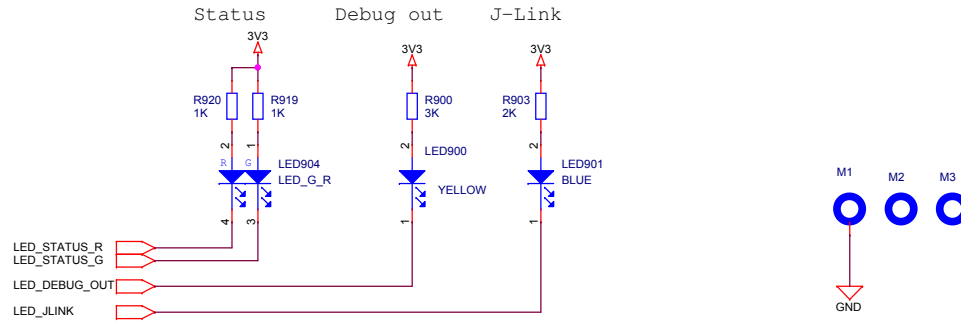
## Relative Humidity & Temperature Sensor



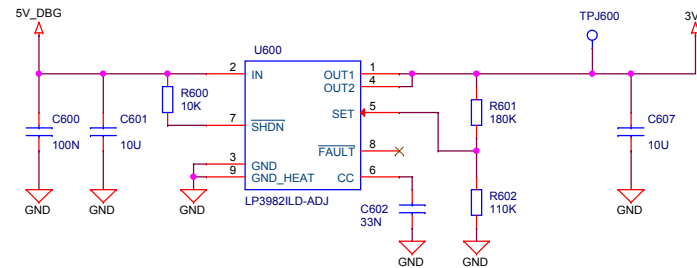
## Radio & User Interface

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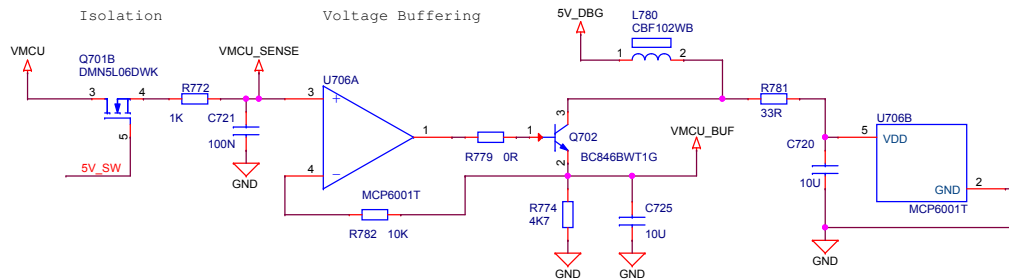
## Indicators:



## 3V3 Regulator



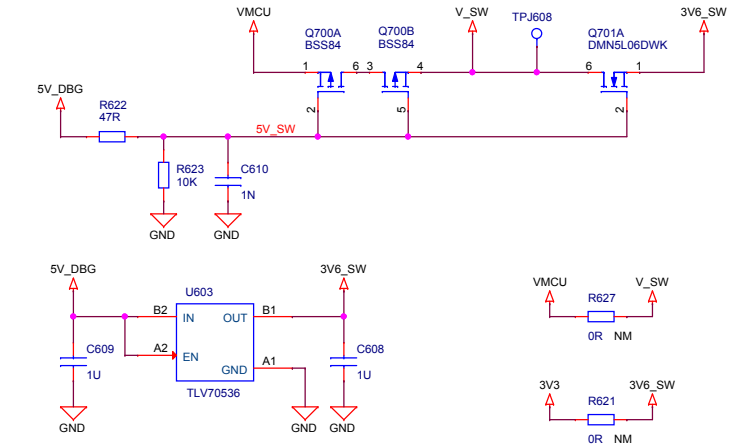
## VMCU Voltage Mirror



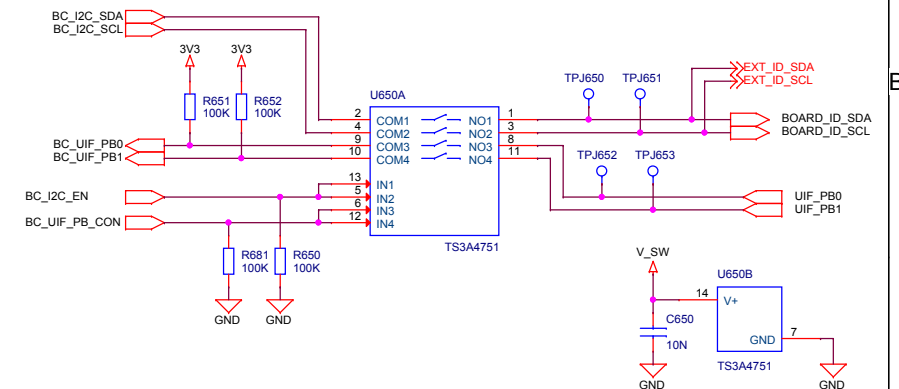
## Power Supply for Analog Switches

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	VMCU
Disconnected	ON	OFF	3.6V VMCU	Isolated

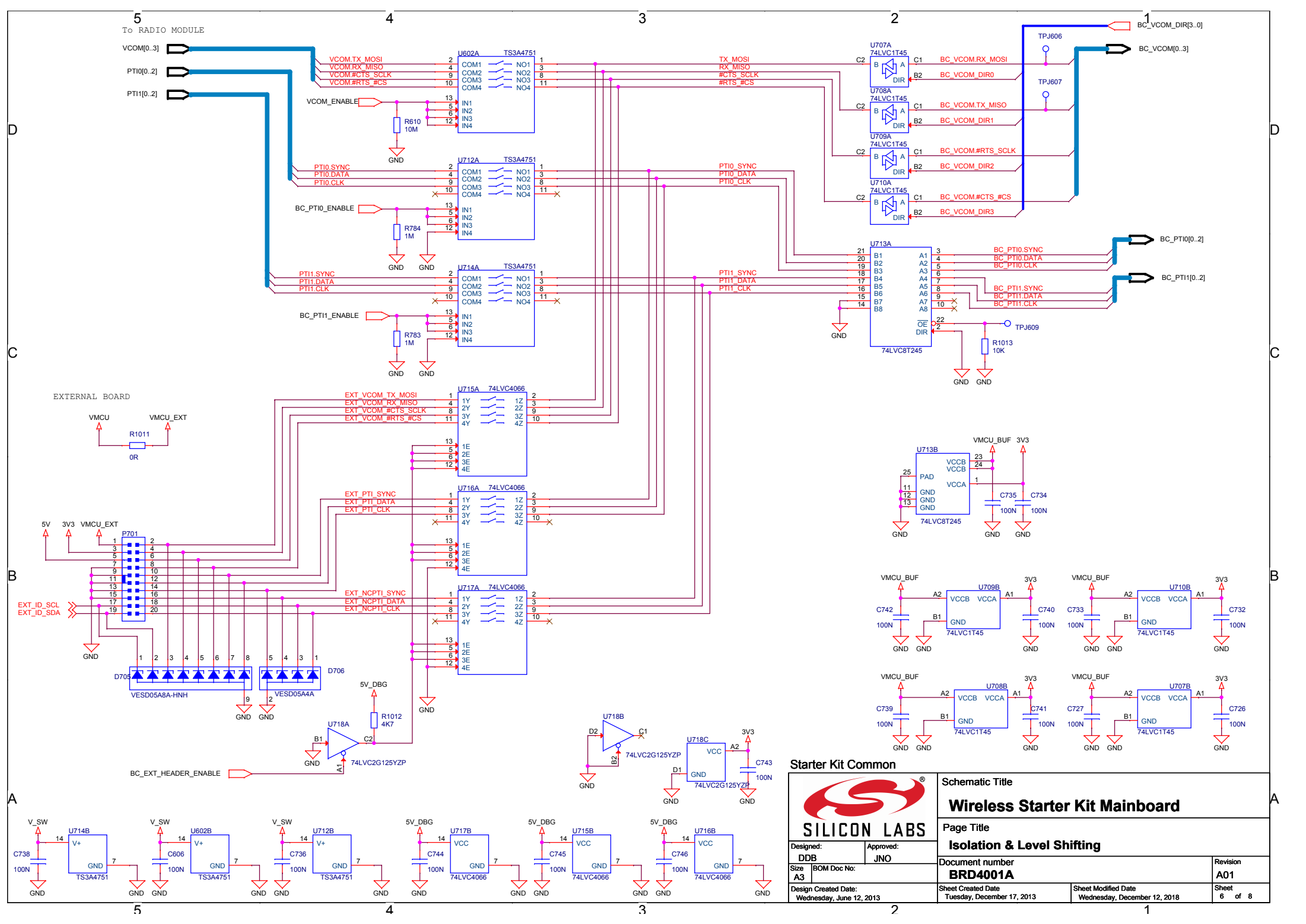


## I2C & Push Button <-> Board Controller Isolation



## Starter Kit Common

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Schematic Title

**Wireless Starter Kit Mainboard**

Page Title

**Isolation & Level Shifting**

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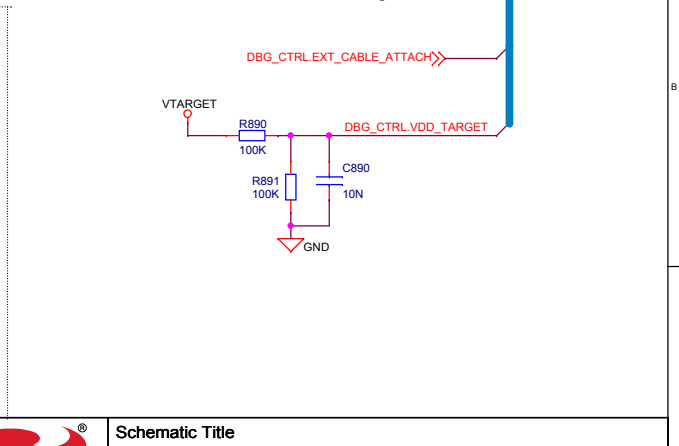
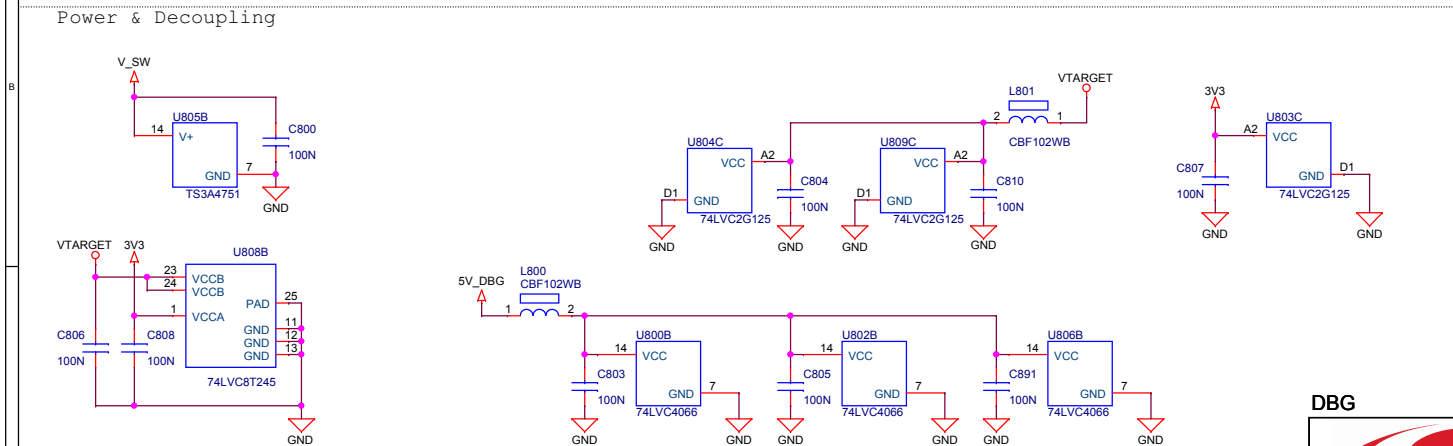
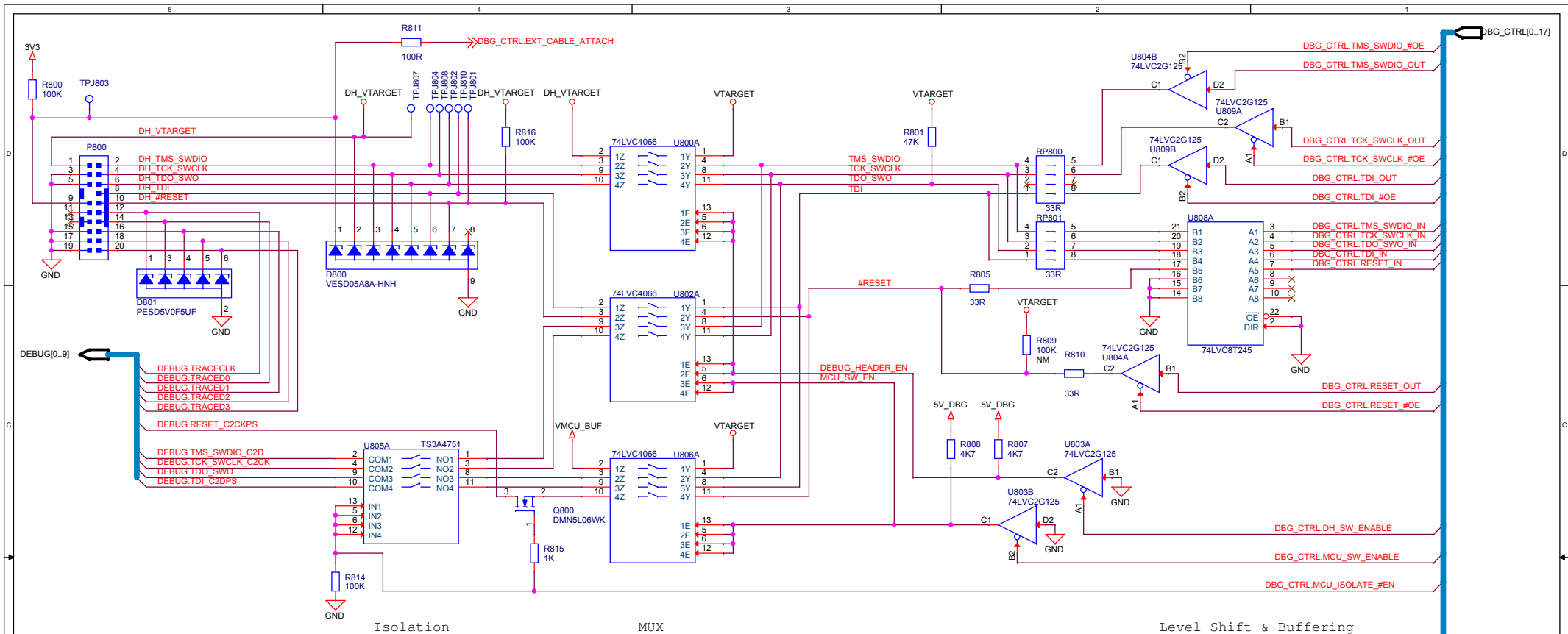
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Mode	DEBUG_MCU_SW_ENABLE	DEBUG_DH_SW_ENABLE	DEBUG_BUF_#OE	ISOLATE_#EN	DH_VTARGET	VTARGET
Debug Out	0	1	0	0	External voltage	External voltage
MCU Debug	1	0	0	1	Disconnected	VMCU
Debug In	1	1	1	1	VMCU	VMCU
Debug Off	0	0	1	0	-	-



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DDB

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## Wireless Starter Kit Mainboard

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## Debug Multiplexer

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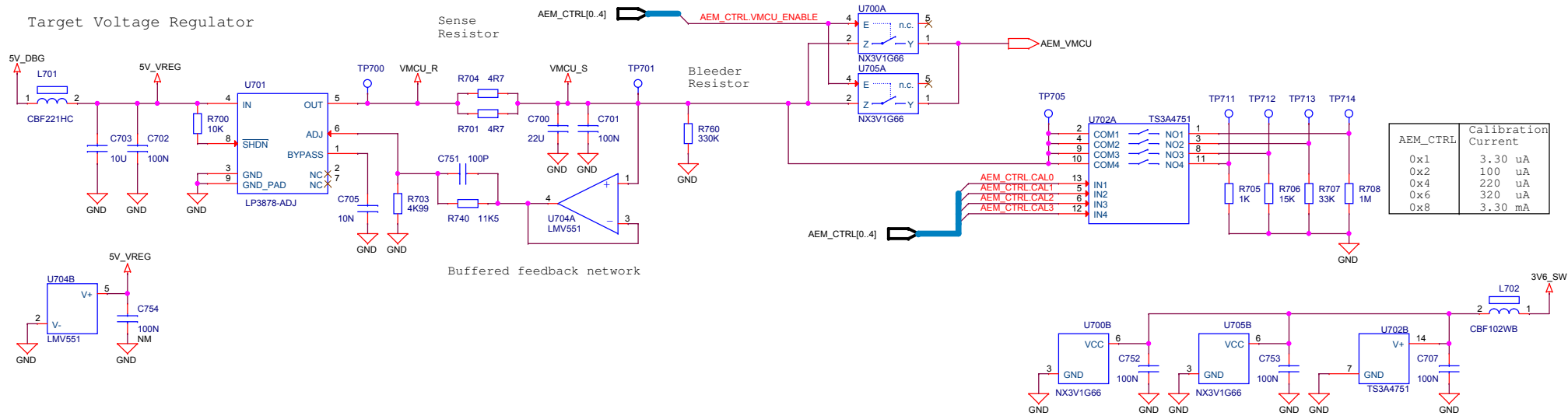
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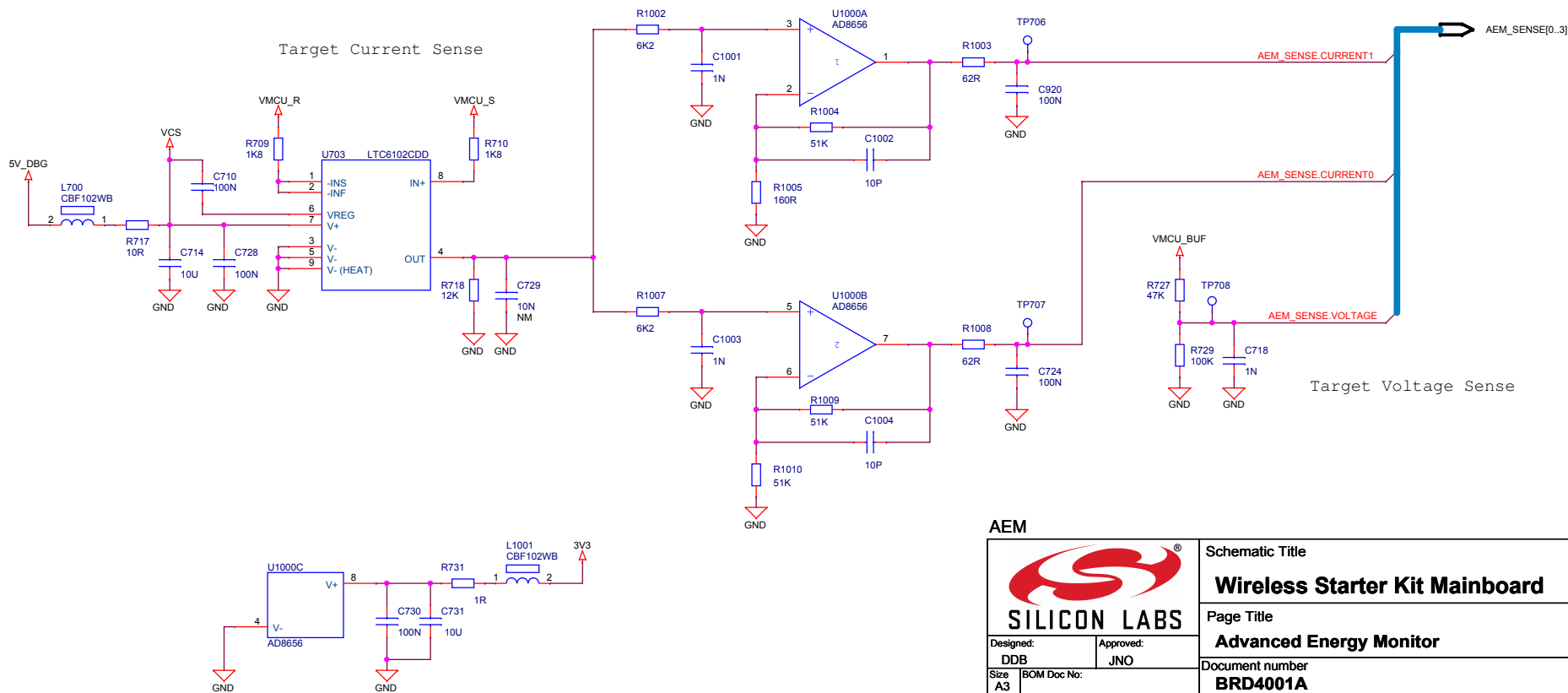
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## Target Voltage Regulator



## Target Current Sense



AEM

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