



Wireless STK Mainboard	
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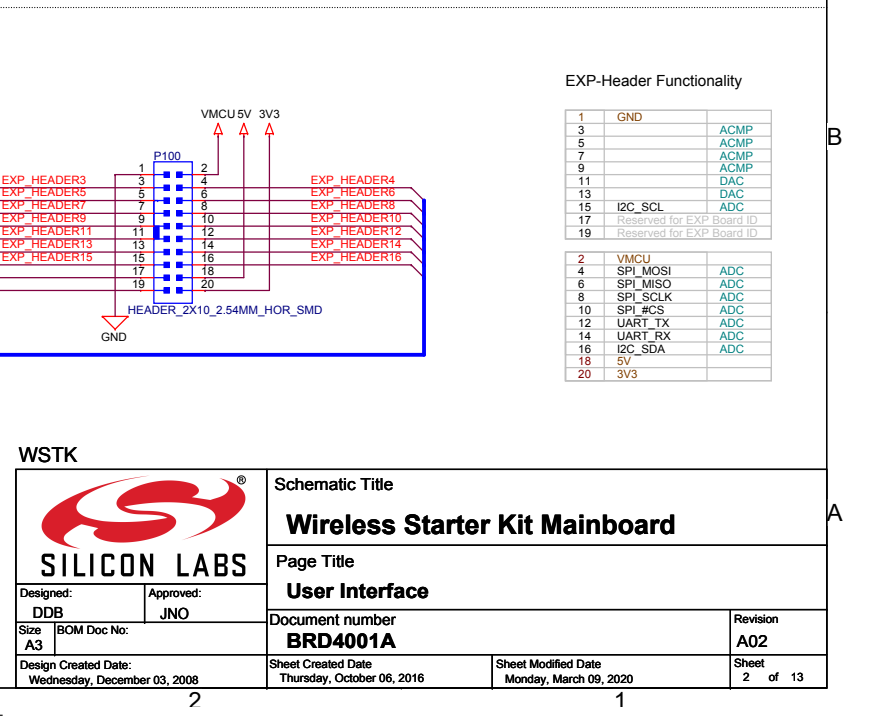
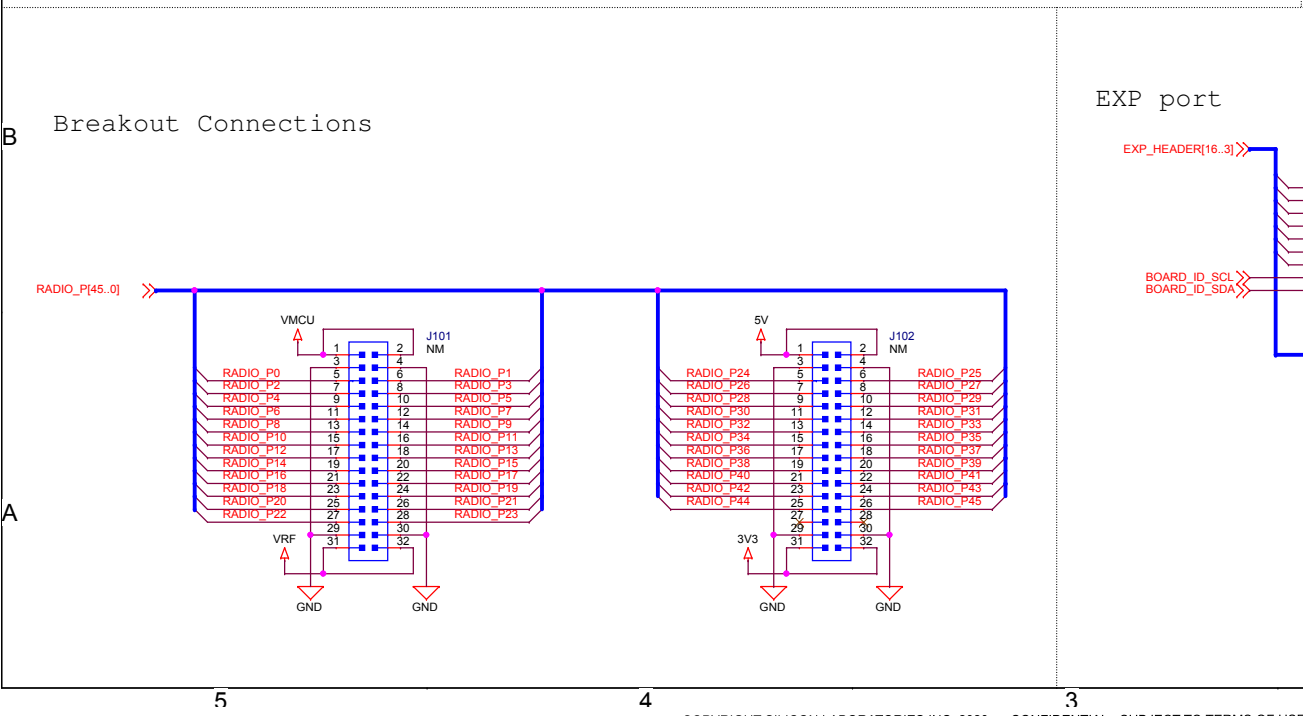
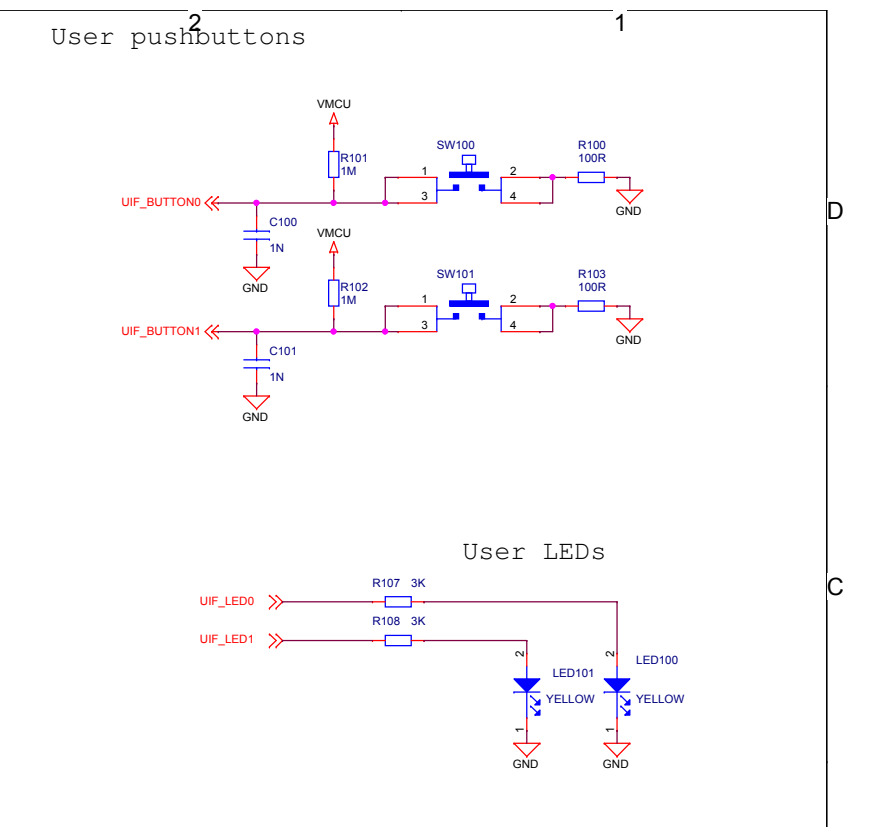
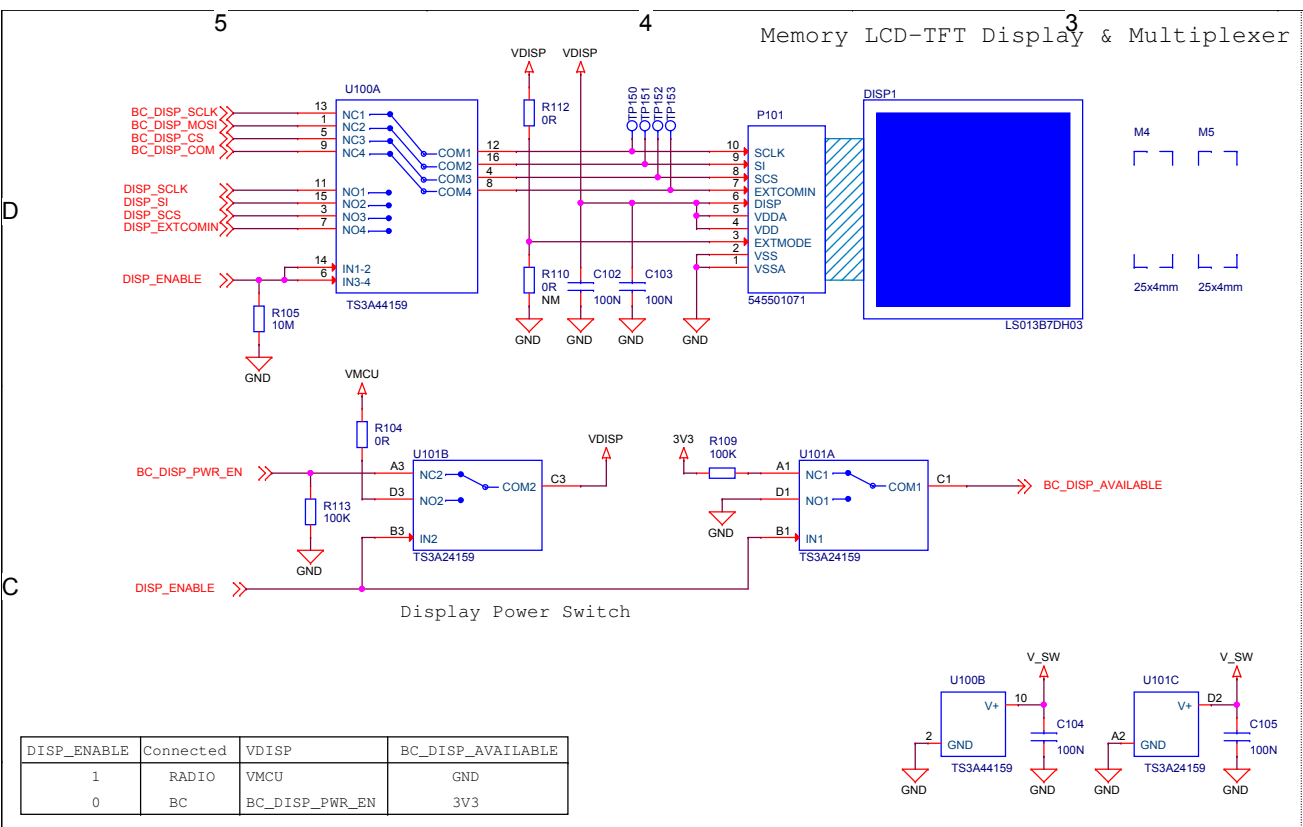
Revision History	
Rev.	Description
A00	Initial production version.
A01	Minor updates for pre-production version.
A02	Replaced various EOL components

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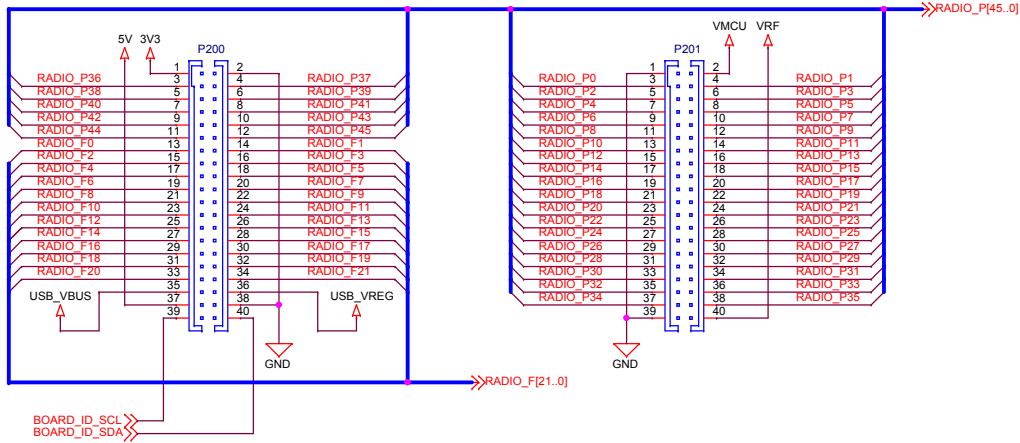


/ WSTK

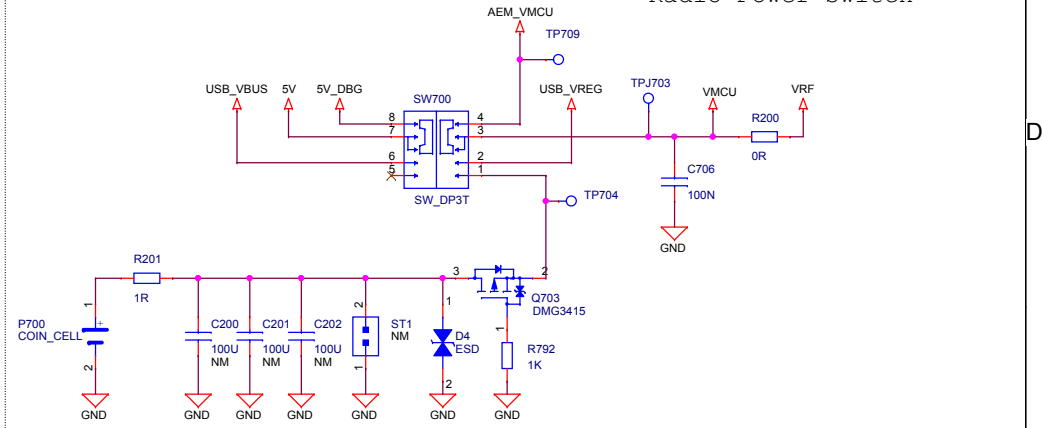
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Designed: DDB Approved: JNO		Page Title	
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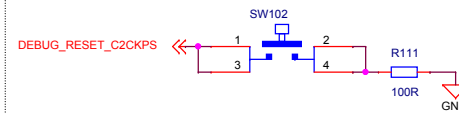
Radio Board Connectors



Radio Power Switch

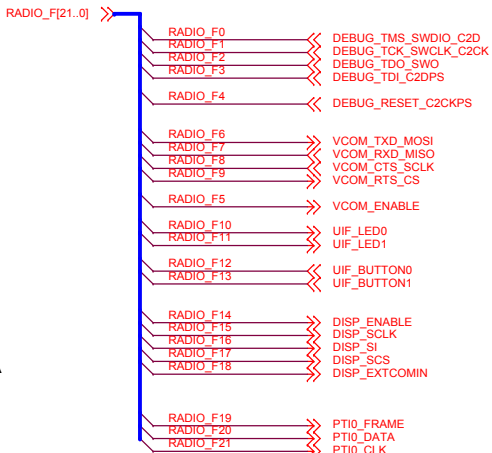


Radio Reset

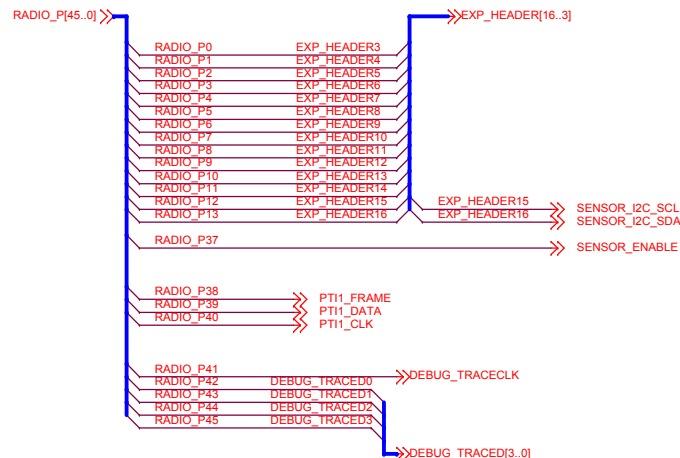


Switch Pos.	Target Supply	EXP Header 5V
1	Output from AEM	J-Link 5V_DBG
2	Target USB_VREG	Target USB_VBUS
3	Coin Cell Battery	(J-Link 5V_DBG)

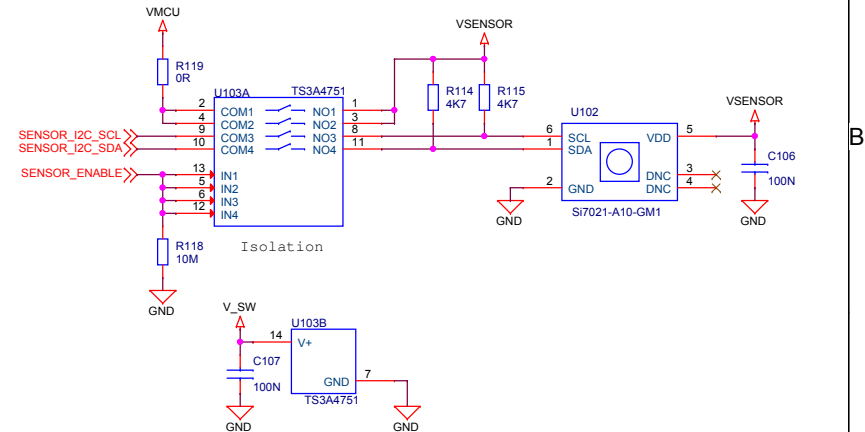
Dedicated functions on RF Board Connectors



Functions shared with breakout pins on RF Board Connectors

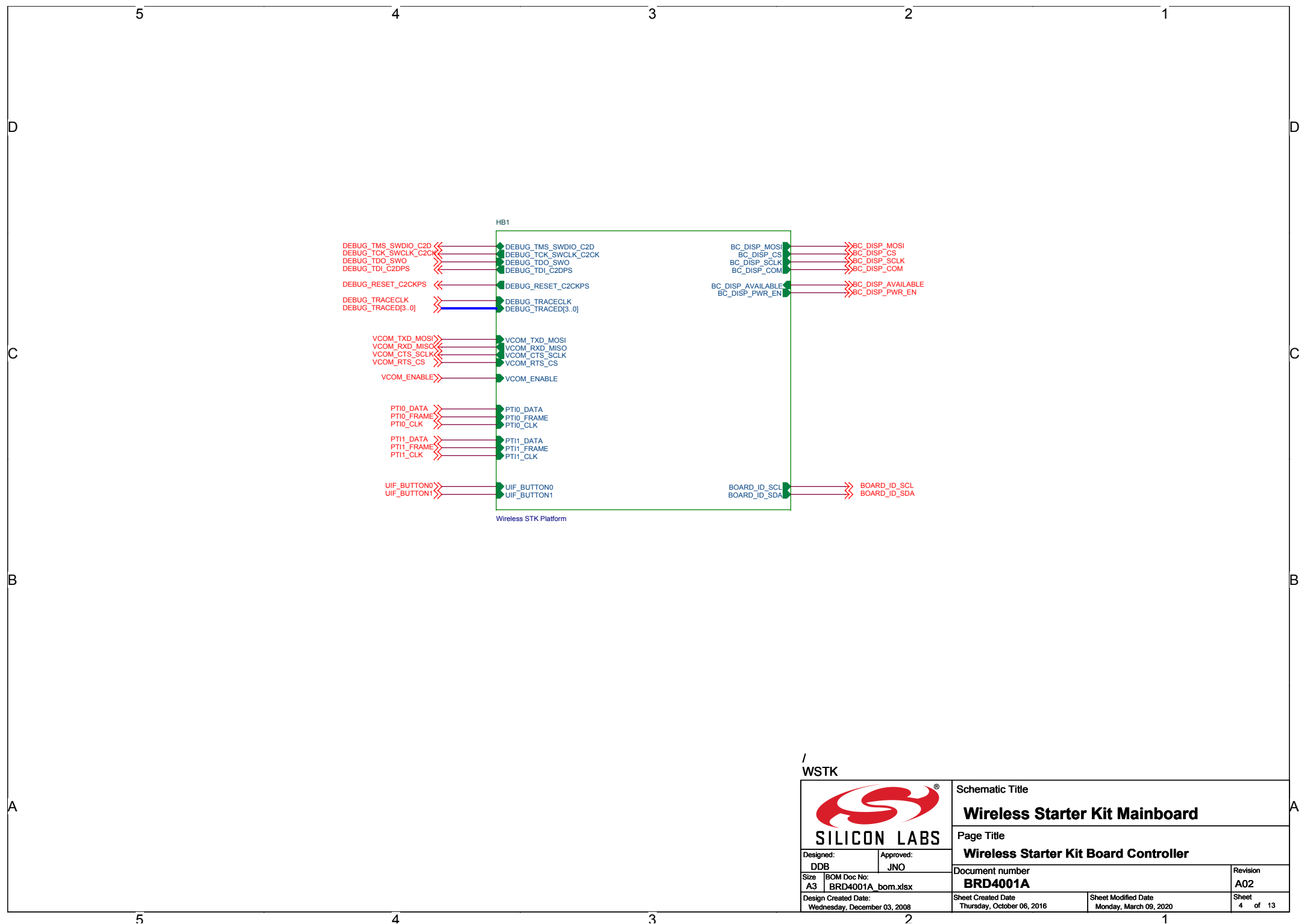


Relative Humidity & Temperature Sensor



WSTK

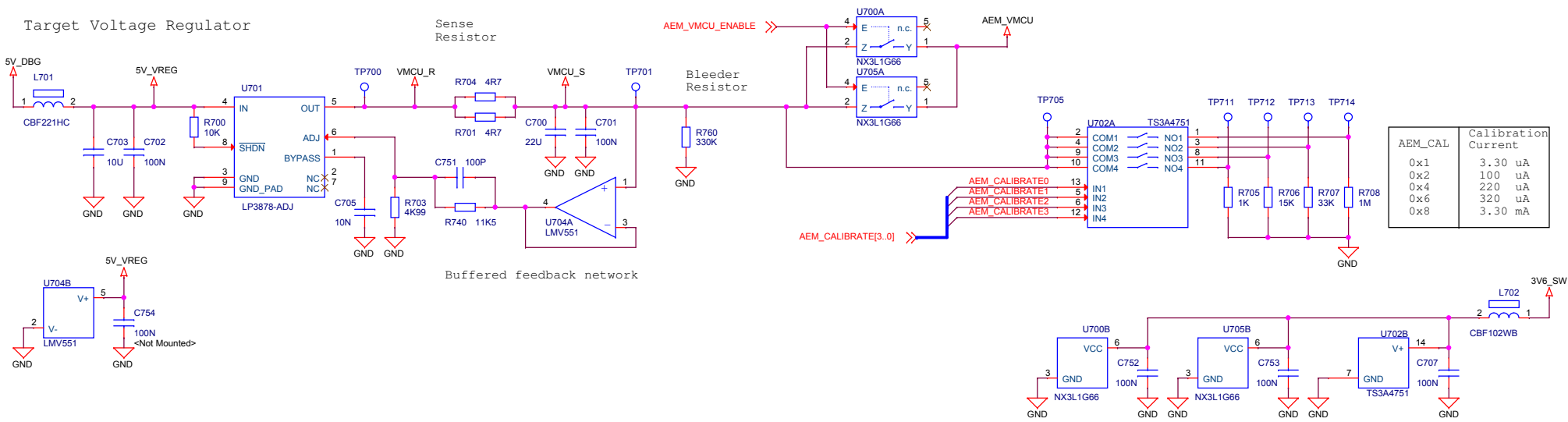
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Sheet Created Date: Thursday, October 06, 2016		Revision	
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WSTK

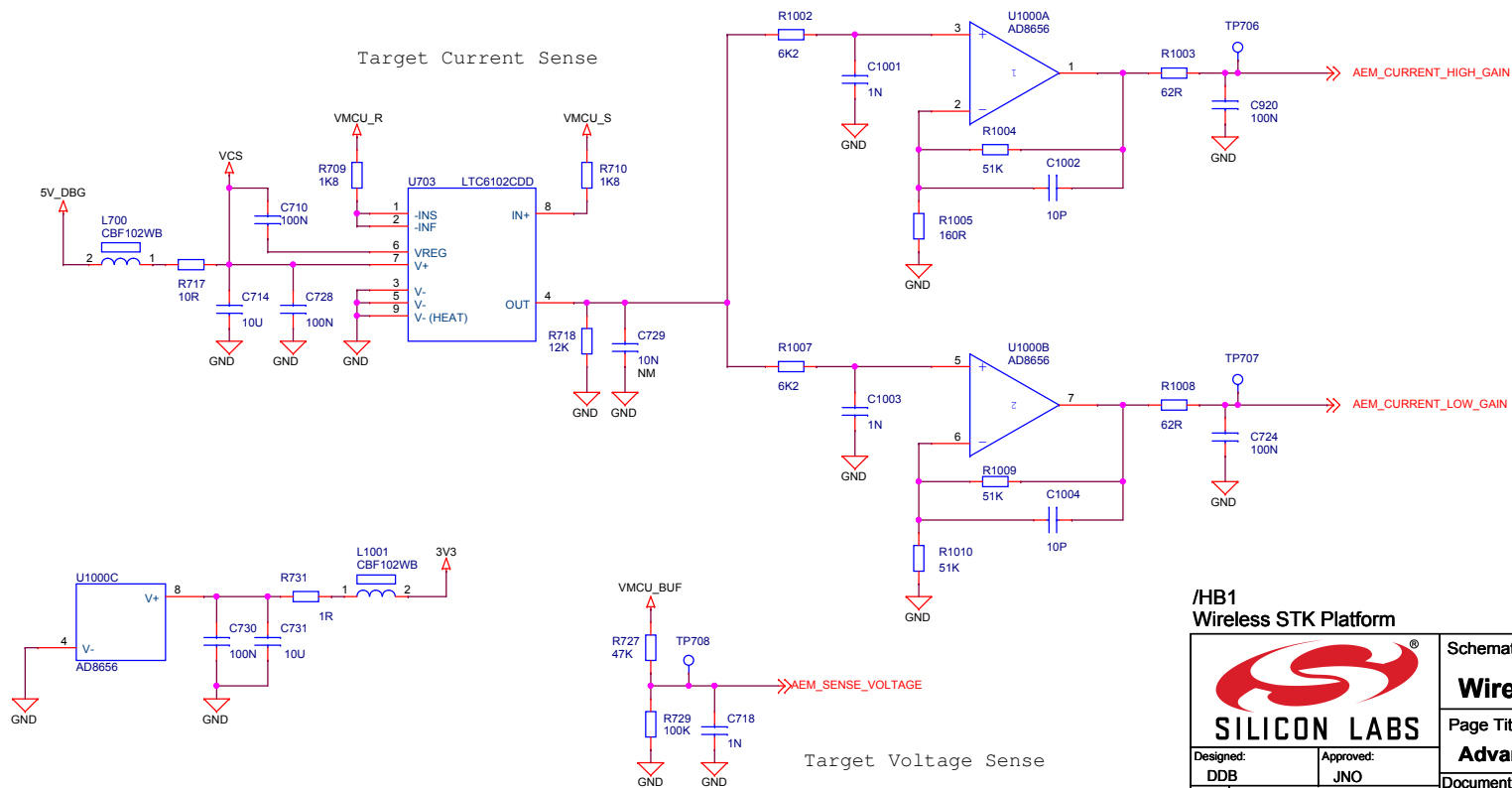
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Target Voltage Regulator




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

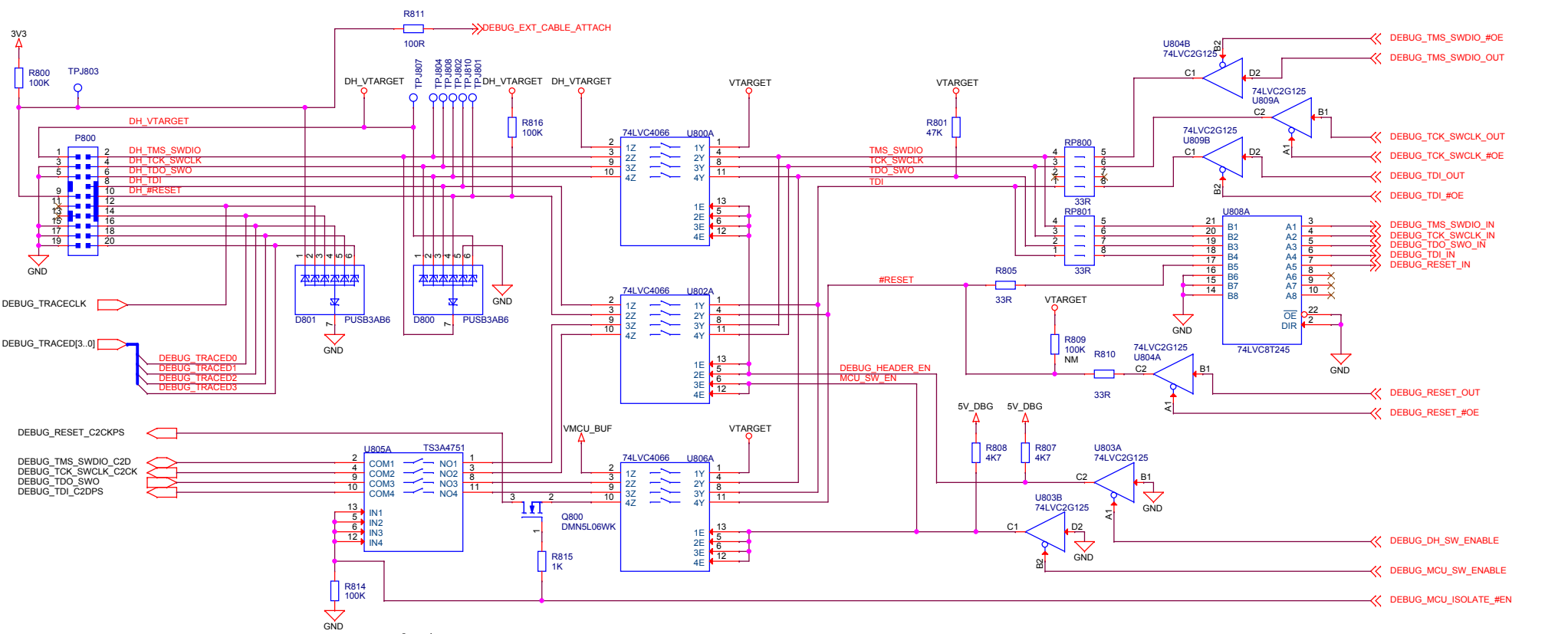
Target Current Sense



Target Voltage Sense

/HB1
Wireless STK Platform

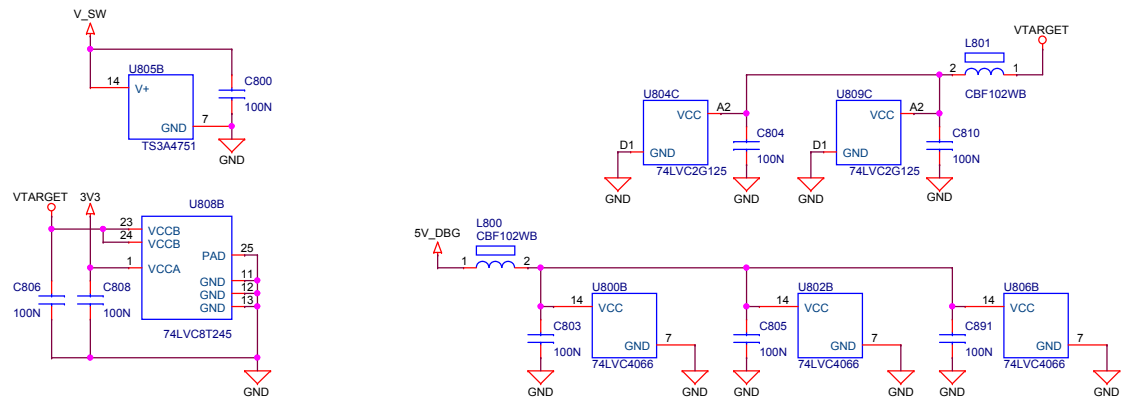
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		Wireless Starter Kit Mainboard	
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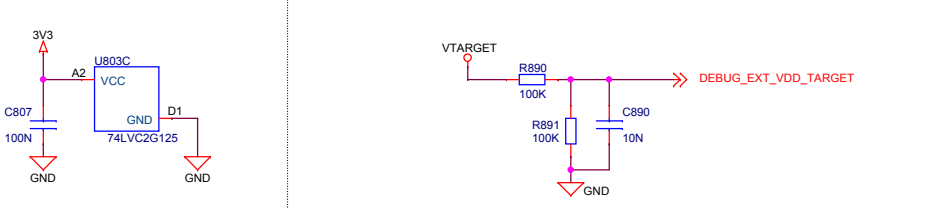
Isolation

MUX

Power & Decoupling



Level Shift & Buffering



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	-	-

/HB1
Wireless STK Platform

Schematic Title
Wireless Starter Kit Mainboard

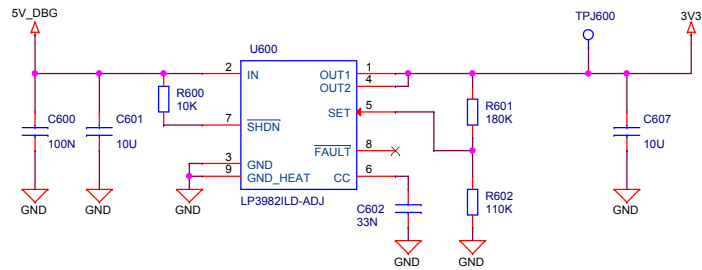
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Debug Interface

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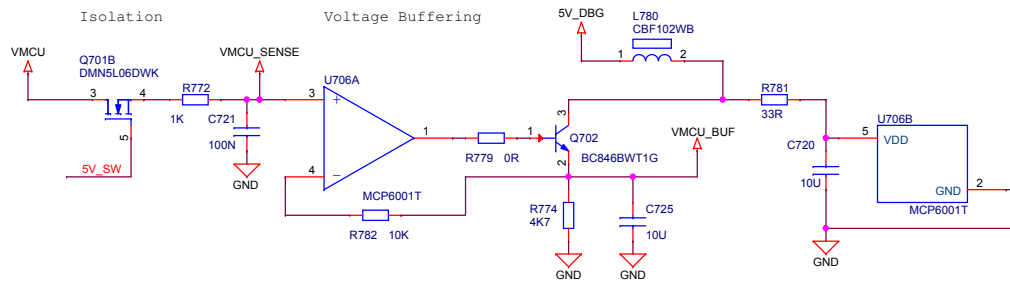
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3V3 Regulator



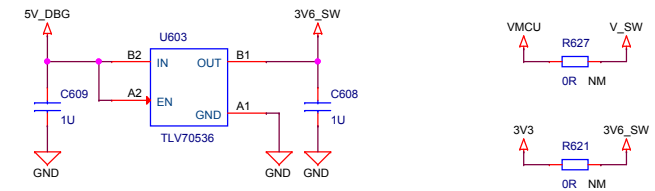
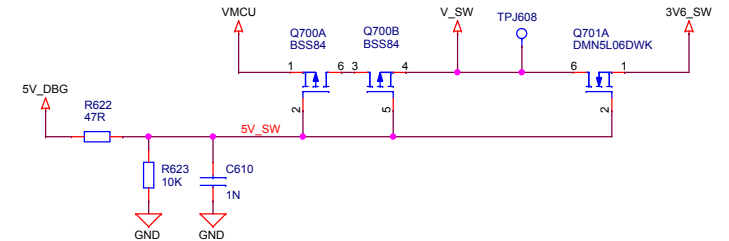
VMCU Voltage Mirror




Power Supply for Analog Switches

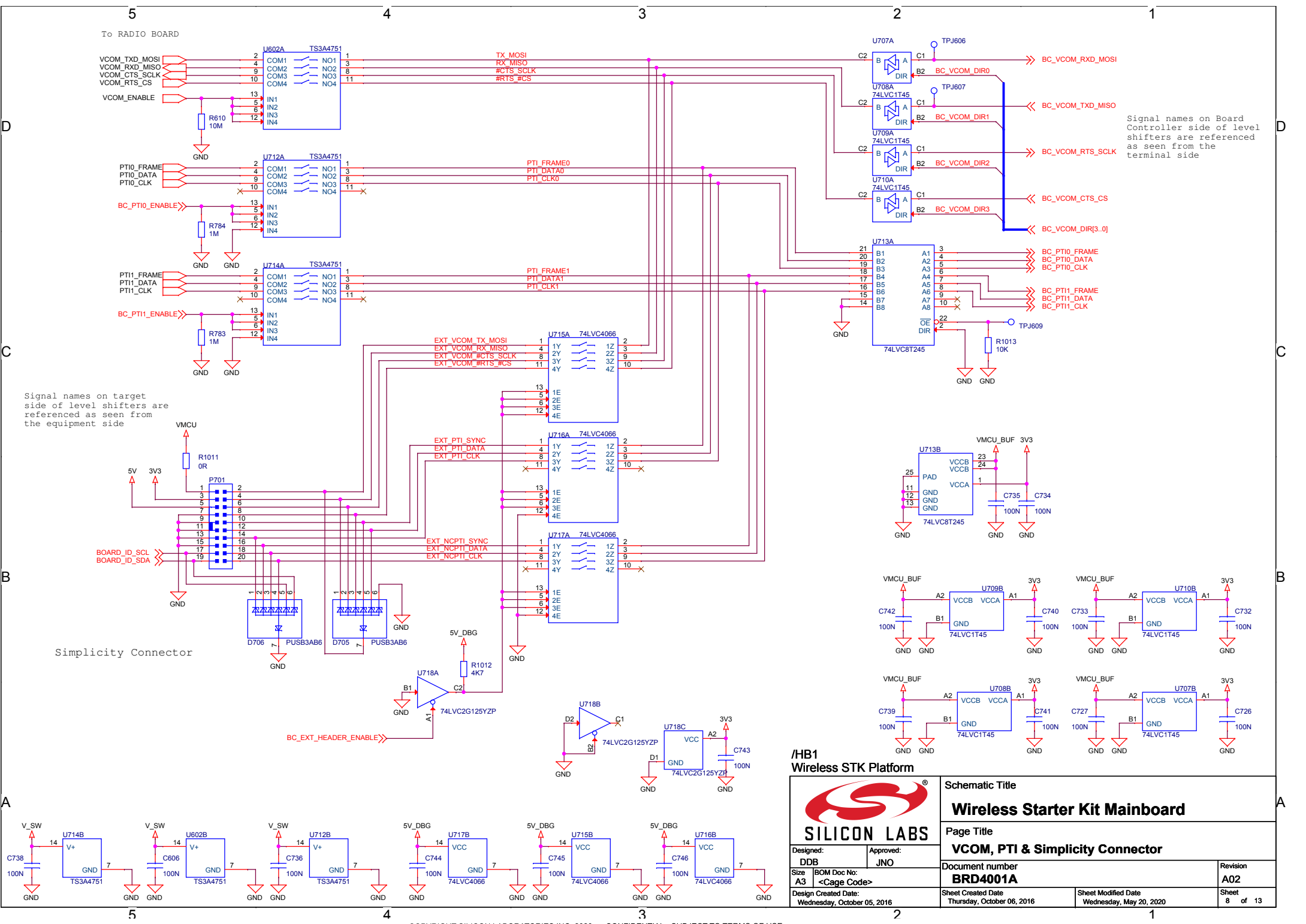
Analog switches used for isolation are powered by 3V6_SW when the USB cable is connected, otherwise by VMCU.

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



Wireless STK Platform

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		Voltage Regulators	
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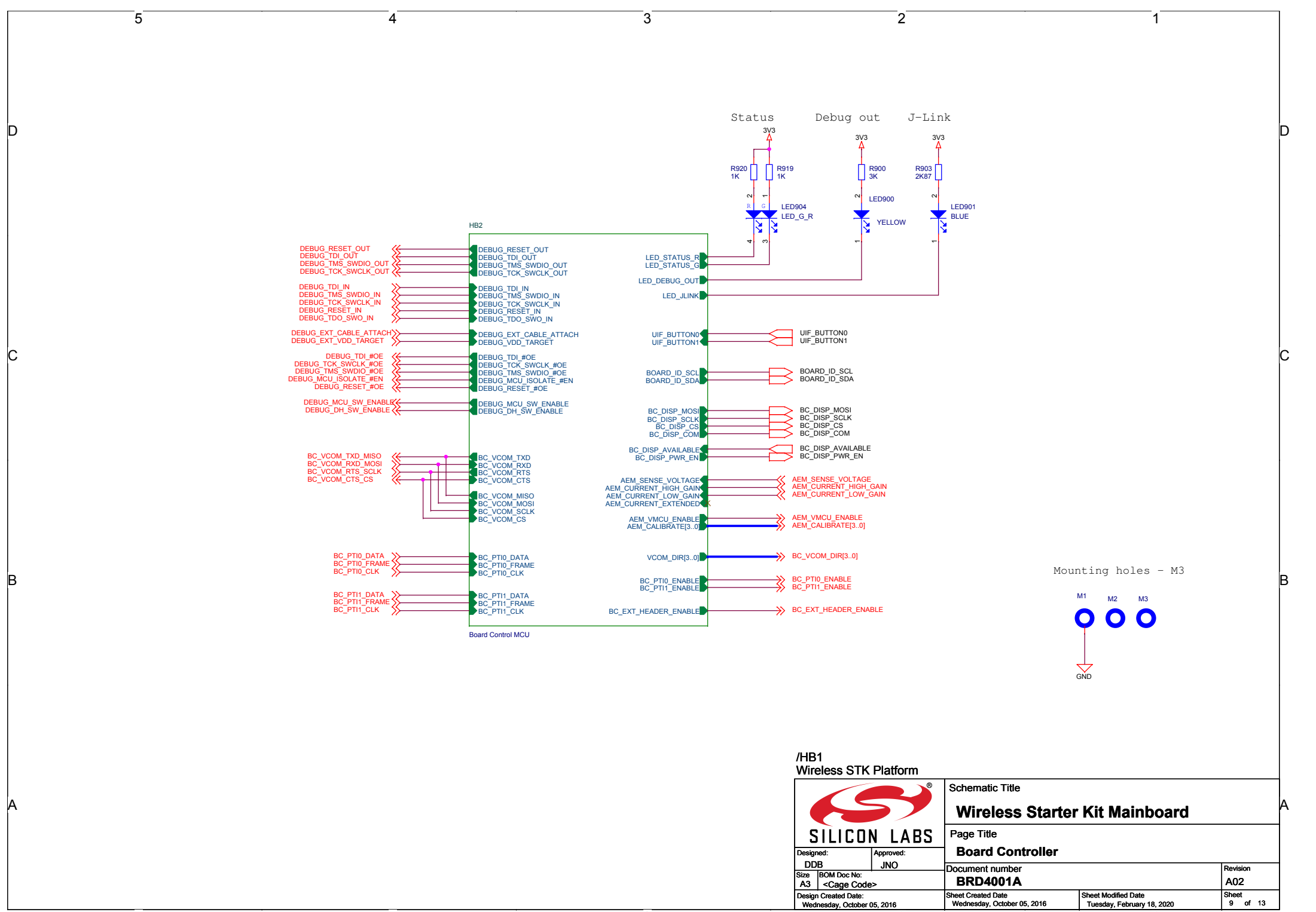
Signal names on Board Controller side of level shifters are referenced as seen from the terminal side

Signal names on target side of level shifters are referenced as seen from the equipment side


Simplicity Connector

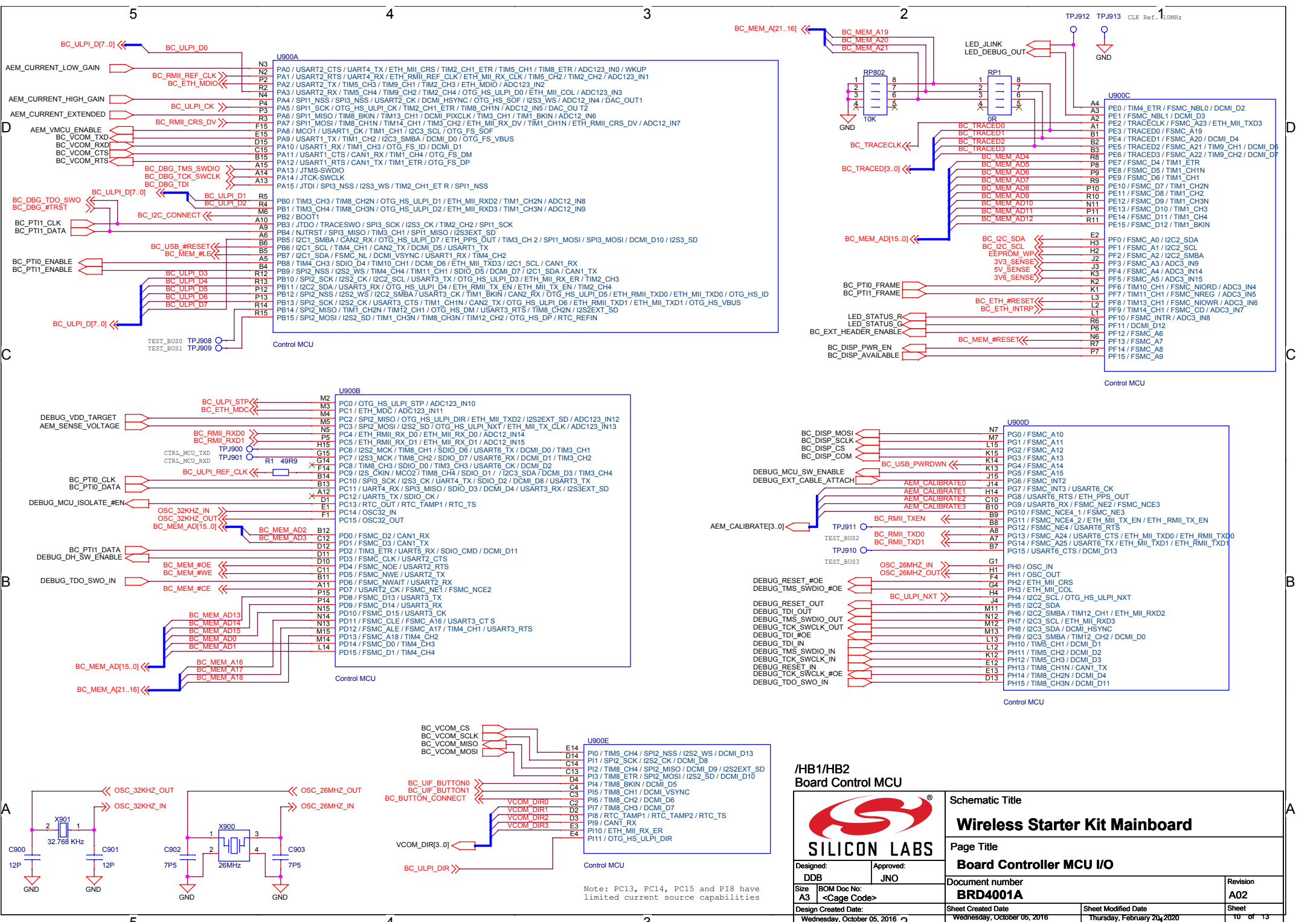
/HB1
Wireless STK Platform

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		Wireless Starter Kit Mainboard	
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/HB1
Wireless STK Platform

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/HB1/HB2 Board Control MCU

SILICON LABS

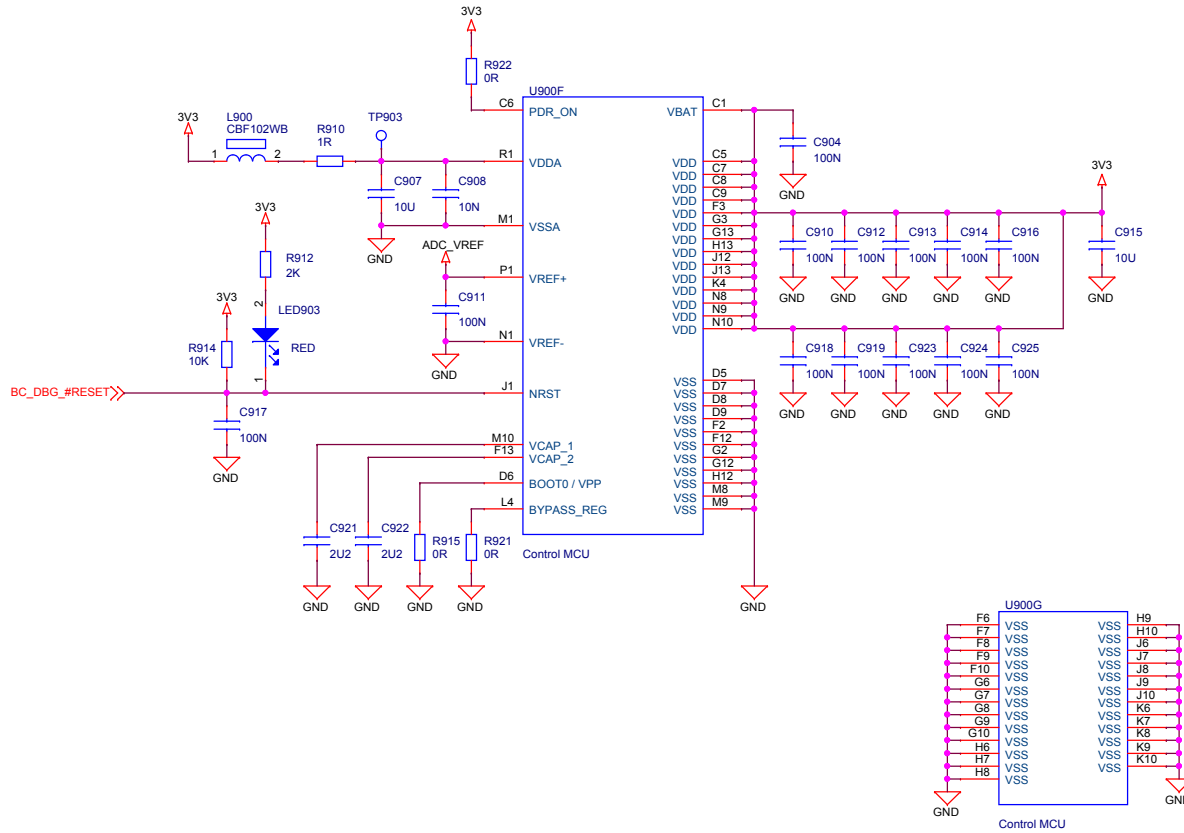
Schematic Title
Wireless Starter Kit Mainboard

Page Title
Board Controller MCU I/O

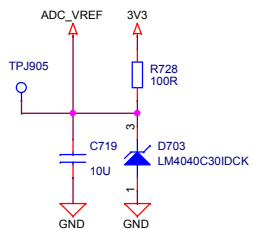
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Note: PC13, PC14, PC15 and PI8 have limited current source capabilities

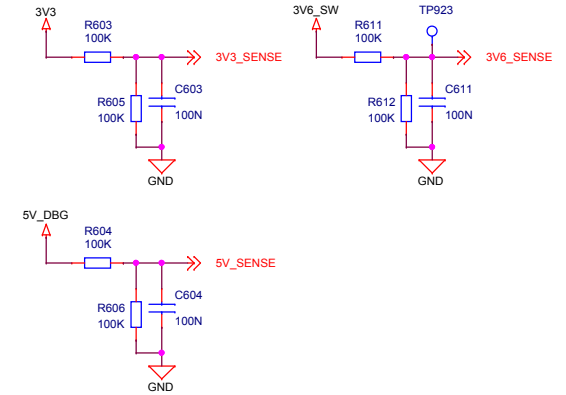
Board Controller Power & Decoupling:



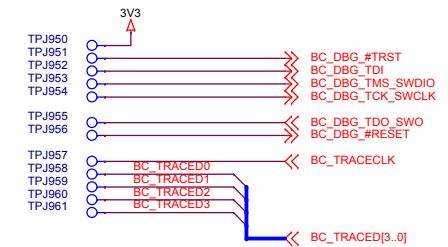
ADC reference voltage




POWER SENSE

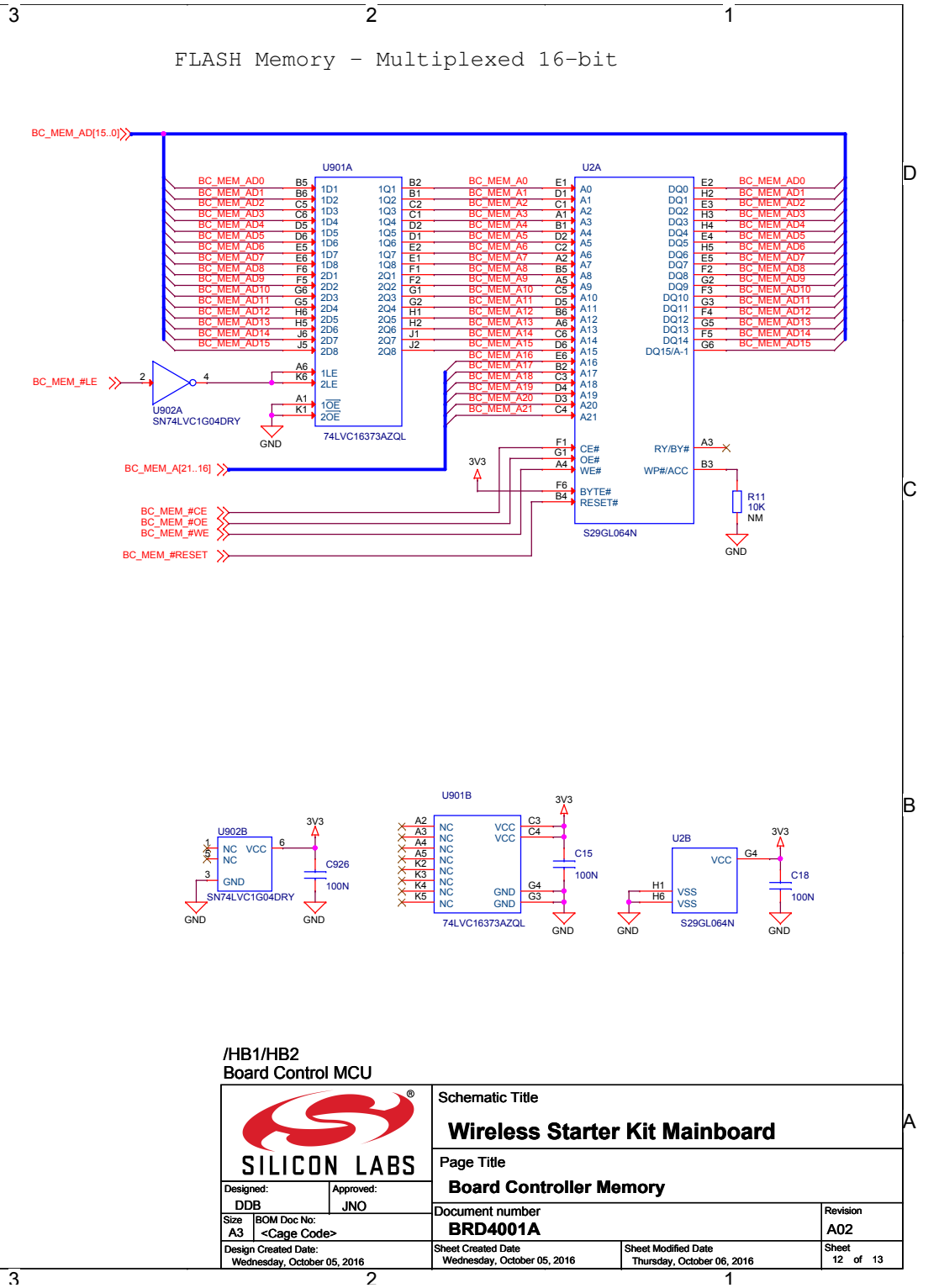
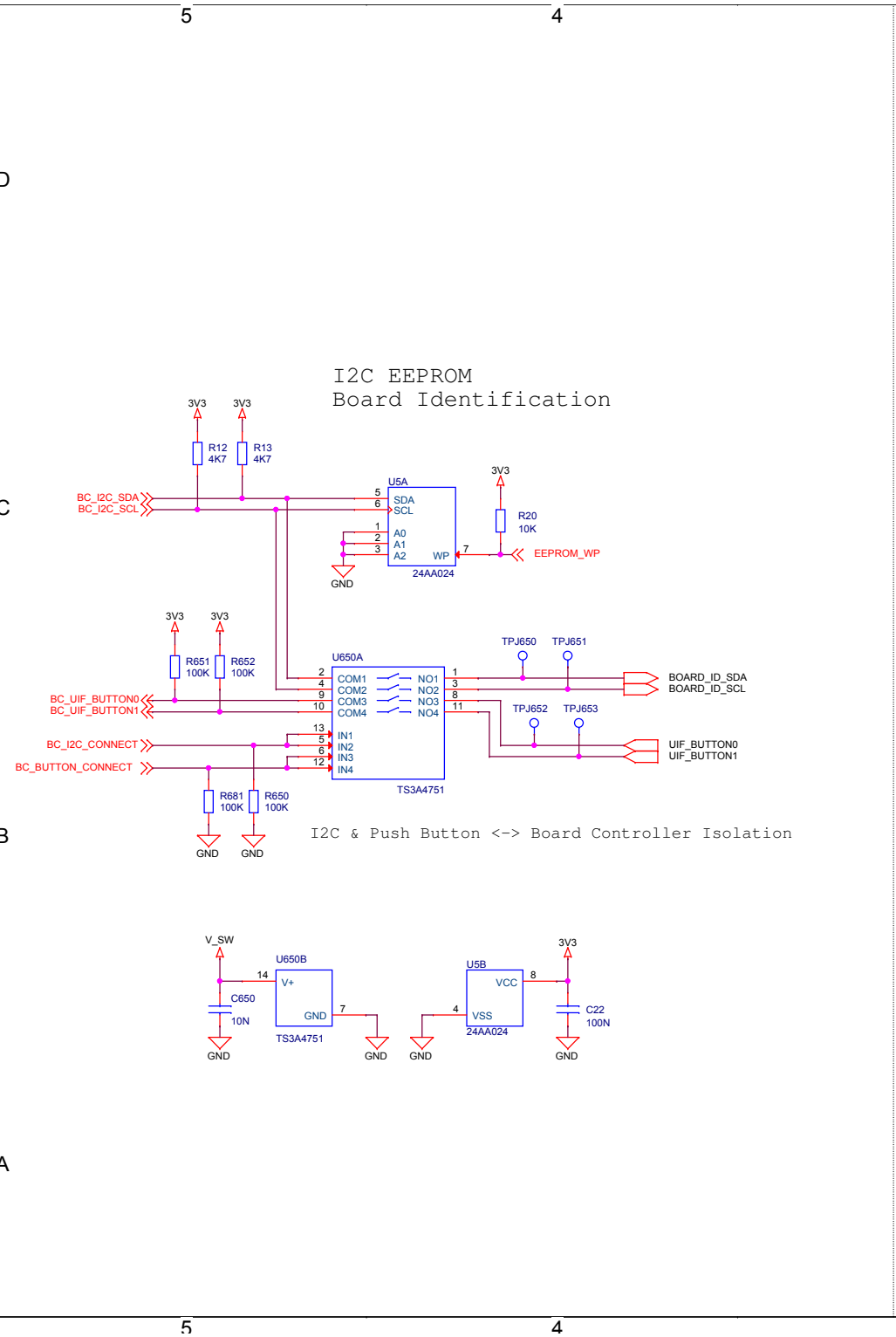


Board Controller Debug & Trace Test Points



/HB1/HB2
Board Control MCU

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		Board Controller Power & Misc	
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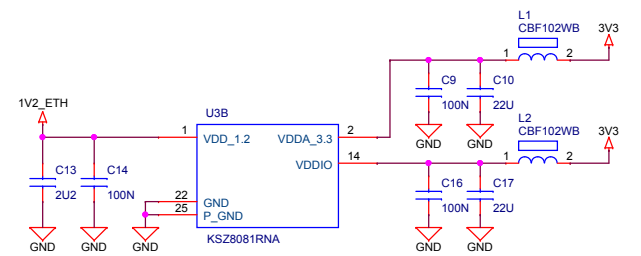
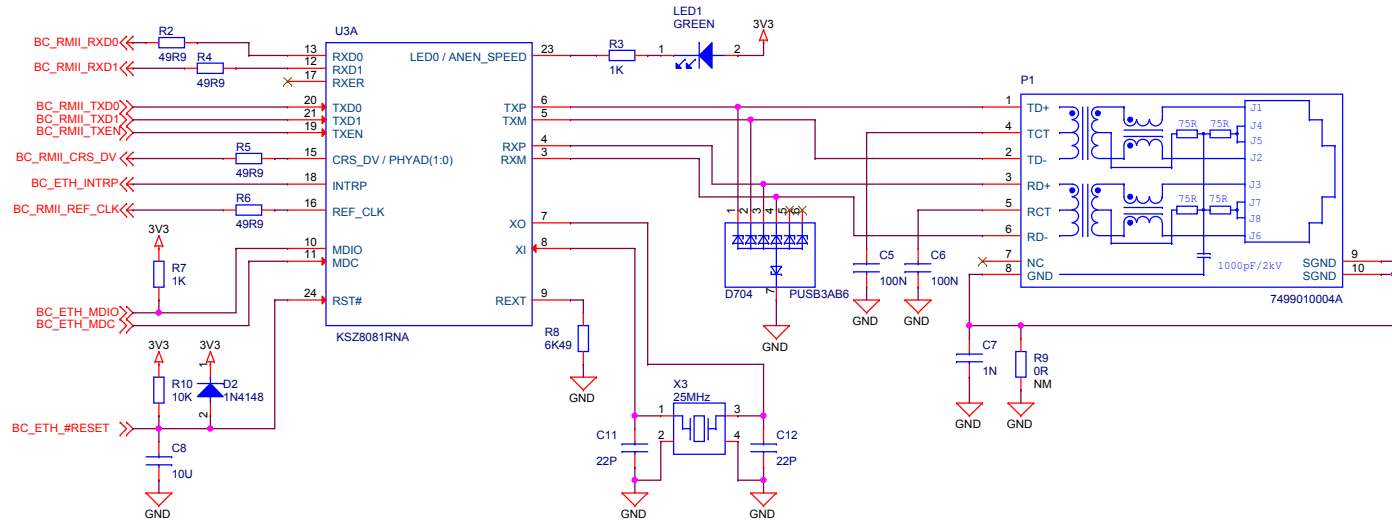


/HB1/HB2
Board Control MCU

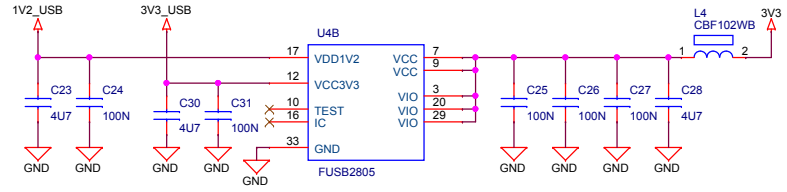
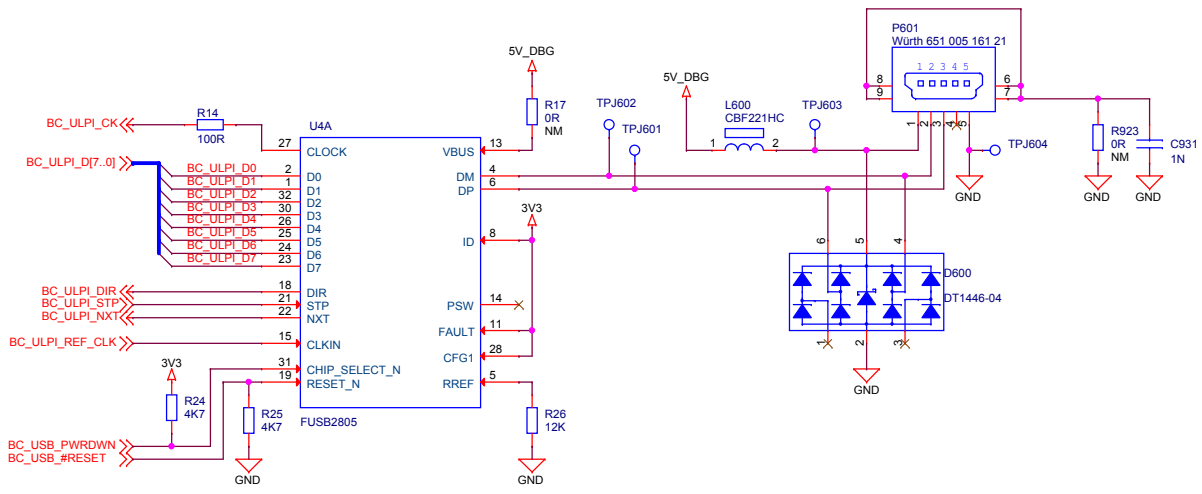


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10/100 Mbit Ethernet PHY



USB High Speed



/HB1/HB2
Board Control MCU

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		Board Controller USB & Ethernet	
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