



Wireless STK Mainboard	
Board Function	Page
Title Page	1
User Interface	2
Radio Board Interface	3
Breakout Signals	4
Target Voltage Supply	5
Target Supply Control	6
Advanced Energy Monitor	7
Debug Multiplexer	8
Board Voltage Supply	9
VCOM & PTI Multiplexer	10
Logic Analyzer & Mini Simplicity Connector	11
Board Controller IO	12 13
Board Controller Power	14
Board Controller Misc.	15
Board Controller USB & Ethernet	16

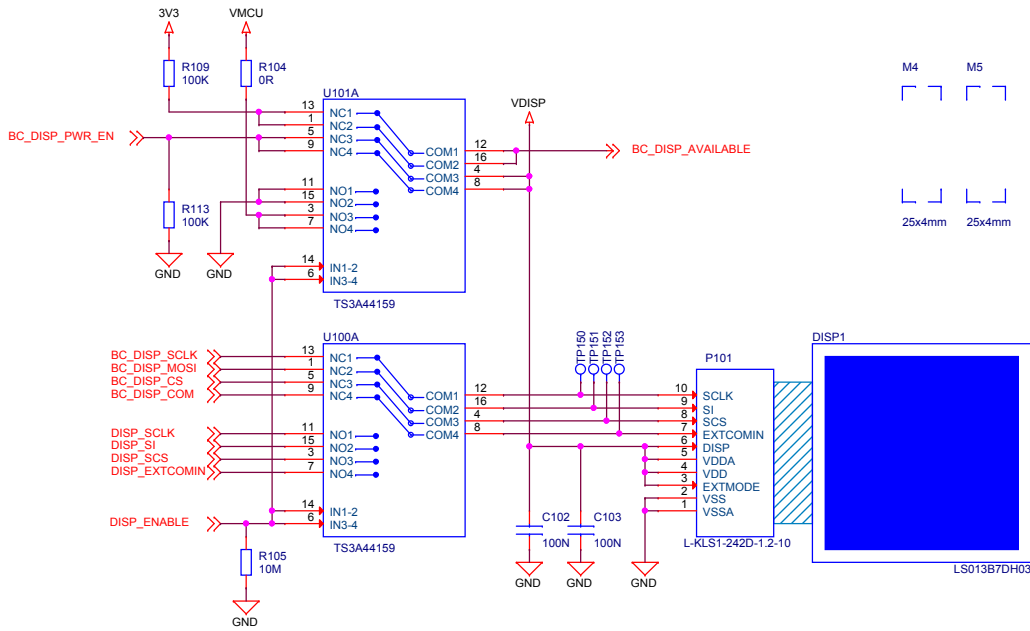
Revision History	
Rev.	Description
A00	Initial production release
A01	Removed U720 Opamp, changed to KLS Ethernet jack
A02	Changed to discrete current sense amplifier, 0.5 ohm sense resistor
A03	Discrete LDO, improved logic analyzer front end



<Schematic Path>  
WSTK

<p><b>SILICON LABS</b></p>		Schematic Title	
		<b>Wireless Starter Kit Platform</b>	
Designed: HEL Approved: RGU		Page Title	
		<b>Title Page</b>	
Size A3	BOM Doc No: <Cage Code>	Document number <b>BRD4002A</b>	Revision A03
Design Created Date: Wednesday, December 03, 2008		Sheet Created Date Saturday, March 21, 2009	Sheet Modified Date Wednesday, June 02, 2021
		Sheet 1 of 16	

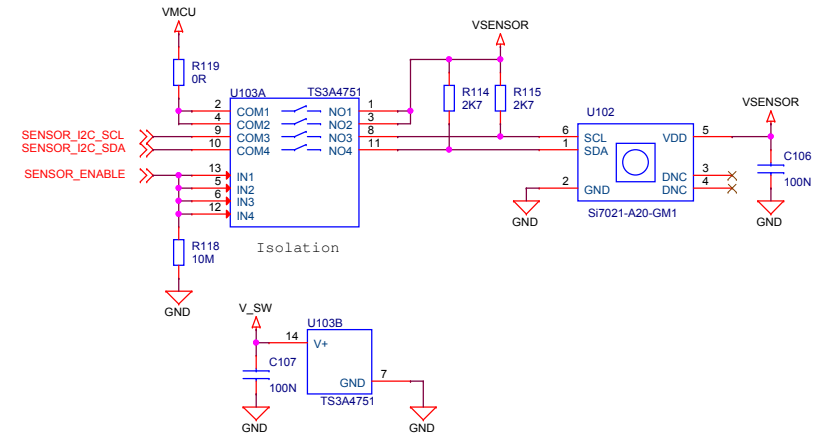
### Memory LCD-TFT Display & Multiplexer



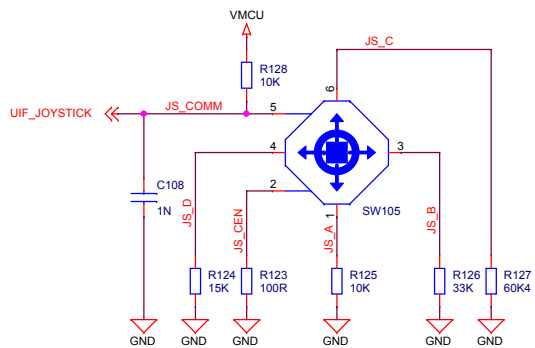
DISP_ENABLE	Connected	V_DISP	BC_DISP_AVAILABLE
1	RADIO	VMCU	GND
0	BC	BC_DISP_PWR_EN	3V3

The target device always controls ownership of the display using the DISP\_ENABLE signal

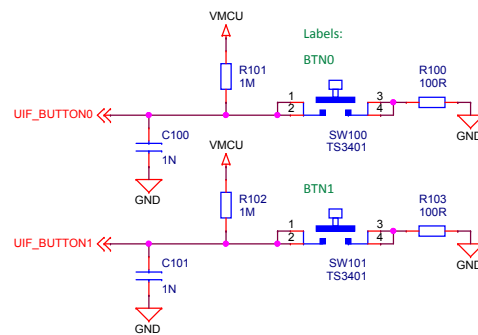
### Relative Humidity & Temperature Sensor



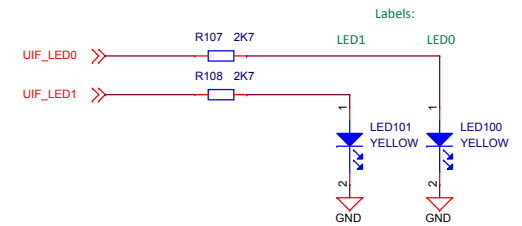
### Analog Joystick



### User pushbuttons

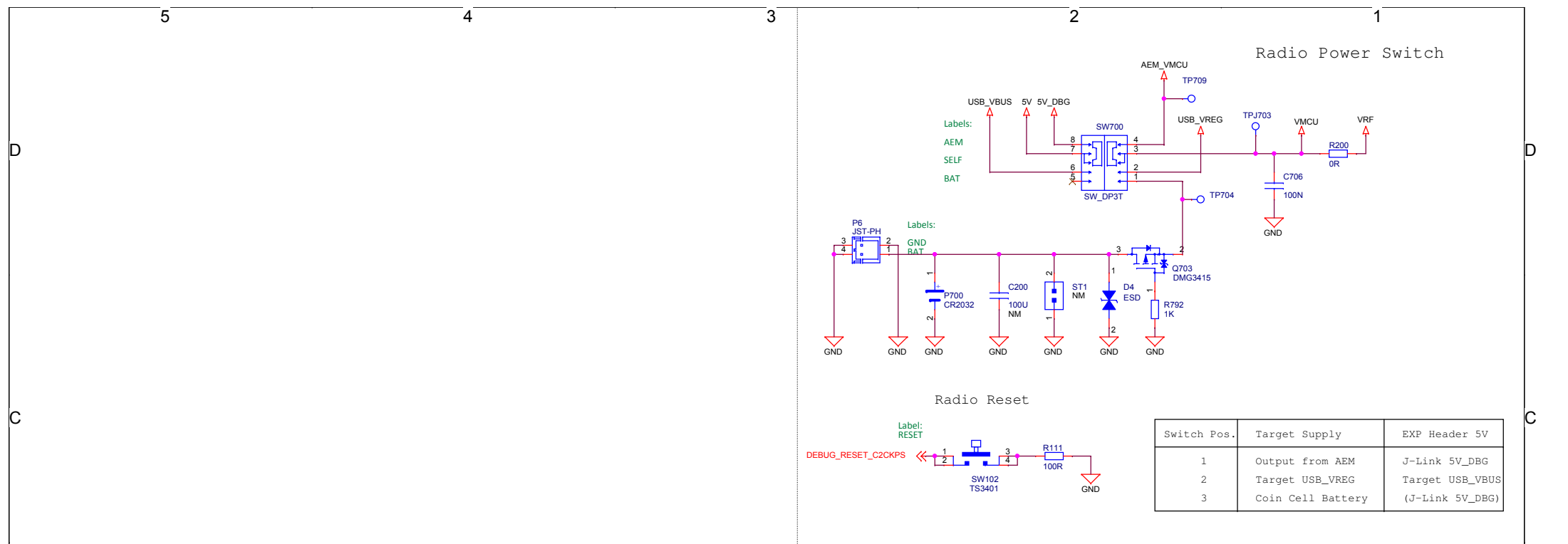


### User LEDs

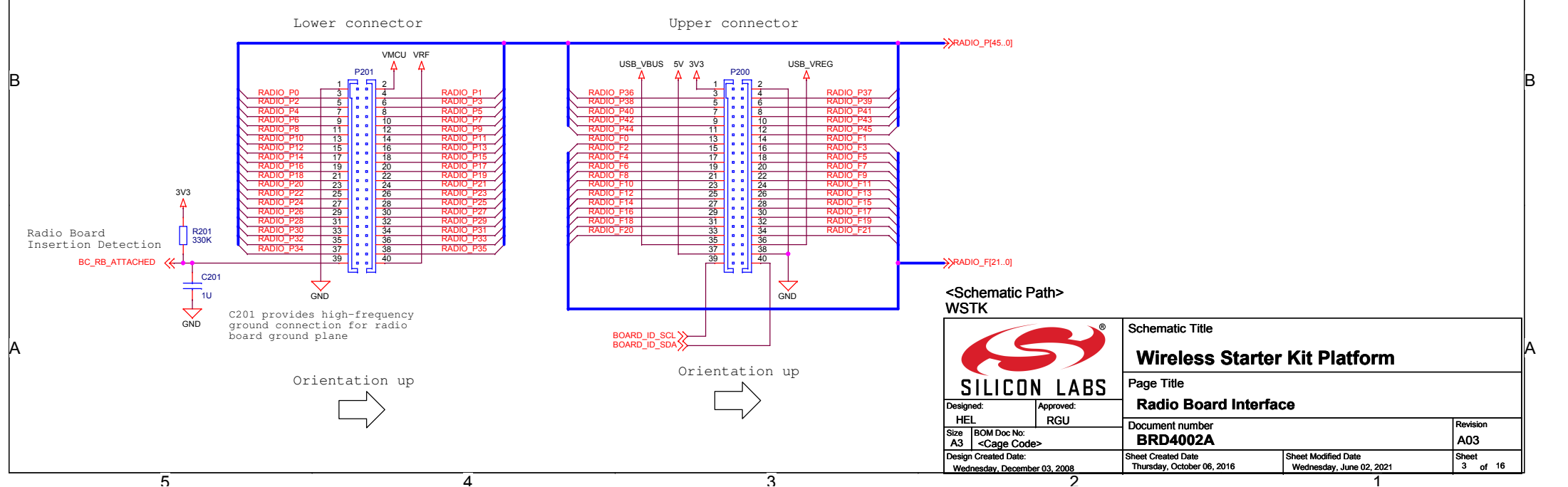


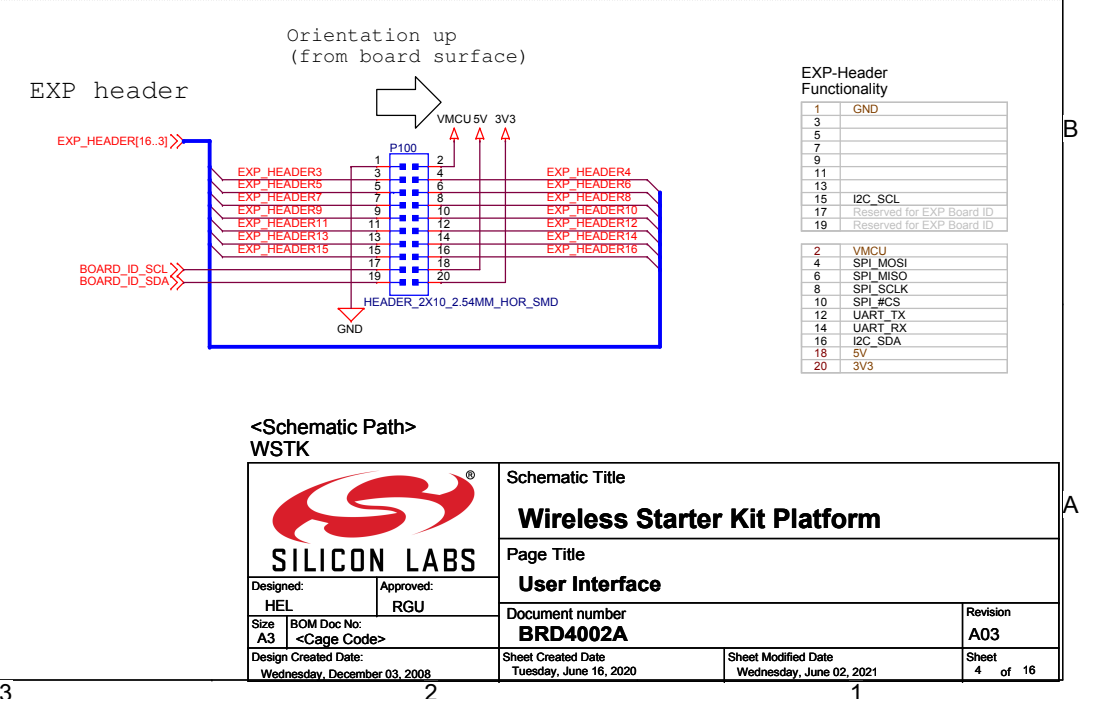
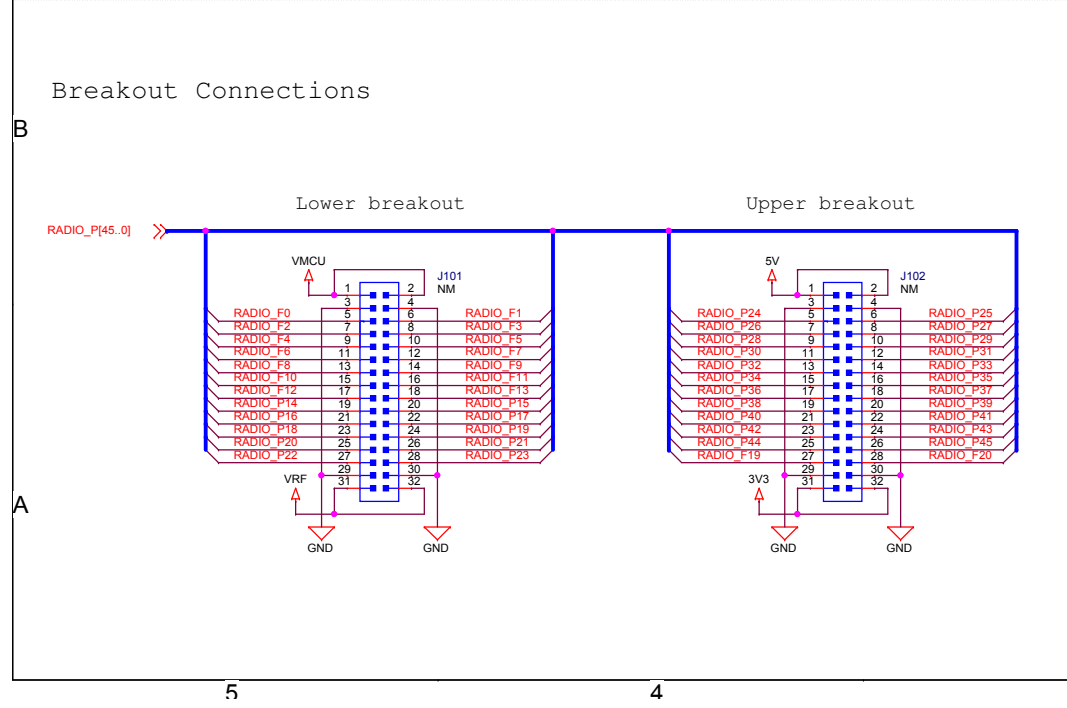
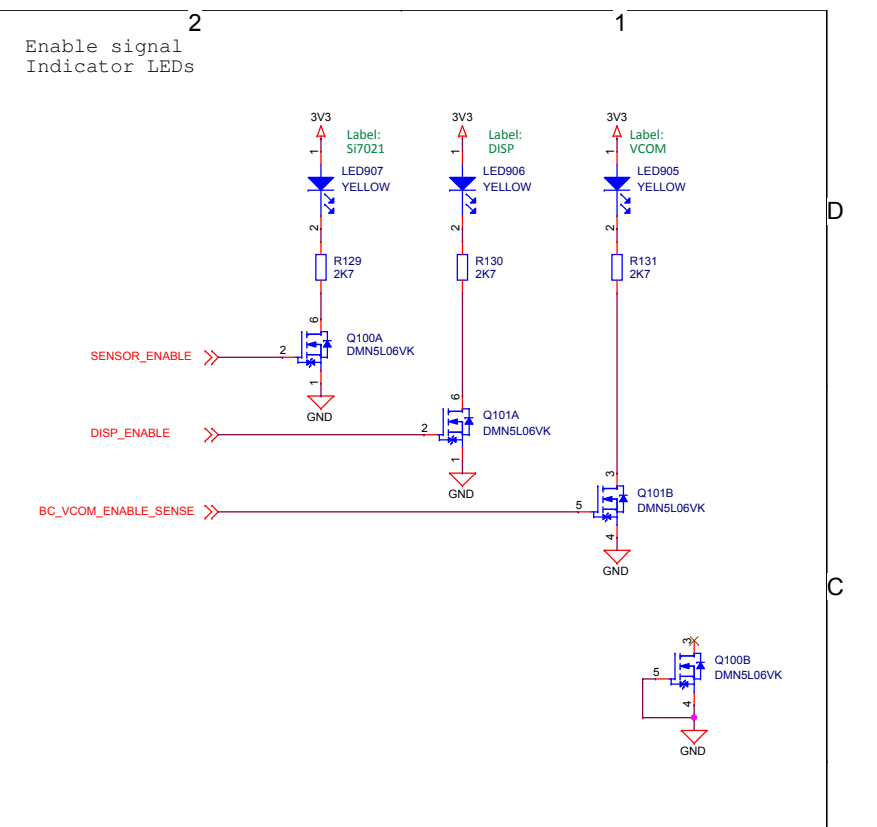
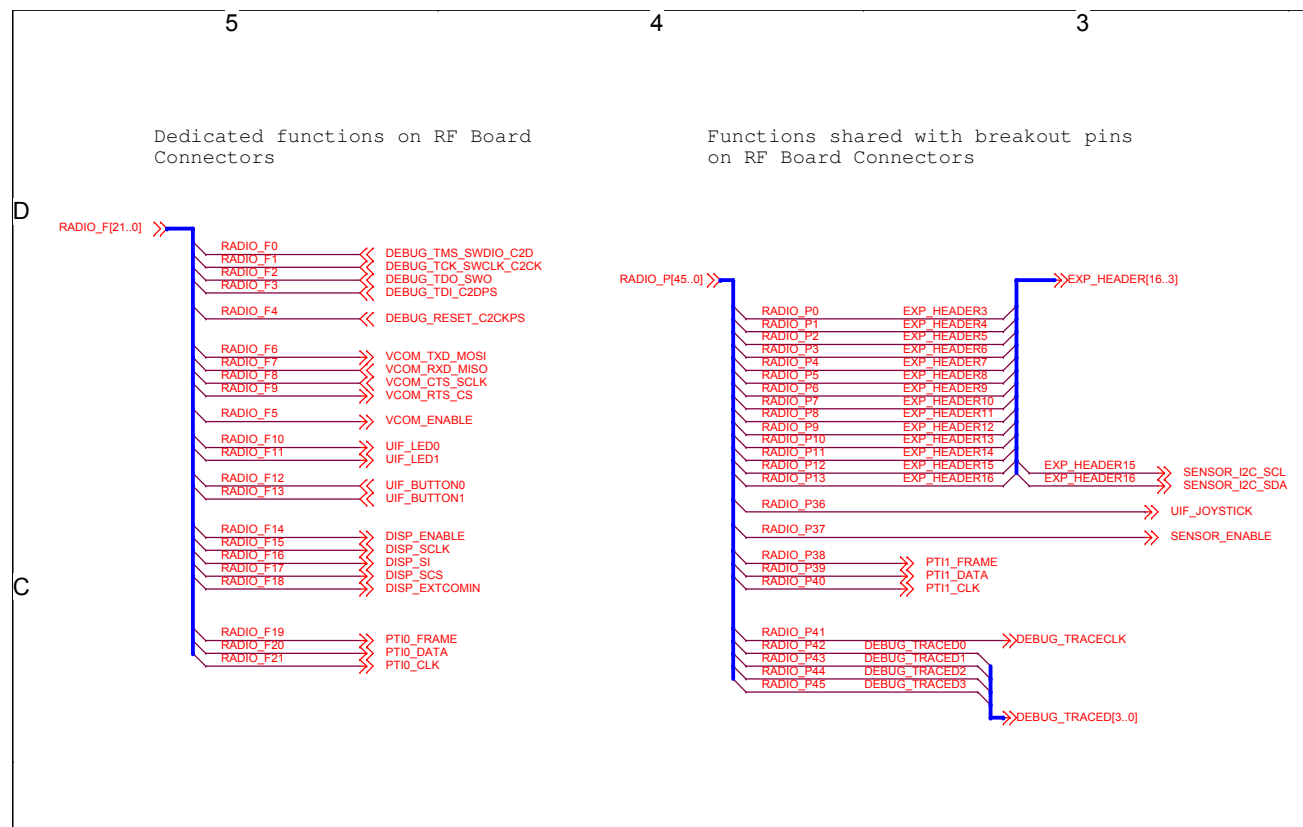
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Designed: HEL Approved: RGU		Page Title	
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Size A3	BOM Doc No: <Cage Code>	Document number <b>BRD4002A</b>	Revision A03
Design Created Date: Wednesday, December 03, 2008		Sheet Created Date: Thursday, October 06, 2016	Sheet Modified Date: Wednesday, June 02, 2021
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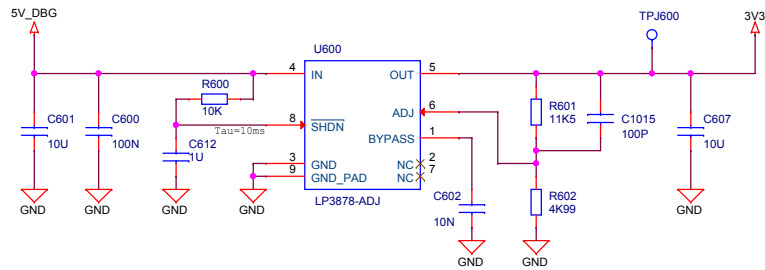


Radio Board Connectors

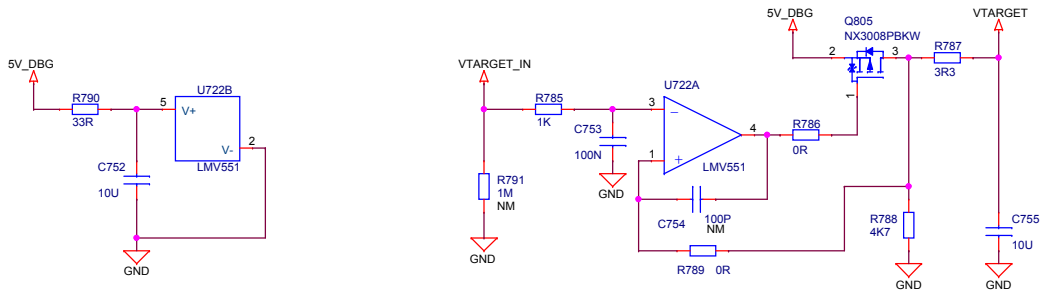




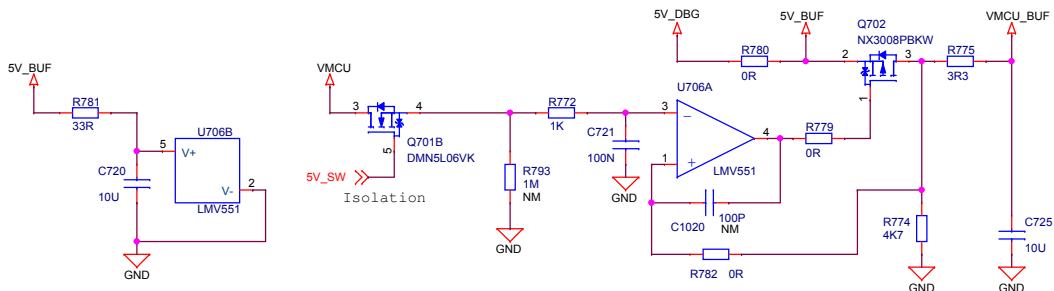
### 3V3 Regulator



### VTarget Voltage Mirror



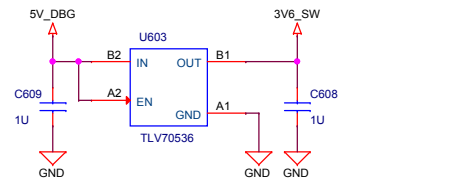
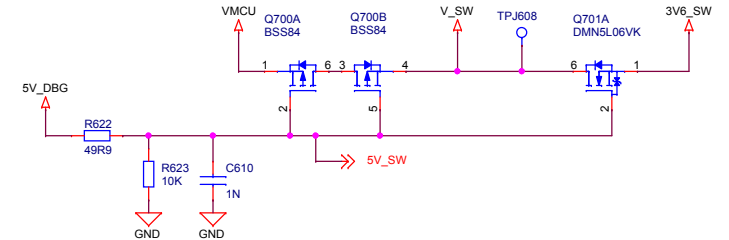
### VMCU Voltage Mirror



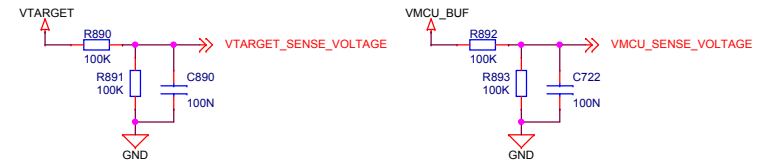
### Power Supply for Analog Switches

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



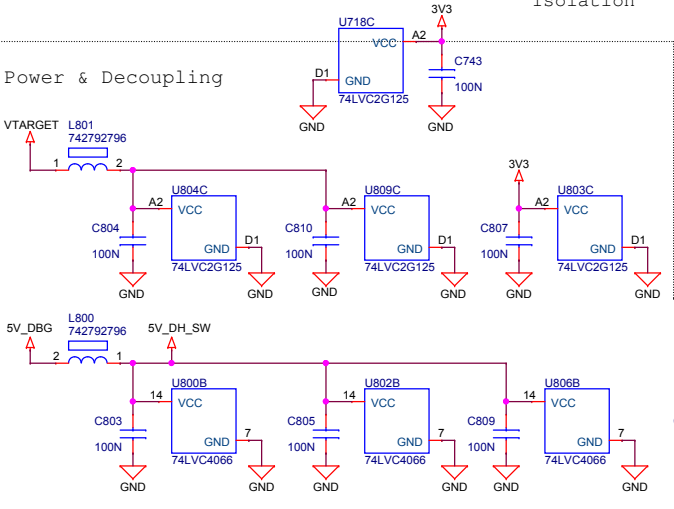
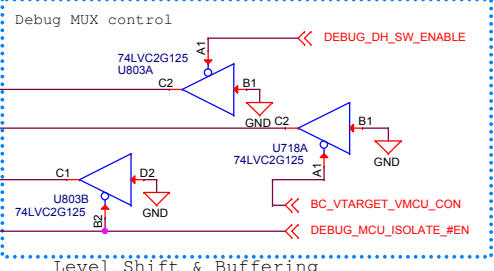
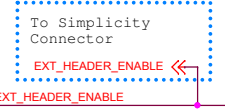
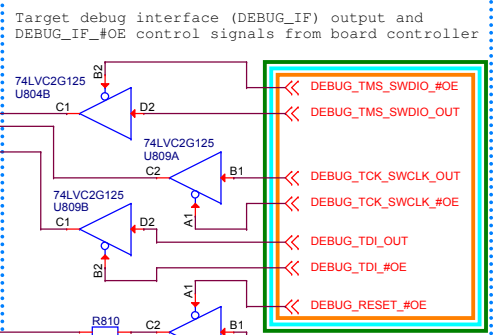
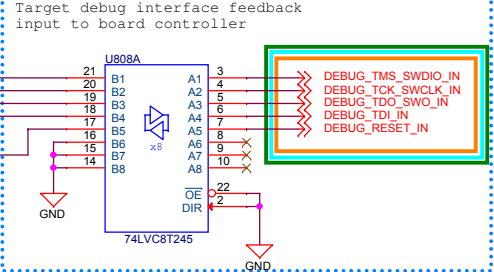
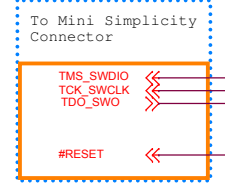
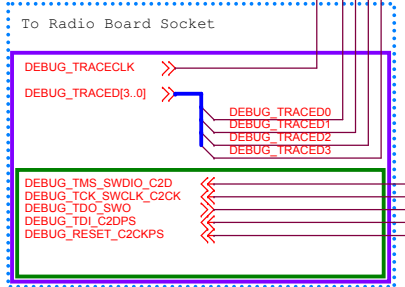
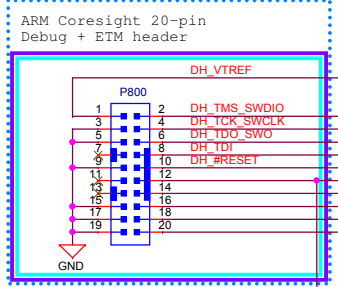
### Buffered voltage monitoring



Mode	VTARGET SOURCE	VTREF SOURCE
Debug Out	VTREF (EXT)	NONE (SELF)
Mini Out	VMCU	NONE
MCU Debug	VMCU	NONE
Debug In	VMCU	VMCU_BUF
Debug Off	VMCU	NONE

WSTK

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Approved: RGU BOM Doc No: <Cage Code>		Document number	
		<b>BRD4002A</b>	
Revision		Revision	
A03		A03	
Sheet Created Date		Sheet Modified Date	
Monday, March 23, 2020		Wednesday, June 02, 2021	
Sheet 8 of 16		Sheet 8 of 16	



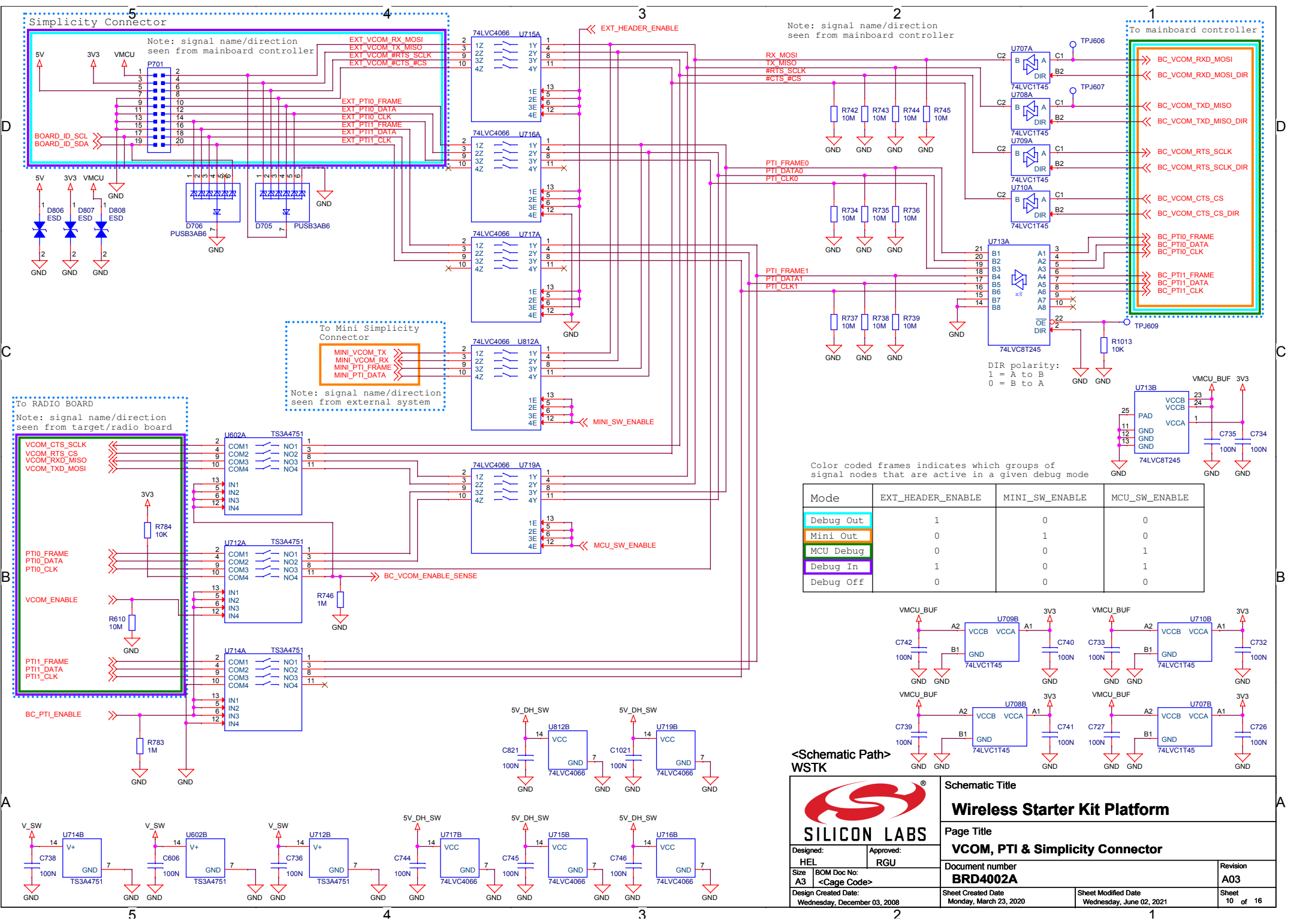
Mode	VTARGET_VMCU_CON	DEBUG_DH_SW_ENABLE	MINI_SW_ENABLE	DEBUG_IF_#OE	ISOLATE_#EN	VTREF	VTARGET
Debug Out	0	1	0	0/1	0	External voltage	External voltage
Mini Out	1	0	1	0/1	0	Disconnected	VMCU
MCU Debug	1	0	0	0/1	1	Disconnected	VMCU
Debug In	1	1	0	1	1	VMCU	VMCU
Debug Off	1	0	0	1	0	-	-

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

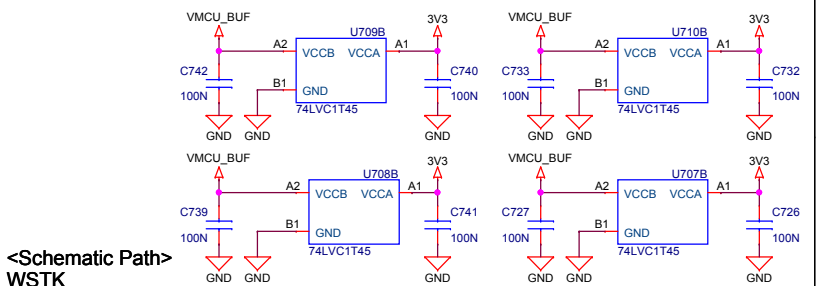
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Page Title		<b>Debug Interface</b>	
Document number	<b>BRD4002A</b>	Revision	<b>A03</b>
Sheet Created Date	Monday, March 23, 2020	Sheet Modified Date	Wednesday, June 02, 2021
Sheet 9 of 16			



Mode	EXT_HEADER_ENABLE	MINI_SW_ENABLE	MCU_SW_ENABLE
Debug Out	1	0	0
Mini Out	0	1	0
MCU Debug	0	0	1
Debug In	1	0	1
Debug Off	0	0	0



**<Schematic Path>**  
WSTK

**Schematic Title**  
**Wireless Starter Kit Platform**

**Page Title**  
**VCOM, PTI & Simplicity Connector**

Designed: HEL Approved: RGU

Size: A3 BOM Doc No: <Cage Code>

Design Created Date: Wednesday, December 03, 2008

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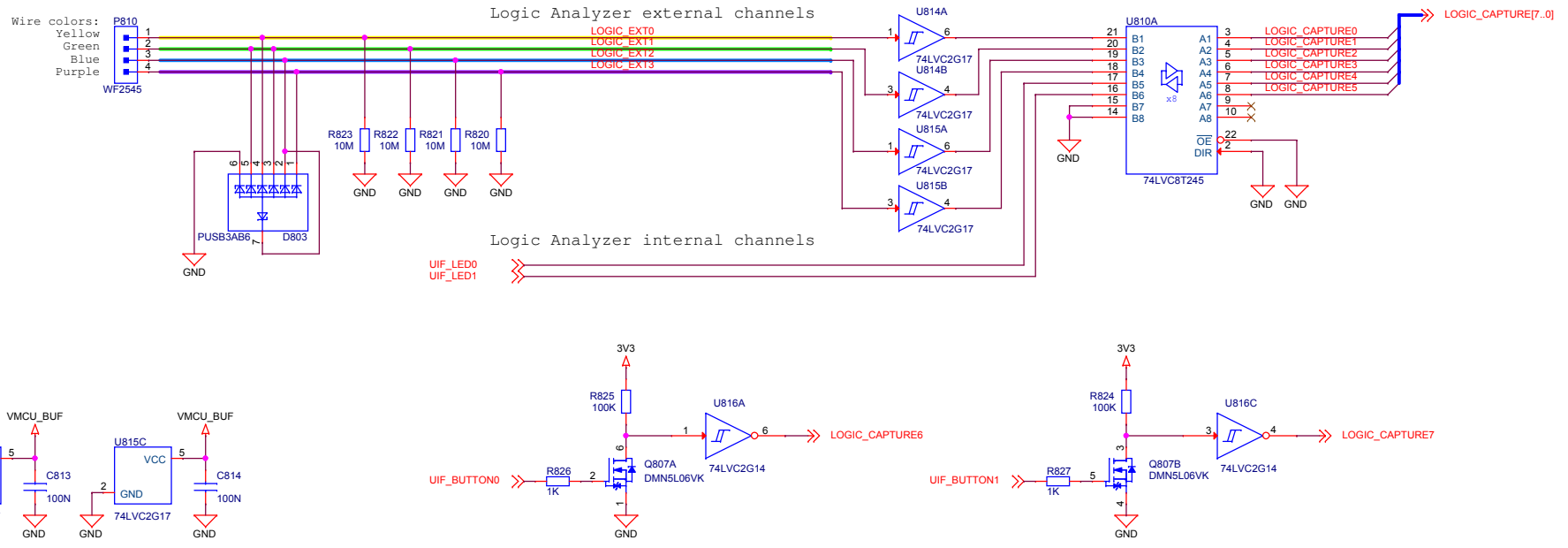
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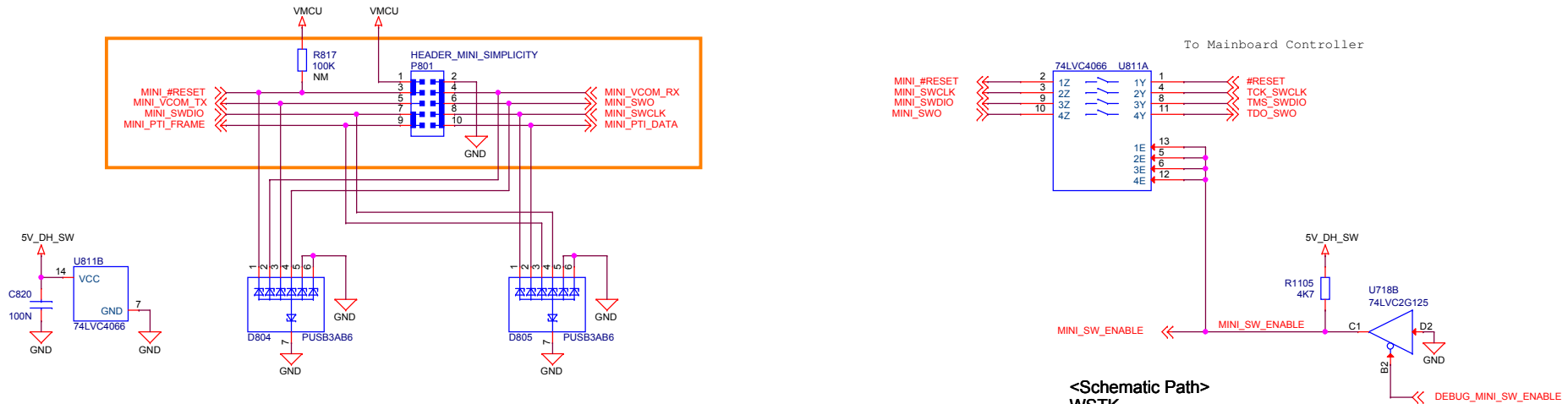
Revision  
**A03**

Sheet 10 of 16

# Logic Analyzer front end



# Mini Simplicity Connector



Mode	EXT_HEADER_ENABLE	BC_VCOM_###_DIR	BC_RB_VCOM_#DIS
Debug Out	1	0/1	0
Mini Out	0	0/1	0
MCU Debug	0	0/1	1
Debug In	1	0	1
Debug Off	0	0	0

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

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**Schematic Title**  
Wireless Starter Kit Platform

**Page Title**  
Logic Analyzer and Mini Simplicity

Designed: HEL | Approved: RGU

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Design Created Date: Wednesday, December 03, 2008

Document number: BRD4002A

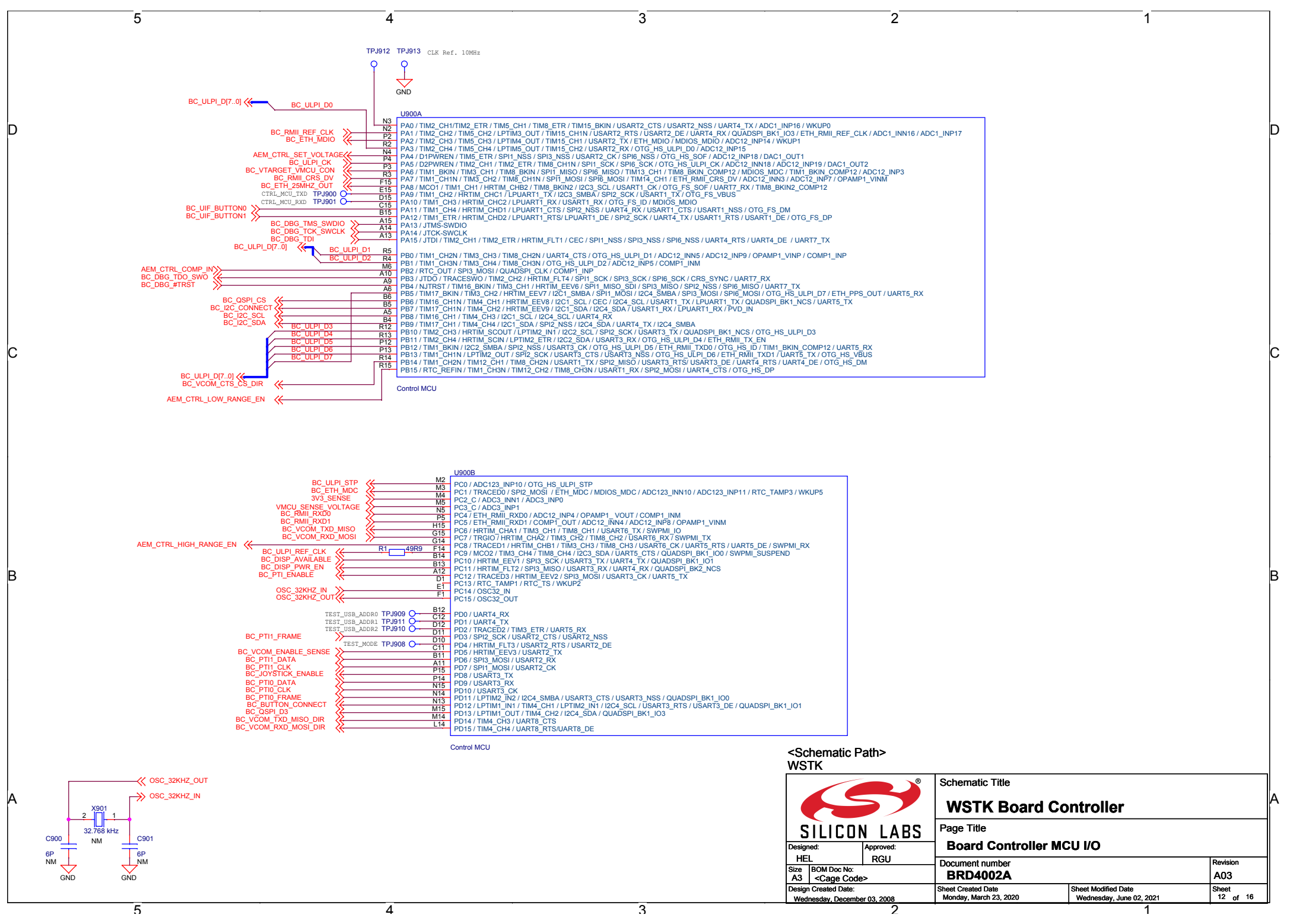
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Sheet Modified Date: Wednesday, June 02, 2021


Revision: A03

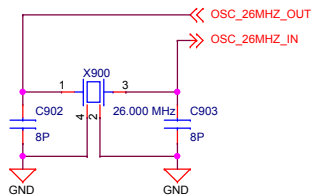
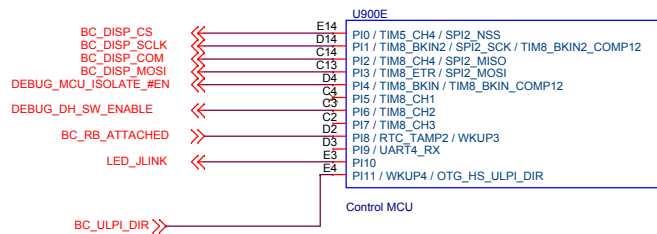
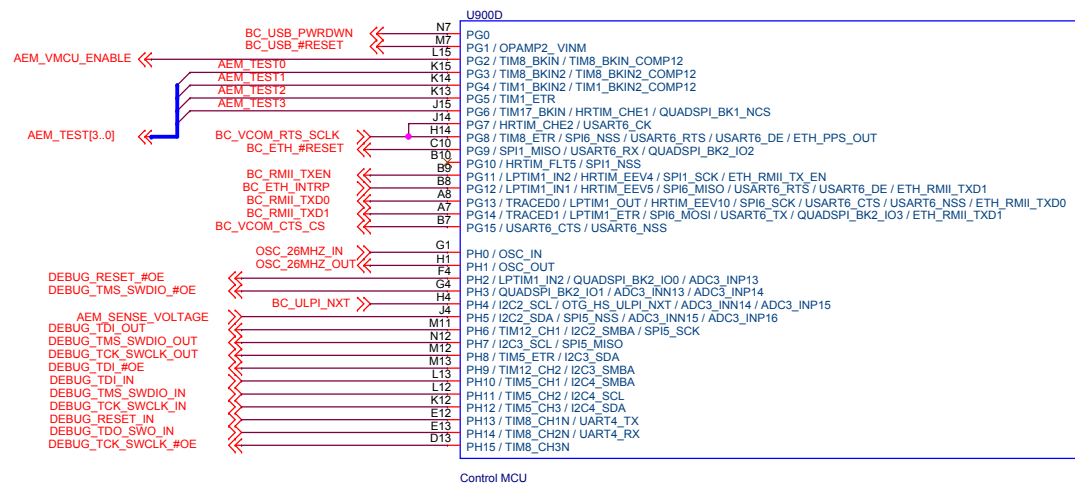
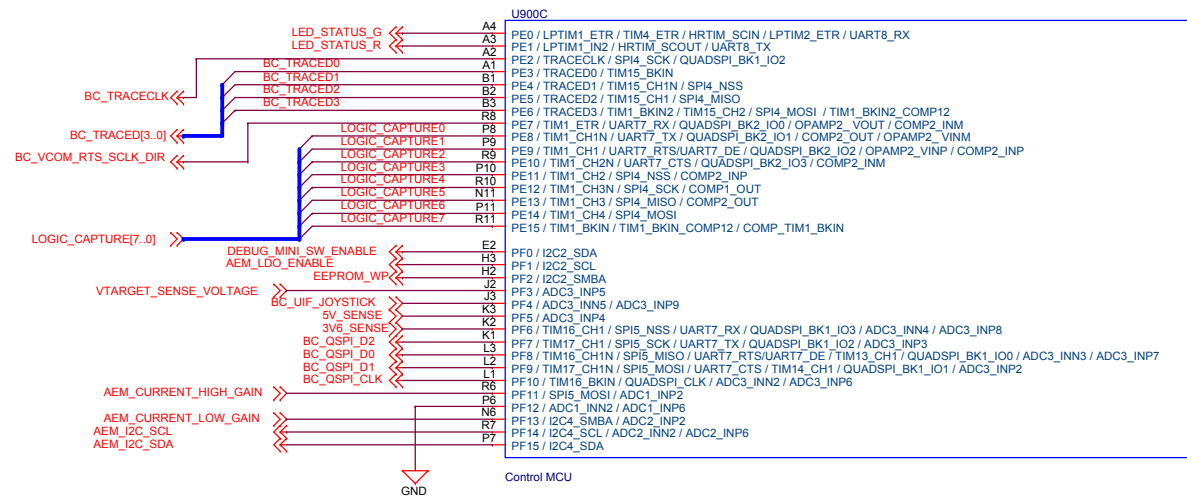
Sheet 11 of 16





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Design: HEL Approved: RGU		Page Title	
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Size A3	BOM Doc No: <Cage Code>	Document number <b>BRD4002A</b>	Revision A03
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		Sheet 12 of 16	

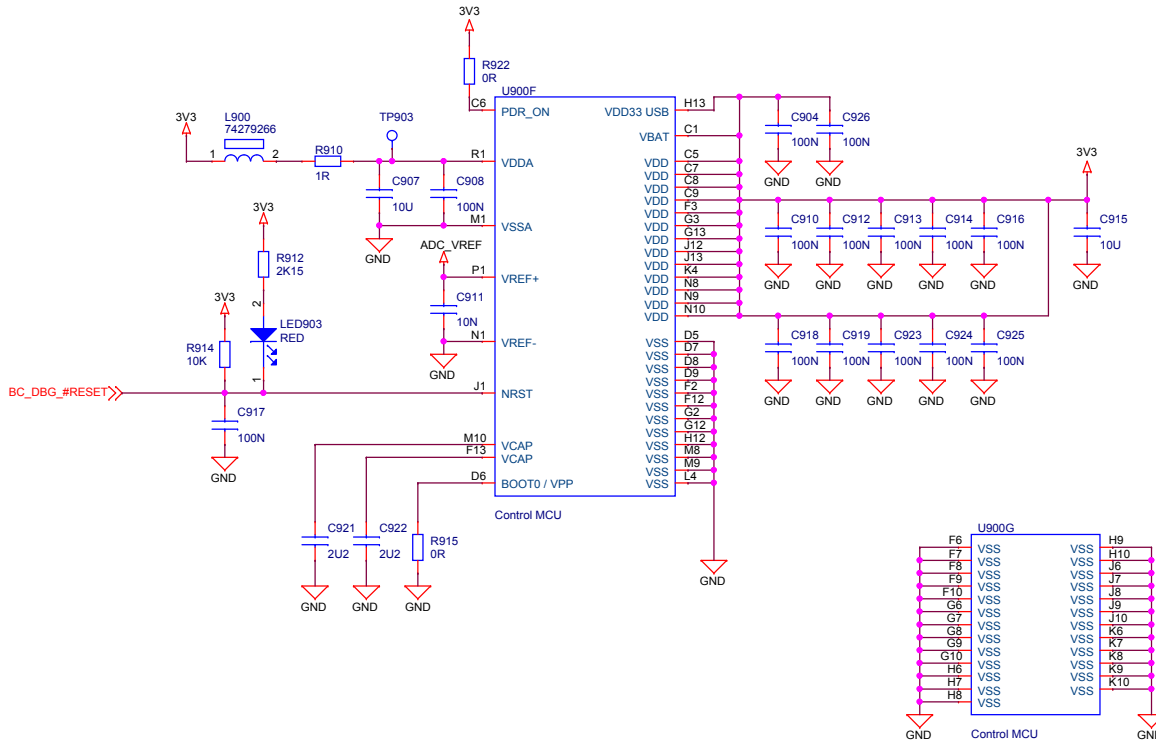


Note: PC13, PC14, PC15 and PI8 have limited current source capabilities

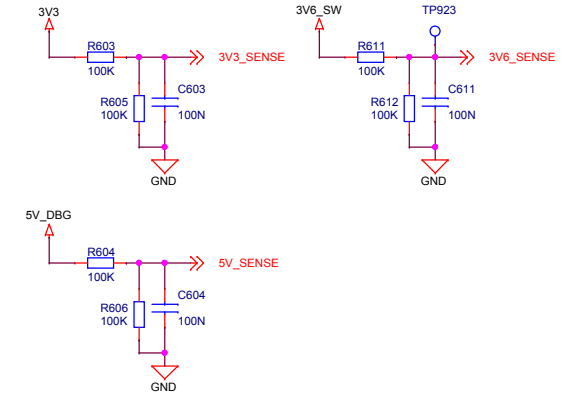
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Size A3	BOM Doc No: <Cage Code>	Document number	
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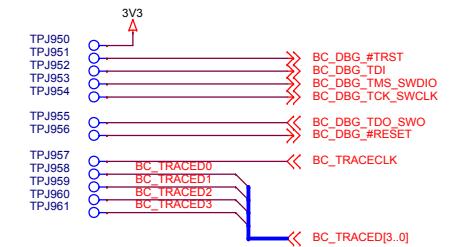
Board Controller Power & Decoupling:



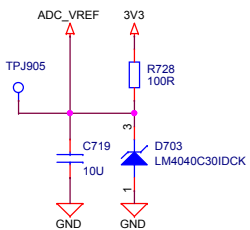
POWER SENSE



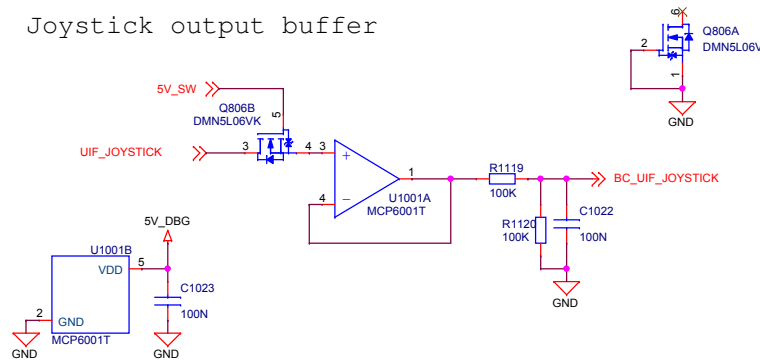
Board Controller Debug & Trace Test Points



ADC reference voltage

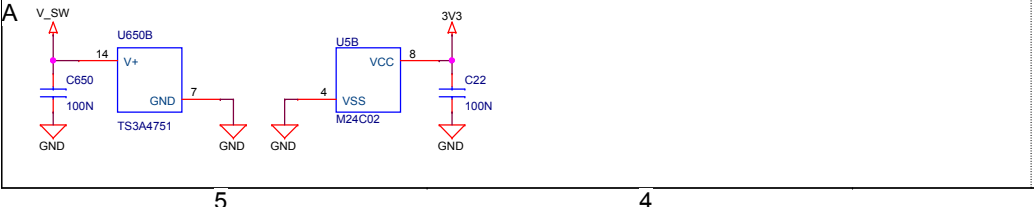
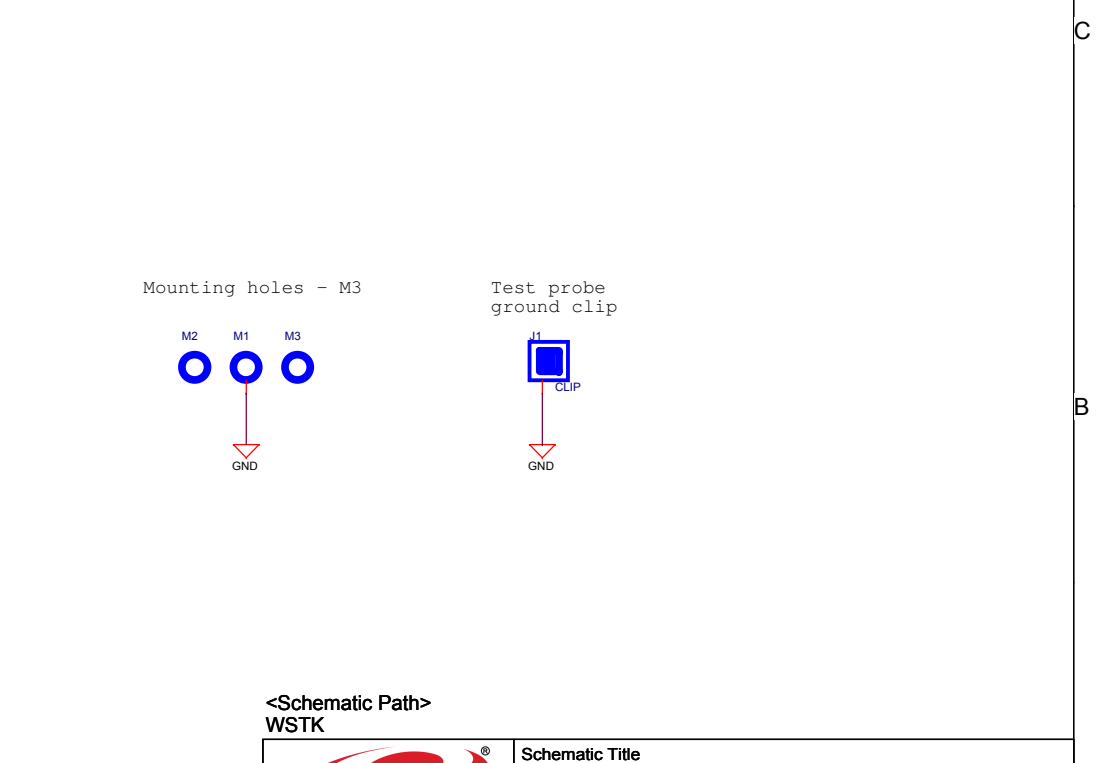
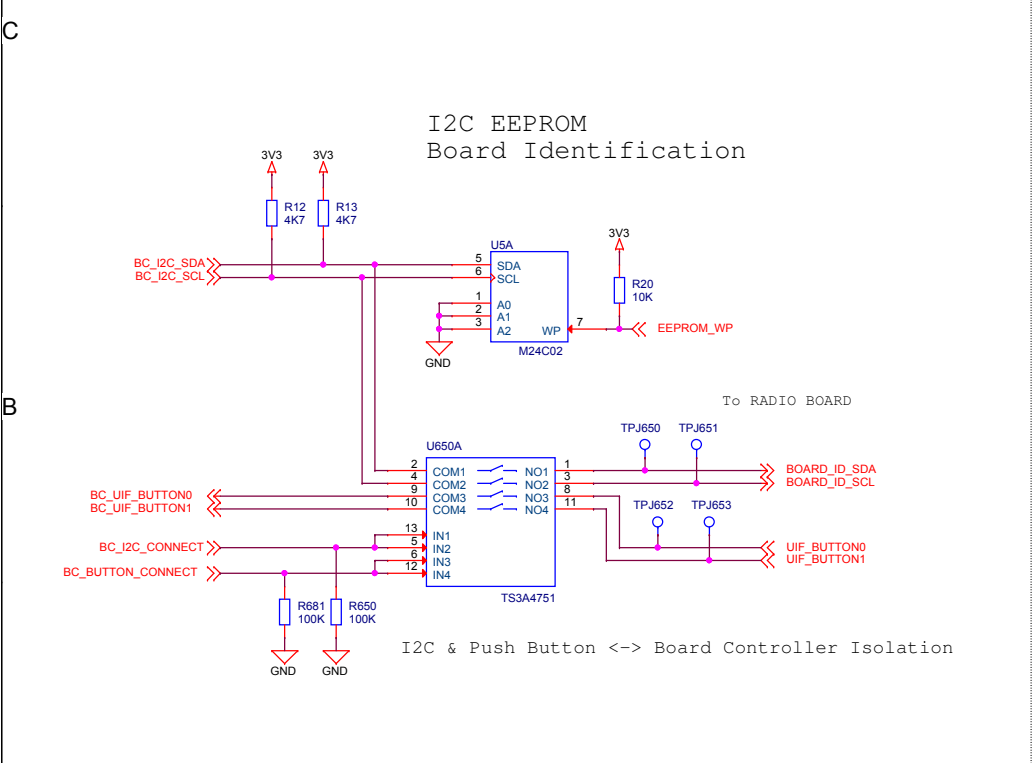
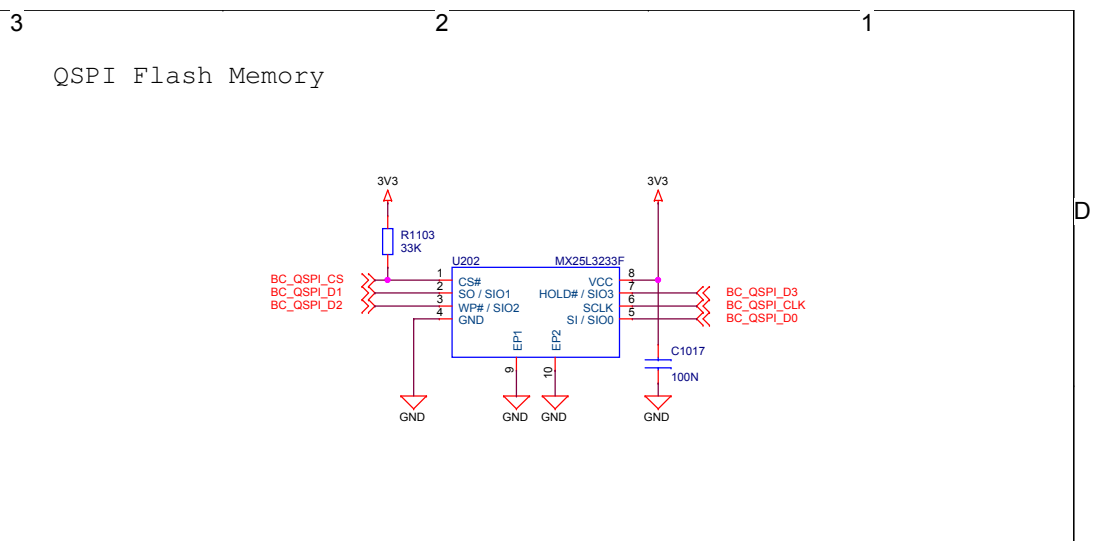
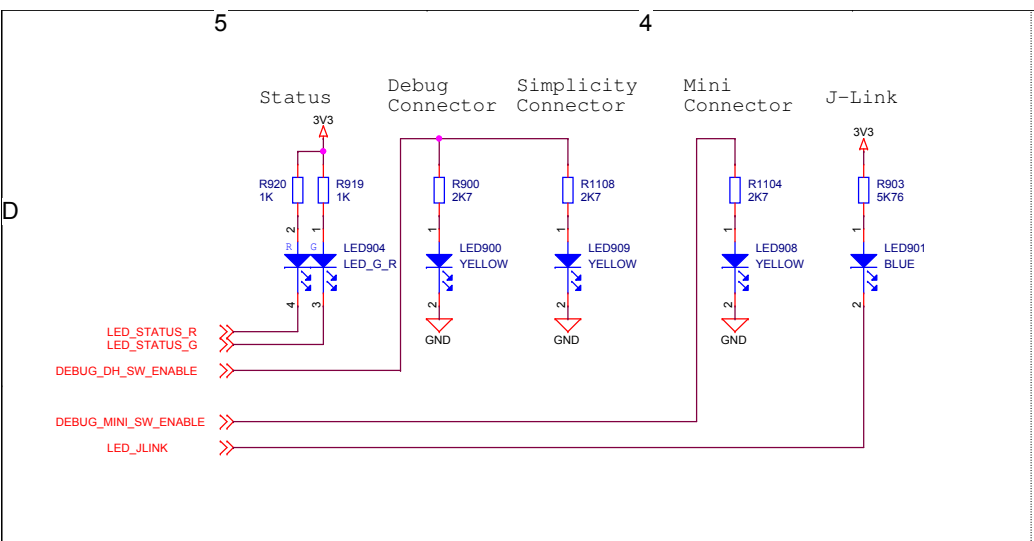


Joystick output buffer



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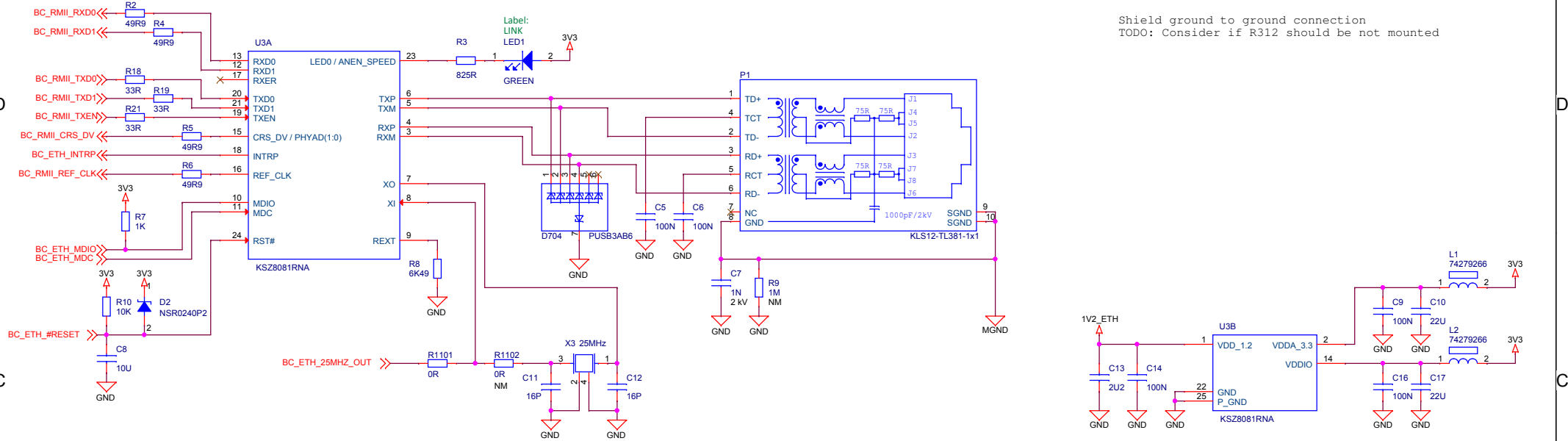
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		<b>BRD4002A</b>	
Sheet Created Date: Wednesday, December 03, 2008		Revision <b>A03</b>	
Sheet Modified Date: Monday, March 23, 2020		Sheet 14 of 16	



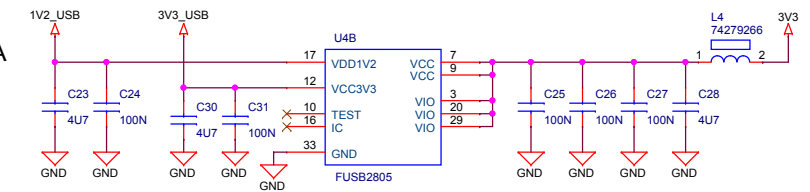
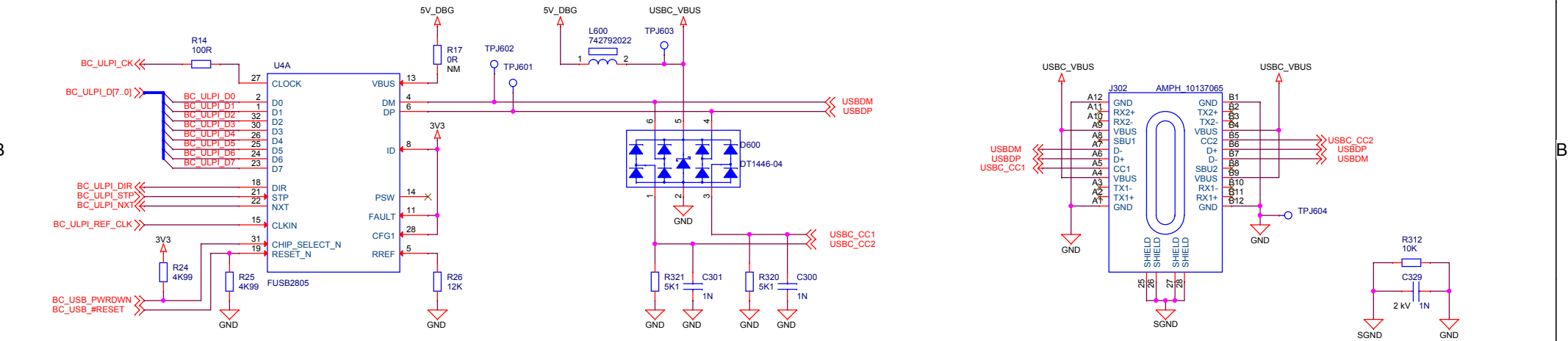
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		<b>BRD4002A</b>	
Revision		A03	
Sheet Created Date		Monday, March 23, 2020	
Sheet Modified Date		Wednesday, June 02, 2021	
Sheet		15 of 16	


# 10/100 Mbit Ethernet PHY



# USB High Speed



<Schematic Path>  
WSTK

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Designed: HEL Approved: RGU		Page Title	
		<b>Board Controller USB &amp; Ethernet</b>	
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Design Created Date: Wednesday, December 03, 2008		<b>BRD4002A</b>	A03
Sheet Created Date: Monday, March 23, 2020	Sheet Modified Date: Wednesday, June 02, 2021		Sheet 16 of 16