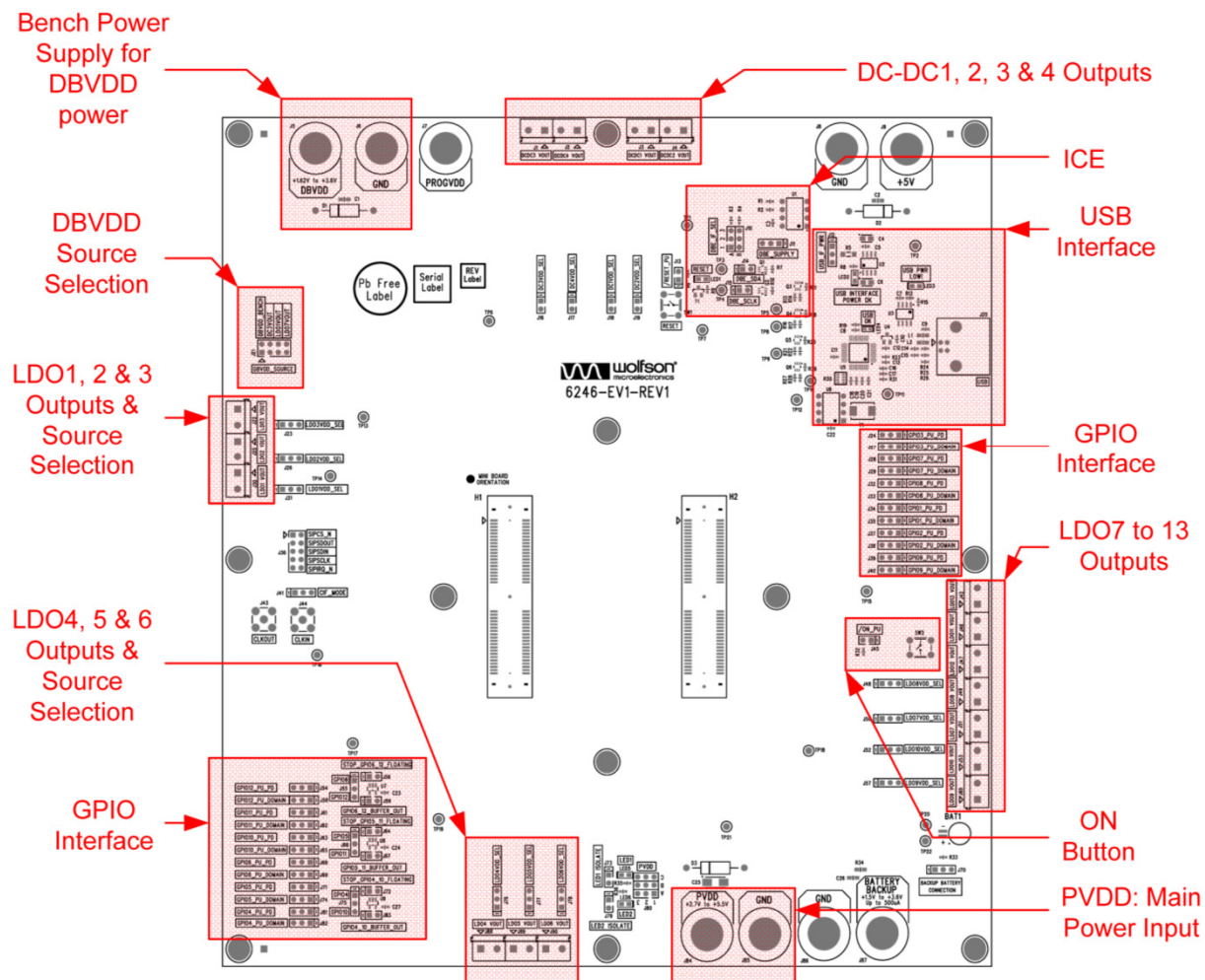


<b>DOC TYPE:</b>	SCHEMATIC AND LAYOUT
<b>BOARD REFERENCE:</b>	6246-EV1-REV1
<b>BOARD TYPE:</b>	Customer Main
<b>WOLFSON DEVICE(S):</b>	WM8320, WM8321, WM8325 and WM8326
<b>DATE:</b>	January 2011
<b>DOC REVISION:</b>	Rev 1.1



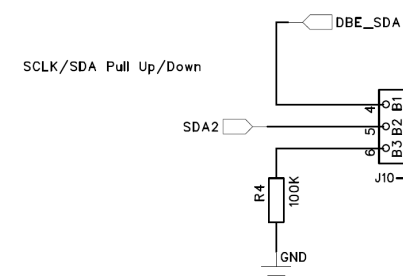
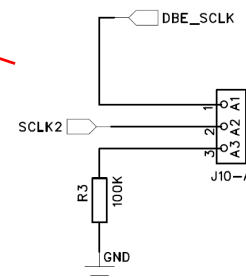
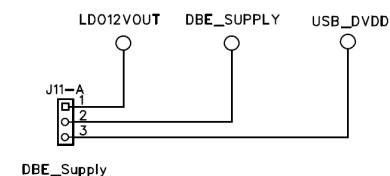
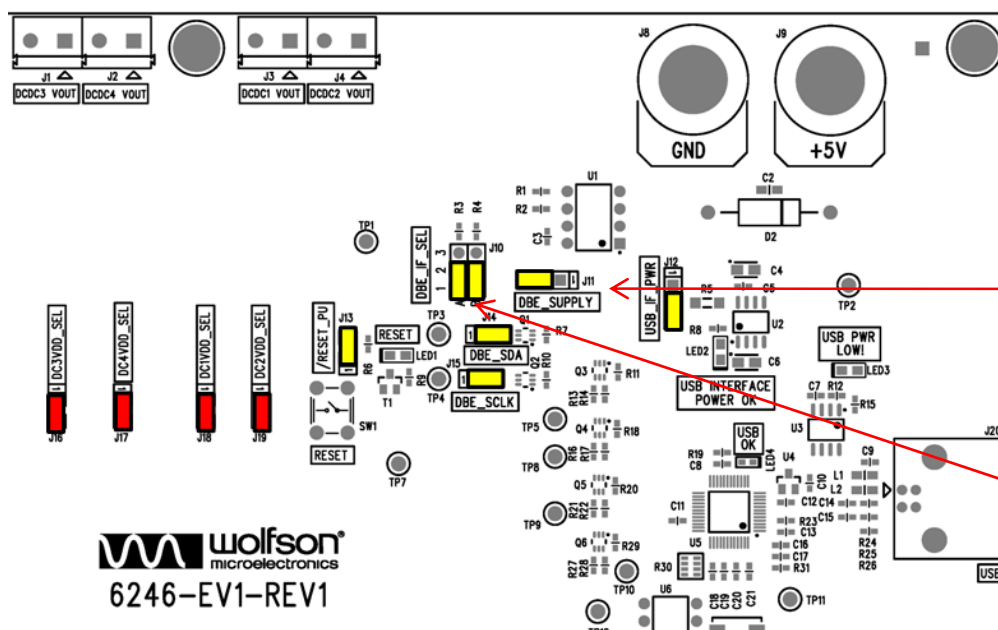


### DEVELOPMENT MODE USING THE INSTANTCONFIG™ EEPROM (ICE)

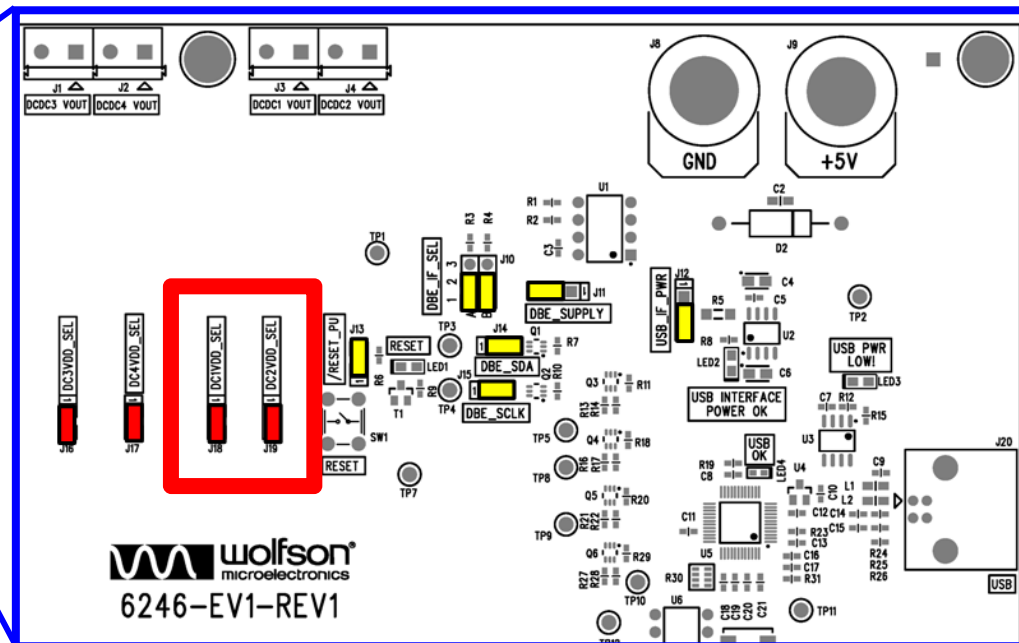
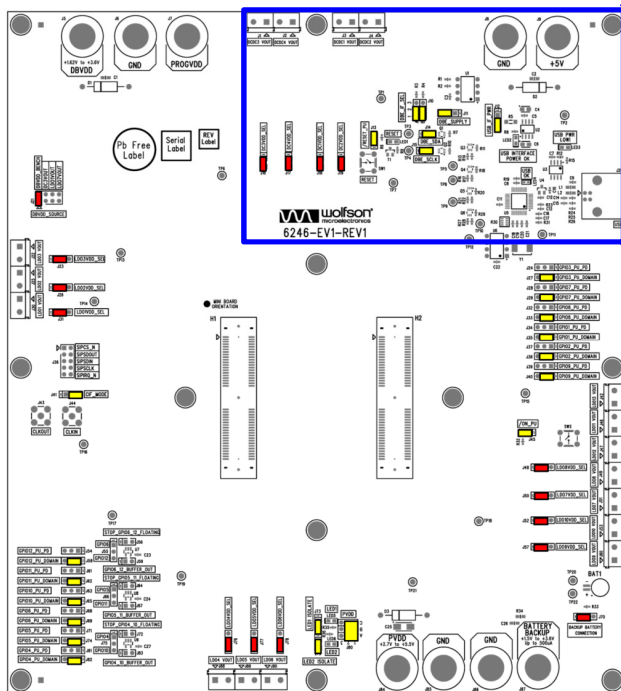
#### ICE Set-up

J11 – ICE powered from BDVDD  
(alternative is LDO12 (VPMIC))

J10 – SCLK2 and SDA2 pulled up to  
connect the ICE and place the device into  
Development Mode

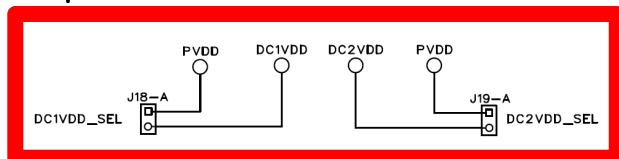


# **USING THE WM8325 OR WM8326 EVB:**



**WM8325 DC-DC2 and WM8326 DC-DC1&2 Converters maximum current capability is 2.5A. Therefore, it is recommended to remove jumpers J18 and/or J19 to isolate the mini board DC $m$ VDD from the mother board DC $m$ VDD.**

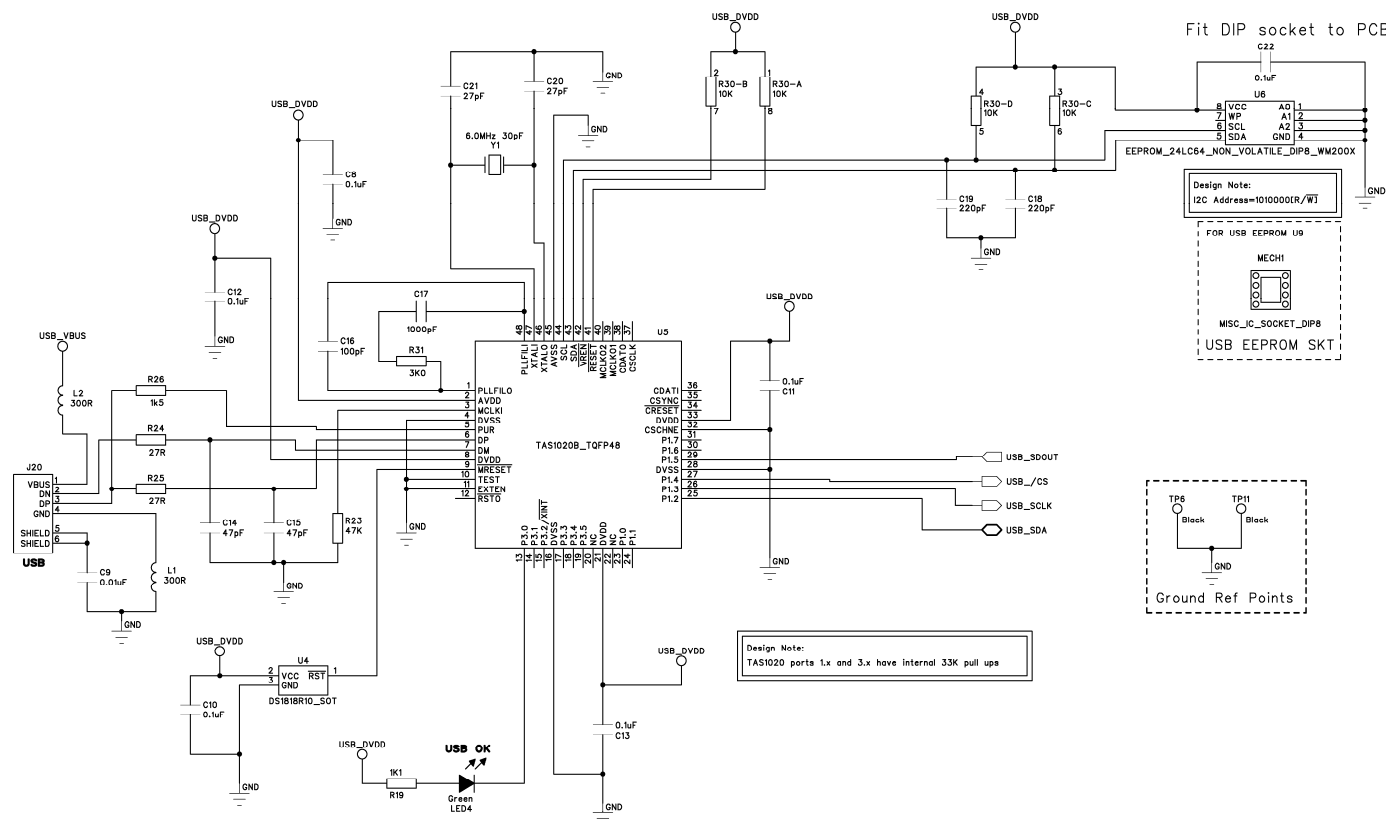
**VDD Input Selection for DCDCs**



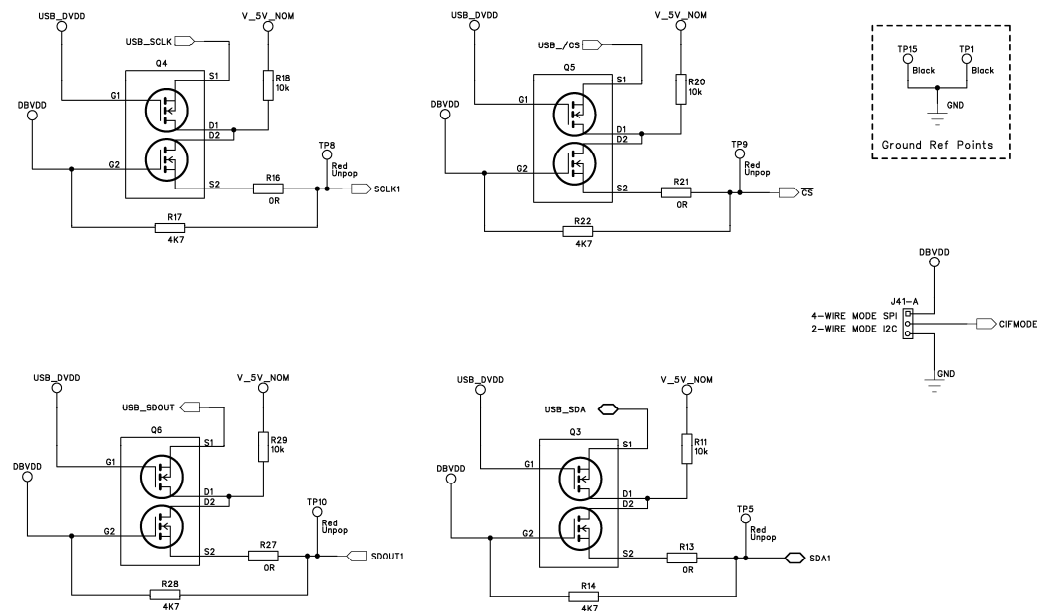
**Power to the DC-DC1 and/or DC-DC2 Converters should directly be applied to the appropriate TPDC $m$ VDD test points onto the mini-boards.**

### SCHEMATIC

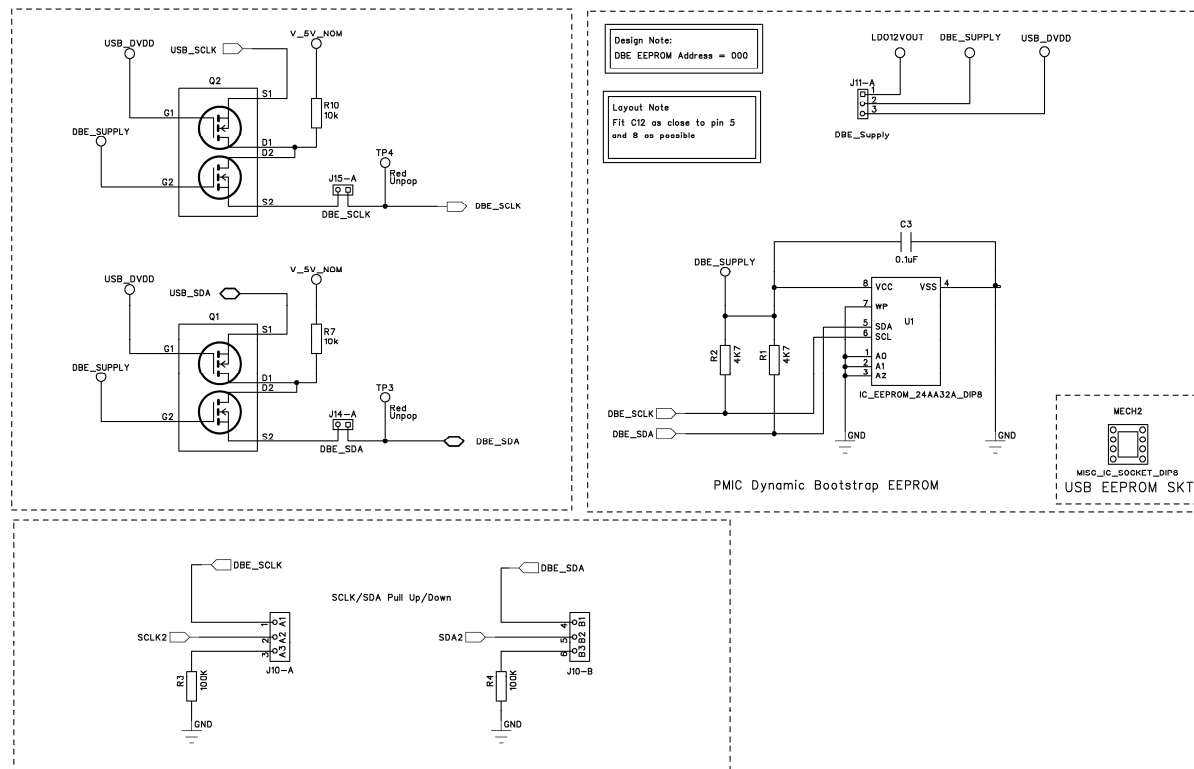
### Sheet 1: USB Interface



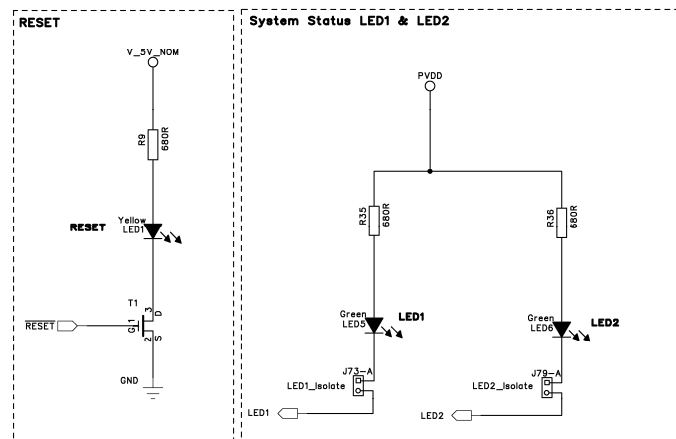
### Sheet 2: I2C Level Shifter



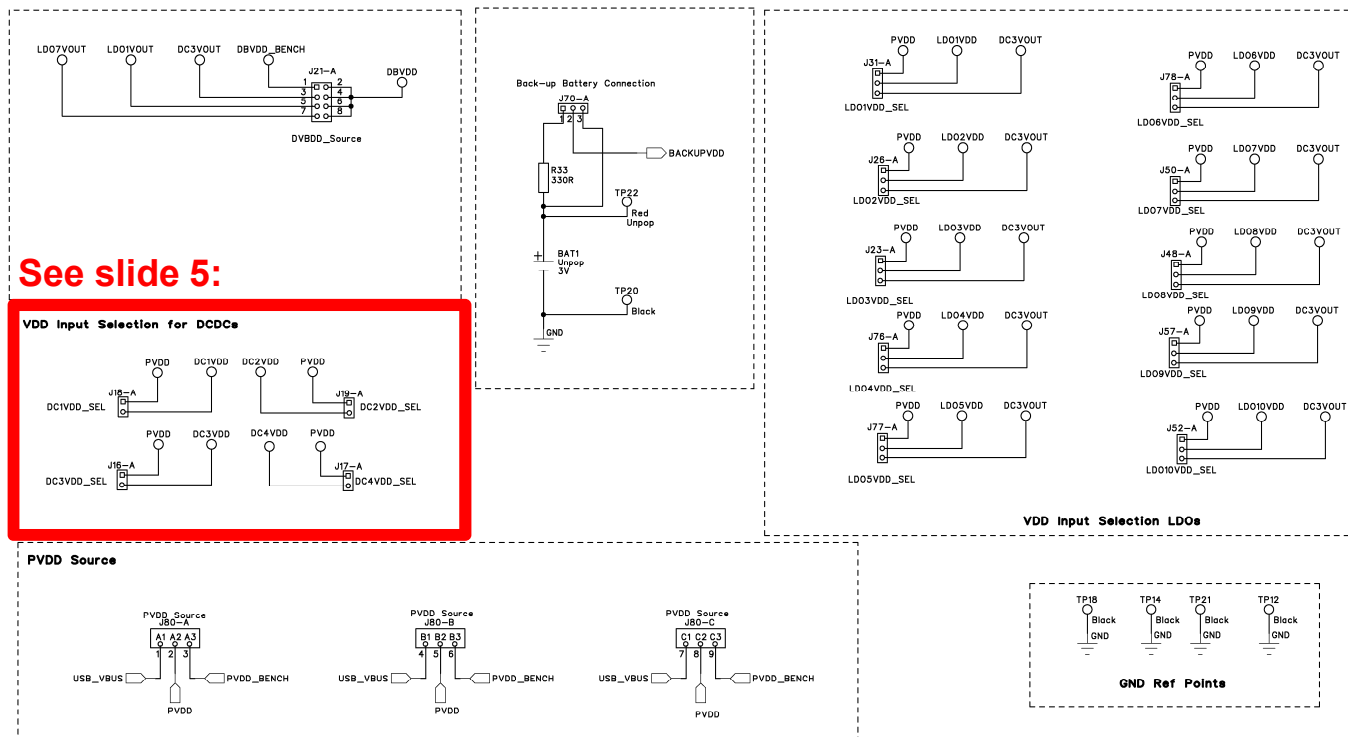
### Sheet 3: InstantConfig™ EEPROM

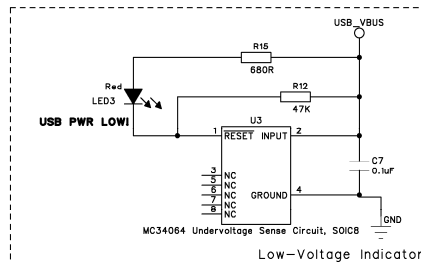
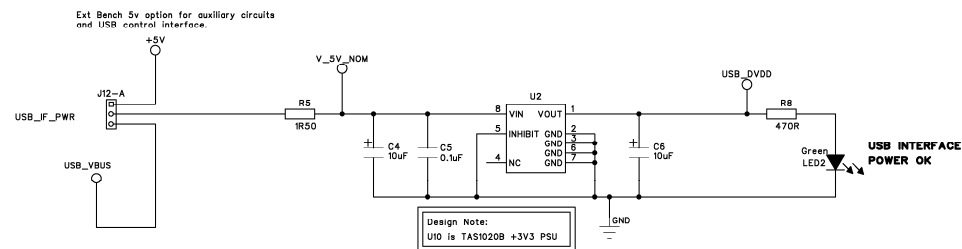


Sheet 4: Reset & Status LEDs

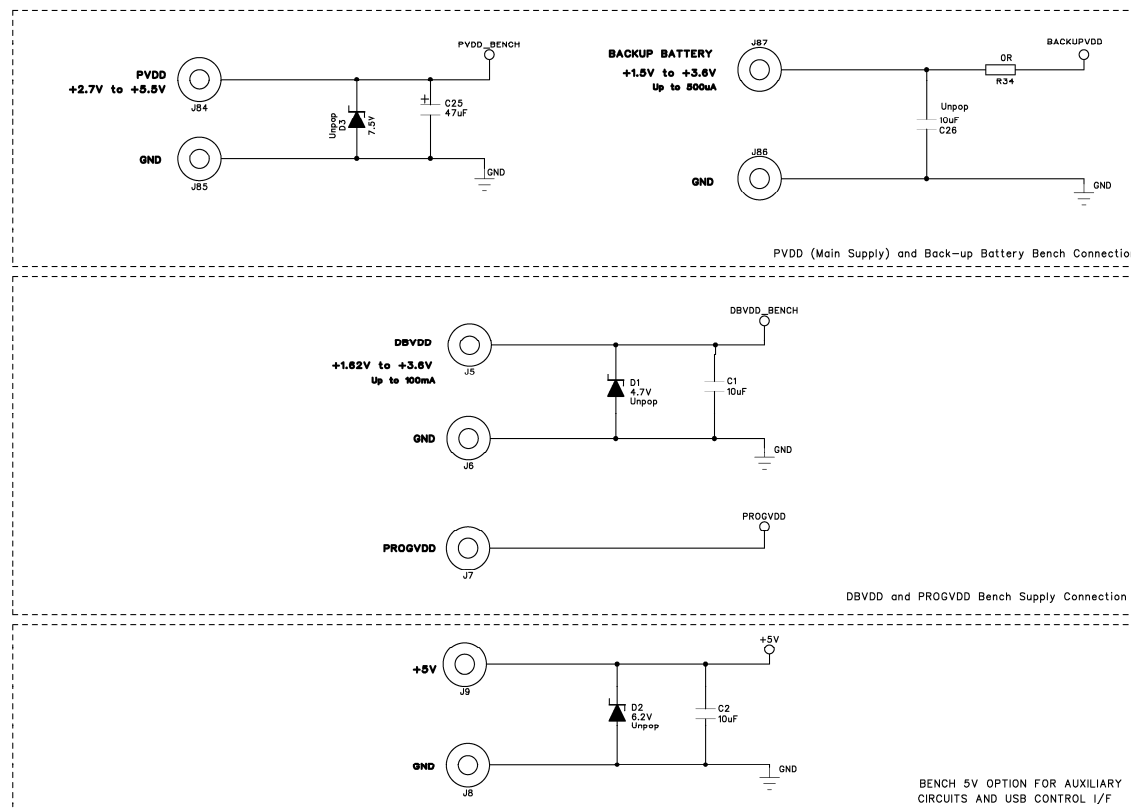


## Sheet 5: Power Headers

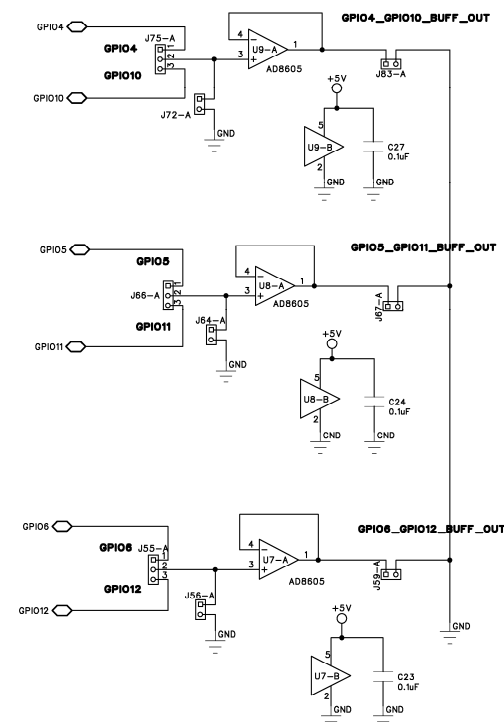
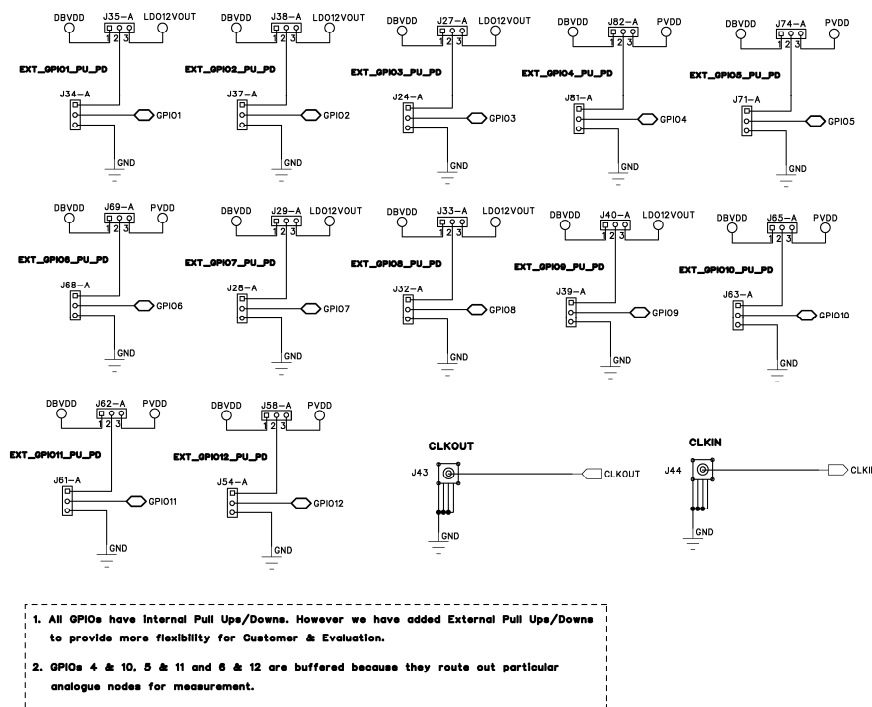




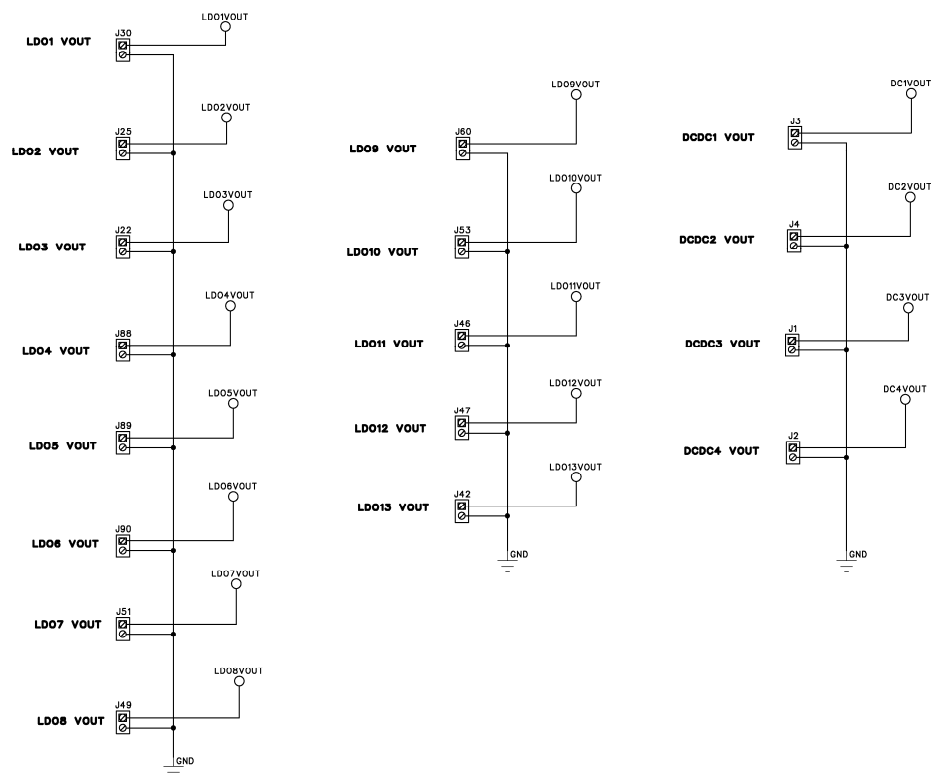
### Sheet 7: Bench Power



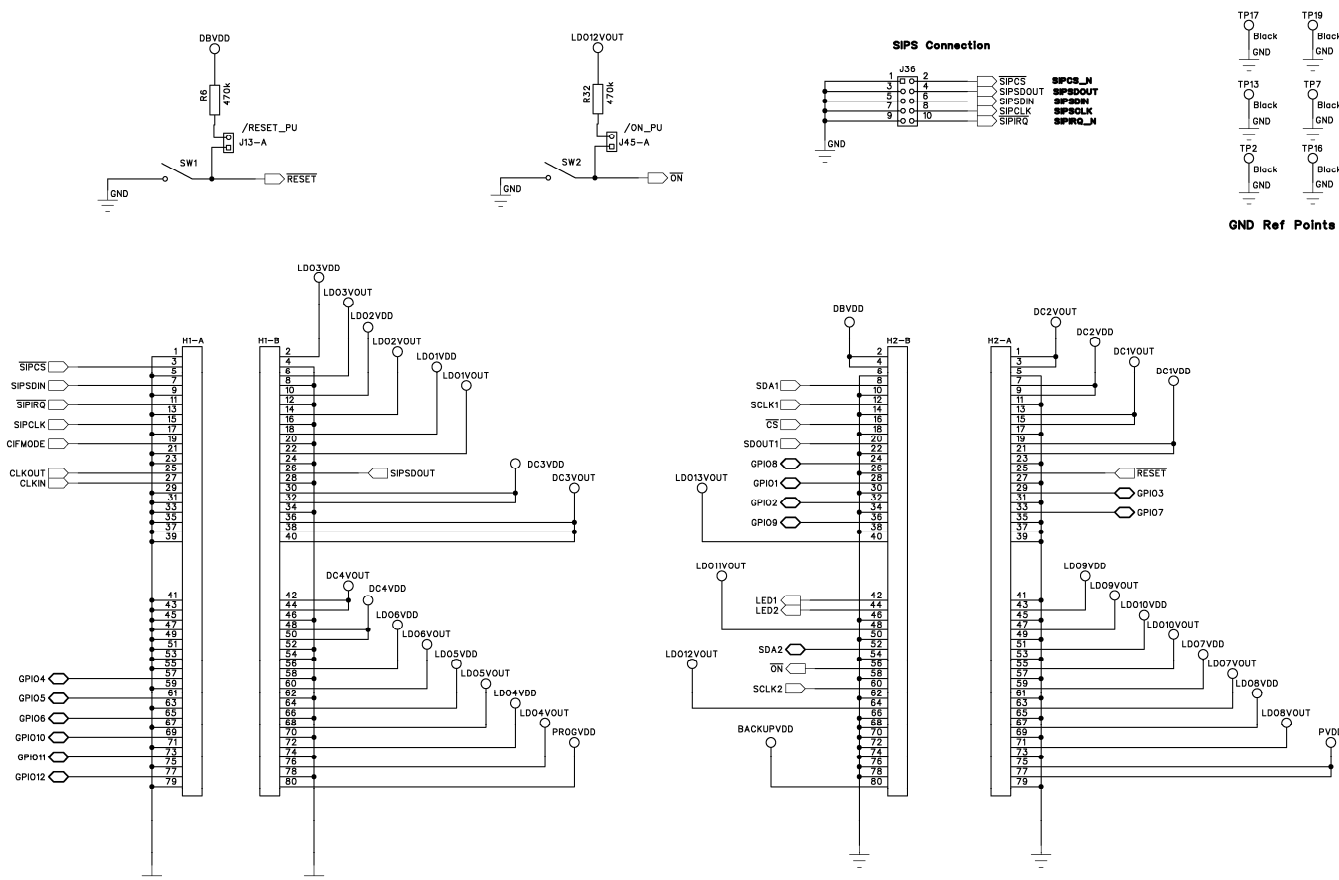
### Sheet 8: GPIO Pull Up/Down



Sheet 9: LDO & DCDC Outputs



### Sheet 10: Mini Board Connectors, ON & Reset



### Sheet 17: Reference Table 1 (Jumpers)

Short 1-2

Short 2-3

J41-B

4-WIRE MODE SPI

2-WIRE MODE I2C

PCB Ref: CIFMODE

2-3

LNK\_J41

YELLOW

Short 1-2

Short 2-3

J11-B

LD012VOUT

USB\_DVDD

PCB Ref: DBE\_Supply

2-3

LNK\_J11

YELLOW

J10-C

Short 1-2

Short 2-3

PCB Ref:

Row A:

SCLK Pull Up

SCLK Pull Down

SDA2\_PU\_PD

Row B:

SDA Pull Up

SDA Pull Down

SCLK2\_PU\_PD

1-2

1-2

LNK\_J10A

YELLOW

LNK\_J10B

YELLOW

Short

Open

J15-B

DBE\_SCLK

Isolated

PCB Ref: DBE\_SCLK

Short

LNK\_J15

YELLOW

Short

Open

J14-B

DBE\_SDA

Isolated

PCB Ref: DBE\_SDA

Short

LNK\_J14

YELLOW

DBE

Short

Open

J73-B

LED1 Connected

Isolate

PCB Ref: LED1\_Isolate

Short

LNK\_J73

YELLOW

Short

Open

J79-B

LED2 Connected

Isolate

PCB Ref: LED2\_Isolate

Short

LNK\_J79

YELLOW

WATCHDOG\_AND\_LEDS

Short 1-2

Short 2-3

J12-B

5V\_NOM

USB\_VBUS

PCB Ref: USB\_IF\_PWR

2-3

LNK\_J12

YELLOW

USB\_POWER

Short

Open

J13-B

External Pull-up

Input Floating

PCB Ref: /RESET\_PU

Open

Short

Open

J45-B

External Pull-up

Input Floating

PCB Ref: /ON\_PU

Open

CONNECTORS

Short 1-2

Short 2-3

J31-B

PVDD

DC3VOUT

PCB Ref: LD01VDD\_SEL

1-2

LNK\_J31

RED

Short 1-2

Short 2-3

J26-B

PVDD

DC3VOUT

PCB Ref: LD02VDD\_SEL

1-2

LNK\_J26

RED

Short 1-2

Short 2-3

J23-B

PVDD

DC3VOUT

PCB Ref: LD03VDD\_SEL

1-2

LNK\_J23

RED

Short 1-2

Short 2-3

J76-B

PVDD

DC3VOUT

PCB Ref: LD04VDD\_SEL

1-2

LNK\_J76

RED

Short 1-2

Short 2-3

J77-B

PVDD

DC3VOUT

PCB Ref: LD05VDD\_SEL

1-2

LNK\_J77

RED

Short 1-2

Short 2-3

J78-B

PVDD

DC3VOUT

PCB Ref: LD06VDD\_SEL

1-2

LNK\_J78

RED

Short 1-2

Short 2-3

J50-B

PVDD

DC3VOUT

PCB Ref: LD07VDD\_SEL

1-2

LNK\_J50

RED

Short 1-2

Short 2-3

J48-B

PVDD

DC3VOUT

PCB Ref: LD08VDD\_SEL

1-2

LNK\_J48

RED

Short 1-2

Short 2-3

J57-B

PVDD

DC3VOUT

PCB Ref: LD09VDD\_SEL

1-2

LNK\_J57

RED

Short 1-2

Short 2-3

J52-B

PVDD

DC3VOUT

PCB Ref: LD01VDD\_SEL

1-2

LNK\_J52

RED

Short

Open

J18-B

PVDD

DC1VDD Open

PCB Ref: DC1VDD\_SEL

Short

LNK\_J18

RED

Short

Open

J19-B

DC2VDD from PVDD

DC2VDD Open

PCB Ref: DC2VDD\_SEL

Short

LNK\_J19

RED

Short

Open

J16-B

DC3VDD from PVDD

DC3VDD Open

PCB Ref: DC3VDD\_SEL

Short

LNK\_J16

RED

Short

Open

J17-B

DC4VDD from PVDD

DC4VDD Open

PCB Ref: DC4VDD\_SEL

Short

LNK\_J17

RED

Short 1-2

Short 3-4

Short 5-6

Short 7-8

J21-B

DBVDD\_BENCH

DC3VOUT

LD01VOUT

LD07VOUT

PCB Ref: DBVDD\_Source

1-2

LNK\_J21

RED

Short 1-2

Short 2-3

J70-B

Via Resistor

Direct

PCB Ref: Back-up Battery Connection

1-2

LNK\_J70

RED

J80-D

Short 1-2

Short 2-3

PCB Ref:

Row A:

PVDD from USB

PVDD from Bench

PVDD Source

Row B:

PVDD from USB

PVDD from Bench

PVDD Source

Row C:

PVDD from USB

PVDD from Bench

PVDD Source

2-3

2-3













2-3

LNK\_J80

BLACK

POWER\_HEADER

### Sheet 18: Reference Table 2 (Jumpers)

<table><tr><td></td><td>Short</td><td>Open</td></tr><tr><td>J83-B</td><td>GPIO4_10_BUFFER_GND</td><td>GPIO4_10_BUFFER_OUT</td></tr><tr><td>PCB Ref:</td><td colspan="2">GPIO4_10_BUFFER_OUT</td></tr></table>		Short	Open	J83-B	GPIO4_10_BUFFER_GND	GPIO4_10_BUFFER_OUT	PCB Ref:	GPIO4_10_BUFFER_OUT		Open	<table><tr><td></td><td>Short 1-2</td><td>Short 2-3</td></tr><tr><td>J35-B</td><td>DBVDD</td><td>LD012VOUT</td></tr><tr><td>PCB Ref:</td><td colspan="2">GPIO1_PU_DOMAIN</td></tr></table>		Short 1-2	Short 2-3	J35-B	DBVDD	LD012VOUT	PCB Ref:	GPIO1_PU_DOMAIN		1-2	 LNK_J35 YELLOW											
	Short	Open																															
J83-B	GPIO4_10_BUFFER_GND	GPIO4_10_BUFFER_OUT																															
PCB Ref:	GPIO4_10_BUFFER_OUT																																
	Short 1-2	Short 2-3																															
J35-B	DBVDD	LD012VOUT																															
PCB Ref:	GPIO1_PU_DOMAIN																																
<table><tr><td></td><td>Short</td><td>Open</td></tr><tr><td>J87-B</td><td>GPIO5_11_BUFFER_GND</td><td>GPIO5_11_BUFFER_OUT</td></tr><tr><td>PCB Ref:</td><td colspan="2">GPIO5_11_BUFFER_OUT</td></tr></table>		Short	Open	J87-B	GPIO5_11_BUFFER_GND	GPIO5_11_BUFFER_OUT	PCB Ref:	GPIO5_11_BUFFER_OUT		Open	<table><tr><td></td><td>Short 1-2</td><td>Short 2-3</td></tr><tr><td>J38-B</td><td>DBVDD</td><td>LD012VOUT</td></tr><tr><td>PCB Ref:</td><td colspan="2">GPIO2_PU_DOMAIN</td></tr></table>		Short 1-2	Short 2-3	J38-B	DBVDD	LD012VOUT	PCB Ref:	GPIO2_PU_DOMAIN		1-2	 LNK_J38 YELLOW											
	Short	Open																															
J87-B	GPIO5_11_BUFFER_GND	GPIO5_11_BUFFER_OUT																															
PCB Ref:	GPIO5_11_BUFFER_OUT																																
	Short 1-2	Short 2-3																															
J38-B	DBVDD	LD012VOUT																															
PCB Ref:	GPIO2_PU_DOMAIN																																
<table><tr><td></td><td>Short</td><td>Open</td></tr><tr><td>J59-B</td><td>GPIO6_12_BUFFER_GND</td><td>GPIO6_12_BUFFER_OUT</td></tr><tr><td>PCB Ref:</td><td colspan="2">GPIO6_12_BUFFER_OUT</td></tr></table>		Short	Open	J59-B	GPIO6_12_BUFFER_GND	GPIO6_12_BUFFER_OUT	PCB Ref:	GPIO6_12_BUFFER_OUT		Open	<table><tr><td></td><td>Short 1-2</td><td>Short 2-3</td></tr><tr><td>J27-B</td><td>DBVDD</td><td>LD012VOUT</td></tr><tr><td>PCB Ref:</td><td colspan="2">GPIO3_PU_DOMAIN</td></tr></table>		Short 1-2	Short 2-3	J27-B	DBVDD	LD012VOUT	PCB Ref:	GPIO3_PU_DOMAIN		1-2	 LNK_J27X YELLOW											
	Short	Open																															
J59-B	GPIO6_12_BUFFER_GND	GPIO6_12_BUFFER_OUT																															
PCB Ref:	GPIO6_12_BUFFER_OUT																																
	Short 1-2	Short 2-3																															
J27-B	DBVDD	LD012VOUT																															
PCB Ref:	GPIO3_PU_DOMAIN																																
<table><tr><td></td><td>Short 1-2</td><td>Short 2-3</td></tr><tr><td>J34-B</td><td>Pull-up</td><td>Pull-down</td></tr><tr><td>PCB Ref:</td><td colspan="2">GPIO1_PU_PD</td></tr></table>		Short 1-2	Short 2-3	J34-B	Pull-up	Pull-down	PCB Ref:	GPIO1_PU_PD		Open	<table><tr><td></td><td>Short 1-2</td><td>Short 2-3</td></tr><tr><td>J82-B</td><td>DBVDD</td><td>SYSVDD</td></tr><tr><td>PCB Ref:</td><td colspan="2">GPIO4_PU_DOMAIN</td></tr></table>		Short 1-2	Short 2-3	J82-B	DBVDD	SYSVDD	PCB Ref:	GPIO4_PU_DOMAIN		1-2	 LNK_J82 YELLOW											
	Short 1-2	Short 2-3																															
J34-B	Pull-up	Pull-down																															
PCB Ref:	GPIO1_PU_PD																																
	Short 1-2	Short 2-3																															
J82-B	DBVDD	SYSVDD																															
PCB Ref:	GPIO4_PU_DOMAIN																																
<table><tr><td></td><td>Short 1-2</td><td>Short 2-3</td></tr><tr><td>J37-B</td><td>Pull-up</td><td>Pull-down</td></tr><tr><td>PCB Ref:</td><td colspan="2">GPIO2_PU_PD</td></tr></table>		Short 1-2	Short 2-3	J37-B	Pull-up	Pull-down	PCB Ref:	GPIO2_PU_PD		Open	<table><tr><td></td><td>Short 1-2</td><td>Short 2-3</td></tr><tr><td>J75-B</td><td>GPIO4_10_BUFFER</td><td>GPIO10_10_BUFFER</td></tr><tr><td>PCB Ref:</td><td colspan="2">GPIO4_10_BUFFER_SEL</td></tr></table>		Short 1-2	Short 2-3	J75-B	GPIO4_10_BUFFER	GPIO10_10_BUFFER	PCB Ref:	GPIO4_10_BUFFER_SEL		Open	<table><tr><td></td><td>Short 1-2</td><td>Short 2-3</td></tr><tr><td>J74-B</td><td>DBVDD</td><td>SYSVDD</td></tr><tr><td>PCB Ref:</td><td colspan="2">GPIO5_PU_DOMAIN</td></tr></table>		Short 1-2	Short 2-3	J74-B	DBVDD	SYSVDD	PCB Ref:	GPIO5_PU_DOMAIN		1-2	 LNK_J74 YELLOW
	Short 1-2	Short 2-3																															
J37-B	Pull-up	Pull-down																															
PCB Ref:	GPIO2_PU_PD																																
	Short 1-2	Short 2-3																															
J75-B	GPIO4_10_BUFFER	GPIO10_10_BUFFER																															
PCB Ref:	GPIO4_10_BUFFER_SEL																																
	Short 1-2	Short 2-3																															
J74-B	DBVDD	SYSVDD																															
PCB Ref:	GPIO5_PU_DOMAIN																																
<table><tr><td></td><td>Short 1-2</td><td>Short 2-3</td></tr><tr><td>J24-B</td><td>Pull-up</td><td>Pull-down</td></tr><tr><td>PCB Ref:</td><td colspan="2">GPIO3_PU_PD</td></tr></table>		Short 1-2	Short 2-3	J24-B	Pull-up	Pull-down	PCB Ref:	GPIO3_PU_PD		Open	<table><tr><td></td><td>Short 1-2</td><td>Short 2-3</td></tr><tr><td>J66-B</td><td>GPIO5_11_BUFFER</td><td>GPIO11_11_BUFFER</td></tr><tr><td>PCB Ref:</td><td colspan="2">GPIO5_11_BUFFER_SEL</td></tr></table>		Short 1-2	Short 2-3	J66-B	GPIO5_11_BUFFER	GPIO11_11_BUFFER	PCB Ref:	GPIO5_11_BUFFER_SEL		Open	<table><tr><td></td><td>Short 1-2</td><td>Short 2-3</td></tr><tr><td>J69-B</td><td>DBVDD</td><td>SYSVDD</td></tr><tr><td>PCB Ref:</td><td colspan="2">GPIO6_PU_DOMAIN</td></tr></table>		Short 1-2	Short 2-3	J69-B	DBVDD	SYSVDD	PCB Ref:	GPIO6_PU_DOMAIN		1-2	 LNK_J69 YELLOW
	Short 1-2	Short 2-3																															
J24-B	Pull-up	Pull-down																															
PCB Ref:	GPIO3_PU_PD																																
	Short 1-2	Short 2-3																															
J66-B	GPIO5_11_BUFFER	GPIO11_11_BUFFER																															
PCB Ref:	GPIO5_11_BUFFER_SEL																																
	Short 1-2	Short 2-3																															
J69-B	DBVDD	SYSVDD																															
PCB Ref:	GPIO6_PU_DOMAIN																																
<table><tr><td></td><td>Short 1-2</td><td>Short 2-3</td></tr><tr><td>J81-B</td><td>Pull-up</td><td>Pull-down</td></tr><tr><td>PCB Ref:</td><td colspan="2">GPIO4_PU_PD</td></tr></table>		Short 1-2	Short 2-3	J81-B	Pull-up	Pull-down	PCB Ref:	GPIO4_PU_PD		Open	<table><tr><td></td><td>Short 1-2</td><td>Short 2-3</td></tr><tr><td>J55-B</td><td>GPIO6_12_BUFFER</td><td>GPIO12_12_BUFFER</td></tr><tr><td>PCB Ref:</td><td colspan="2">GPIO6_12_BUFFER_SEL</td></tr></table>		Short 1-2	Short 2-3	J55-B	GPIO6_12_BUFFER	GPIO12_12_BUFFER	PCB Ref:	GPIO6_12_BUFFER_SEL		Open	<table><tr><td></td><td>Short 1-2</td><td>Short 2-3</td></tr><tr><td>J29-B</td><td>DBVDD</td><td>LD012VOUT</td></tr><tr><td>PCB Ref:</td><td colspan="2">GPIO7_PU_DOMAIN</td></tr></table>		Short 1-2	Short 2-3	J29-B	DBVDD	LD012VOUT	PCB Ref:	GPIO7_PU_DOMAIN		1-2	 LNK_J29 YELLOW
	Short 1-2	Short 2-3																															
J81-B	Pull-up	Pull-down																															
PCB Ref:	GPIO4_PU_PD																																
	Short 1-2	Short 2-3																															
J55-B	GPIO6_12_BUFFER	GPIO12_12_BUFFER																															
PCB Ref:	GPIO6_12_BUFFER_SEL																																
	Short 1-2	Short 2-3																															
J29-B	DBVDD	LD012VOUT																															
PCB Ref:	GPIO7_PU_DOMAIN																																
<table><tr><td></td><td>Short 1-2</td><td>Short 2-3</td></tr><tr><td>J71-B</td><td>Pull-up</td><td>Pull-down</td></tr><tr><td>PCB Ref:</td><td colspan="2">GPIO5_PU_PD</td></tr></table>		Short 1-2	Short 2-3	J71-B	Pull-up	Pull-down	PCB Ref:	GPIO5_PU_PD		Open	<table><tr><td></td><td>Short</td><td>Open</td></tr><tr><td>J72-B</td><td>GPIO Grounded</td><td>GPIO Floating</td></tr><tr><td>PCB Ref:</td><td colspan="2">STOP_GPIO4_10_FLOATING</td></tr></table>		Short	Open	J72-B	GPIO Grounded	GPIO Floating	PCB Ref:	STOP_GPIO4_10_FLOATING		Open	<table><tr><td></td><td>Short 1-2</td><td>Short 2-3</td></tr><tr><td>J33-B</td><td>DBVDD</td><td>LD012VOUT</td></tr><tr><td>PCB Ref:</td><td colspan="2">GPIO8_PU_DOMAIN</td></tr></table>		Short 1-2	Short 2-3	J33-B	DBVDD	LD012VOUT	PCB Ref:	GPIO8_PU_DOMAIN		1-2	 LNK_J33 YELLOW
	Short 1-2	Short 2-3																															
J71-B	Pull-up	Pull-down																															
PCB Ref:	GPIO5_PU_PD																																
	Short	Open																															
J72-B	GPIO Grounded	GPIO Floating																															
PCB Ref:	STOP_GPIO4_10_FLOATING																																
	Short 1-2	Short 2-3																															
J33-B	DBVDD	LD012VOUT																															
PCB Ref:	GPIO8_PU_DOMAIN																																
<table><tr><td></td><td>Short 1-2</td><td>Short 2-3</td></tr><tr><td>J68-B</td><td>Pull-up</td><td>Pull-down</td></tr><tr><td>PCB Ref:</td><td colspan="2">GPIO6_PU_PD</td></tr></table>		Short 1-2	Short 2-3	J68-B	Pull-up	Pull-down	PCB Ref:	GPIO6_PU_PD		Open	<table><tr><td></td><td>Short</td><td>Open</td></tr><tr><td>J64-B</td><td>GPIO Grounded</td><td>GPIO Floating</td></tr><tr><td>PCB Ref:</td><td colspan="2">STOP_GPIO5_11_FLOATING</td></tr></table>		Short	Open	J64-B	GPIO Grounded	GPIO Floating	PCB Ref:	STOP_GPIO5_11_FLOATING		Open	<table><tr><td></td><td>Short 1-2</td><td>Short 2-3</td></tr><tr><td>J40-B</td><td>DBVDD</td><td>LD012VOUT</td></tr><tr><td>PCB Ref:</td><td colspan="2">GPIO9_PU_DOMAIN</td></tr></table>		Short 1-2	Short 2-3	J40-B	DBVDD	LD012VOUT	PCB Ref:	GPIO9_PU_DOMAIN		1-2	 LNK_J40 YELLOW
	Short 1-2	Short 2-3																															
J68-B	Pull-up	Pull-down																															
PCB Ref:	GPIO6_PU_PD																																
	Short	Open																															
J64-B	GPIO Grounded	GPIO Floating																															
PCB Ref:	STOP_GPIO5_11_FLOATING																																
	Short 1-2	Short 2-3																															
J40-B	DBVDD	LD012VOUT																															
PCB Ref:	GPIO9_PU_DOMAIN																																
<table><tr><td></td><td>Short 1-2</td><td>Short 2-3</td></tr><tr><td>J28-B</td><td>Pull-up</td><td>Pull-down</td></tr><tr><td>PCB Ref:</td><td colspan="2">GPIO7_PU_PD</td></tr></table>		Short 1-2	Short 2-3	J28-B	Pull-up	Pull-down	PCB Ref:	GPIO7_PU_PD		Open	<table><tr><td></td><td>Short</td><td>Open</td></tr><tr><td>J56-B</td><td>GPIO Grounded</td><td>GPIO Floating</td></tr><tr><td>PCB Ref:</td><td colspan="2">STOP_GPIO6_12_FLOATING</td></tr></table>		Short	Open	J56-B	GPIO Grounded	GPIO Floating	PCB Ref:	STOP_GPIO6_12_FLOATING		Open	<table><tr><td></td><td>Short 1-2</td><td>Short 2-3</td></tr><tr><td>J65-B</td><td>DBVDD</td><td>SYSVDD</td></tr><tr><td>PCB Ref:</td><td colspan="2">GPIO10_PU_DOMAIN</td></tr></table>		Short 1-2	Short 2-3	J65-B	DBVDD	SYSVDD	PCB Ref:	GPIO10_PU_DOMAIN		1-2	 LNK_J65 YELLOW
	Short 1-2	Short 2-3																															
J28-B	Pull-up	Pull-down																															
PCB Ref:	GPIO7_PU_PD																																
	Short	Open																															
J56-B	GPIO Grounded	GPIO Floating																															
PCB Ref:	STOP_GPIO6_12_FLOATING																																
	Short 1-2	Short 2-3																															
J65-B	DBVDD	SYSVDD																															
PCB Ref:	GPIO10_PU_DOMAIN																																
<table><tr><td></td><td>Short 1-2</td><td>Short 2-3</td></tr><tr><td>J32-B</td><td>Pull-up</td><td>Pull-down</td></tr><tr><td>PCB Ref:</td><td colspan="2">GPIO8_PU_PD</td></tr></table>		Short 1-2	Short 2-3	J32-B	Pull-up	Pull-down	PCB Ref:	GPIO8_PU_PD		Open	<table><tr><td></td><td>Short 1-2</td><td>Short 2-3</td></tr><tr><td>J62-B</td><td>DBVDD</td><td>SYSVDD</td></tr><tr><td>PCB Ref:</td><td colspan="2">GPIO11_PU_DOMAIN</td></tr></table>		Short 1-2	Short 2-3	J62-B	DBVDD	SYSVDD	PCB Ref:	GPIO11_PU_DOMAIN		1-2	 LNK_J62 YELLOW											
	Short 1-2	Short 2-3																															
J32-B	Pull-up	Pull-down																															
PCB Ref:	GPIO8_PU_PD																																
	Short 1-2	Short 2-3																															
J62-B	DBVDD	SYSVDD																															
PCB Ref:	GPIO11_PU_DOMAIN																																
<table><tr><td></td><td>Short 1-2</td><td>Short 2-3</td></tr><tr><td>J39-B</td><td>Pull-up</td><td>Pull-down</td></tr><tr><td>PCB Ref:</td><td colspan="2">GPIO9_PU_PD</td></tr></table>		Short 1-2	Short 2-3	J39-B	Pull-up	Pull-down	PCB Ref:	GPIO9_PU_PD		Open	<table><tr><td></td><td>Short 1-2</td><td>Short 2-3</td></tr><tr><td>J58-B</td><td>DBVDD</td><td>SYSVDD</td></tr><tr><td>PCB Ref:</td><td colspan="2">GPIO12_PU_DOMAIN</td></tr></table>		Short 1-2	Short 2-3	J58-B	DBVDD	SYSVDD	PCB Ref:	GPIO12_PU_DOMAIN		1-2	 LNK_J58 YELLOW											
	Short 1-2	Short 2-3																															
J39-B	Pull-up	Pull-down																															
PCB Ref:	GPIO9_PU_PD																																
	Short 1-2	Short 2-3																															
J58-B	DBVDD	SYSVDD																															
PCB Ref:	GPIO12_PU_DOMAIN																																
<table><tr><td></td><td>Short 1-2</td><td>Short 2-3</td></tr><tr><td>J63-B</td><td>Pull-up</td><td>Pull-down</td></tr><tr><td>PCB Ref:</td><td colspan="2">GPIO10_PU_PD</td></tr></table>		Short 1-2	Short 2-3	J63-B	Pull-up	Pull-down	PCB Ref:	GPIO10_PU_PD		Open																							
	Short 1-2	Short 2-3																															
J63-B	Pull-up	Pull-down																															
PCB Ref:	GPIO10_PU_PD																																
<table><tr><td></td><td>Short 1-2</td><td>Short 2-3</td></tr><tr><td>J61-B</td><td>Pull-up</td><td>Pull-down</td></tr><tr><td>PCB Ref:</td><td colspan="2">GPIO11_PU_PD</td></tr></table>		Short 1-2	Short 2-3	J61-B	Pull-up	Pull-down	PCB Ref:	GPIO11_PU_PD		Open																							
	Short 1-2	Short 2-3																															
J61-B	Pull-up	Pull-down																															
PCB Ref:	GPIO11_PU_PD																																
<table><tr><td></td><td>Short 1-2</td><td>Short 2-3</td></tr><tr><td>J54-B</td><td>Pull-up</td><td>Pull-down</td></tr><tr><td>PCB Ref:</td><td colspan="2">GPIO12_PU_PD</td></tr></table>		Short 1-2	Short 2-3	J54-B	Pull-up	Pull-down	PCB Ref:	GPIO12_PU_PD		Open																							
	Short 1-2	Short 2-3																															
J54-B	Pull-up	Pull-down																															
PCB Ref:	GPIO12_PU_PD																																

GPIOs

## BILL OF MATERIALS (BOM)

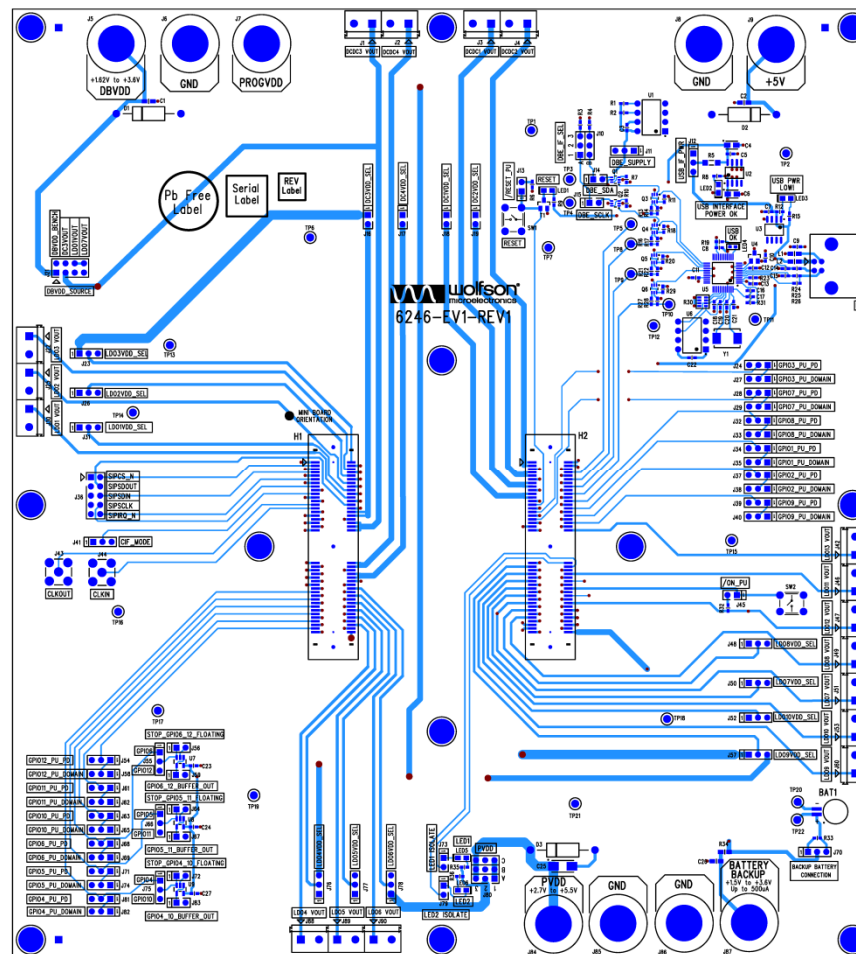
<i>Item</i>	<i>RefDes</i>	<i>Description</i>	<i>Manufacturer</i>	<i>Manufacturer's Part Number</i>
1	U5	USB Streaming Controller	Texas Instruments	TAS1020BPFB
2	C1 C2	10uF 0805 SMD Ceramic Capacitor 6.3V X5R	MuRata	GRM21BR60J106KE19L
3	C20 C21	27pF 0603 SMD Ceramic Capacitor 50V NPO	Panasonic	ECJ-1VC1H270J
4	MISC2	Lead-free label, 15mm round	Brady	Y436425
5	J21	2x4 2.54mm pitch PCB Pin Header VERTICAL	Harwin	M20-9980445
6	J36	2x5 2.54mm pitch PCB Pin Header VERTICAL	Harwin	M20-9980545
7	J13 J14 J15 J16 J17 J18 J19 J45 J56 J59 J64 J67 J72 J73 J79 J83	1x2 PCB Pin Header 0.1" VERTICAL	Harwin	M20-9990245
8	J11 J12 J23 J24 J26 J27 J28 J29 J31 J32 J33 J34 J35 J37 J38 J39 J40 J41 J48 J50 J52 J54 J55 J57 J58 J61 J62 J63 J65 J66 J68 J69 J70 J71 J74 J75 J76 J77 J78 J81 J82	1x3 2.54mm Header Vertical	Harwin	M20-9990345
9	J20	USB receptacle Type B	FCI	61729-0010BLF
10	MECH1 MECH2	IC Socket DIL 8 WAY	Multicomp	2227MC-08-03-F1
11	J43 J44	SMB Connector PCB Mount 50 Ohm VERTICAL	Amphenol	SMB1251B1-3GT30G-50
12	J1 J2 J3 J4 J22 J25 J30 J42 J46 J47 J49 J51 J53 J60 J88 J89 J90	PCB mount 1X2 terminal block for 2.5mm wire guage	LUMBERG	KRM 02
13	L1 L2	300R 0805 BMB2A Ferrite Bead	Meggitt	BMB2A0300AN1
14	U1	24AA32A 32K SERIAL EEPROM DIP8	Microchip	24AA32A-I/P
15	SC1 SC2 SC3 SC4 SC5 SC6 SC7 SC8 SC9 SC10 SC11 SC13	Slotted Panhead Screw - M3 thread; 12mm long	TR Fasteners	M312 PSSTMCZ100-
16	W1 W2 W3 W4 W5 W6 W7 W8 W9 W10 W11 W13	Plain M3 size washer	TR Fasteners	M3-FABRWAN100-
17	C4 C6	10uF 10V SMD Tantalum Capacitor case A	Kemet	T491A106K010AT
18	Q1 Q2 Q3 Q4 Q5 Q6	Si1902DL N- Channel Dual MOSFET SC-70	Vishay	SI1902DL-T1-E3
19	SW1 SW2	B3F1000 SPNO PCB mount switch	Omron	B3F-1000
20	C25	47uF 10V SMD Tantalum Capacitor case C	AVX	TAJC476K010R
21	R5	1R50 1206 SMD chip resistor 5% 0.25W	Vishay	2312 1551 1508
22	C3 C5 C7 C8 C10 C11 C12 C13 C22 C23 C24 C27	0.1uF 0603 SMD Ceramic Capacitor 16V X7R	Phycomp	2238 786 15649

<i>Item</i>	<i>RefDes</i>	<i>Description</i>	<i>Manufacturer</i>	<i>Manufacturer's Part Number</i>
23	C14 C15	47pF 0603 SMD Ceramic Capacitor 50V NPO	AVX	06035A470JAT2A
24	C18 C19	220pF 0603 SMD Ceramic Capacitor 50V NPO	AVX	06035A221JAT2A
25	P2 P3 P4 P5 P6 P7 P8 P9 P10 P11 P12 P13	Hexagonal brass M3 size spacer 20mm length	Harwin	R6379-02
26	C9	0.01uF 0603 SMD Ceramic Capacitor 50V X7R	Phycomp	2238 586 15636
27	LED4	KP-1608MGC 0603 SMD Chip LED GREEN	Kingbright	KP-1608MGC
28	TP1 TP2 TP6 TP7 TP11 TP12 TP13 TP14 TP15 TP16 TP17 TP18 TP19 TP21	1.32mm PCB Test Terminal BLACK	Vero	20-2136
29	R30	10K 1206 SMD chip 4 resistor array 5% 0.063W	Phycomp	2350 03510 103
30	R7 R10 R11 R18 R20 R29	10k 0603 SMD chip resistor 1% 0.063W	Multicomp	MC 0.063W 0603 1% 10K
31	R3 R4	100K 0603 SMD chip resistor 1% 0.063W	Multicomp	MC 0.063W 0603 1% 100K
32	R19	1K1 0603 SMD chip resistor 1% 0.1W	Multicomp	MC 0.063W 0603 1% 1K1
33	R26	1k5 0603 SMD chip resistor 1% 0.063W	Multicomp	MC 0.063W 0603 1% 1K5
34	R24 R25	27R 0603 SMD chip resistor 1% 0.063W	Multicomp	MC 0.063W 0603 1% 27R
35	R31	3K0 0603 SMD chip resistor 1% 0.063W	Multicomp	MC 0.063W 0603 1% 3K
36	R33	330R 0603 SMD chip resistor 1% 0.063W	Multicomp	MC 0.063W 0603 1% 330R
37	R1 R2 R14 R17 R22 R28	4K7 0603 SMD chip resistor 1% 0.063W	Multicomp	MC 0.063W 0603 1% 4K7
38	R12 R23	47K 0603 SMD chip resistor 1% 0.063W	Multicomp	MC 0.063W 0603 1% 47K
39	R6 R32	470k 0603 SMD chip resistor 1% 0.063W	Multicomp	MC 0.063W 0603 1% 470K
40	R9 R15 R35 R36	680R 0603 SMD chip resistor 1% 0.063W	Multicomp	MC 0.063W 0603 1% 680R
41	R13 R16 R21 R27	0R 0603 SMD chip resistor 1% 0.063W	Multicomp	MC 0.063W 0603 0R
42	R34	0R 0805 SMD chip resistor 1% 0.1W	Multicomp	MC 0.1W 0805 0R
43	C16	100pF 0603 SMD Ceramic Capacitor 50V NPO	Multicomp	U0603C101JCT
44	C17	1000pF 0603 SMD Ceramic Capacitor 50V NPO	Multicomp	U0603C102JCT
45	U3	MC34064 Undervoltage Sense Circuit, SOIC8	On Semiconductor	MC34064D-005G
46	U4	DS1818 3.3V active-low Power-On-Reset chip SOT	Dallas Semiconductor	DS1818R-10+
47	U2	KF33BD Very Low Drop +3.3V Voltage Regulator SO	ST Microelectronics	KF33BD
48	U6	EEPROM 8x8 i2c interface - with Wolfson "WM200X" code	Microchip Technology	24LC64-I/P

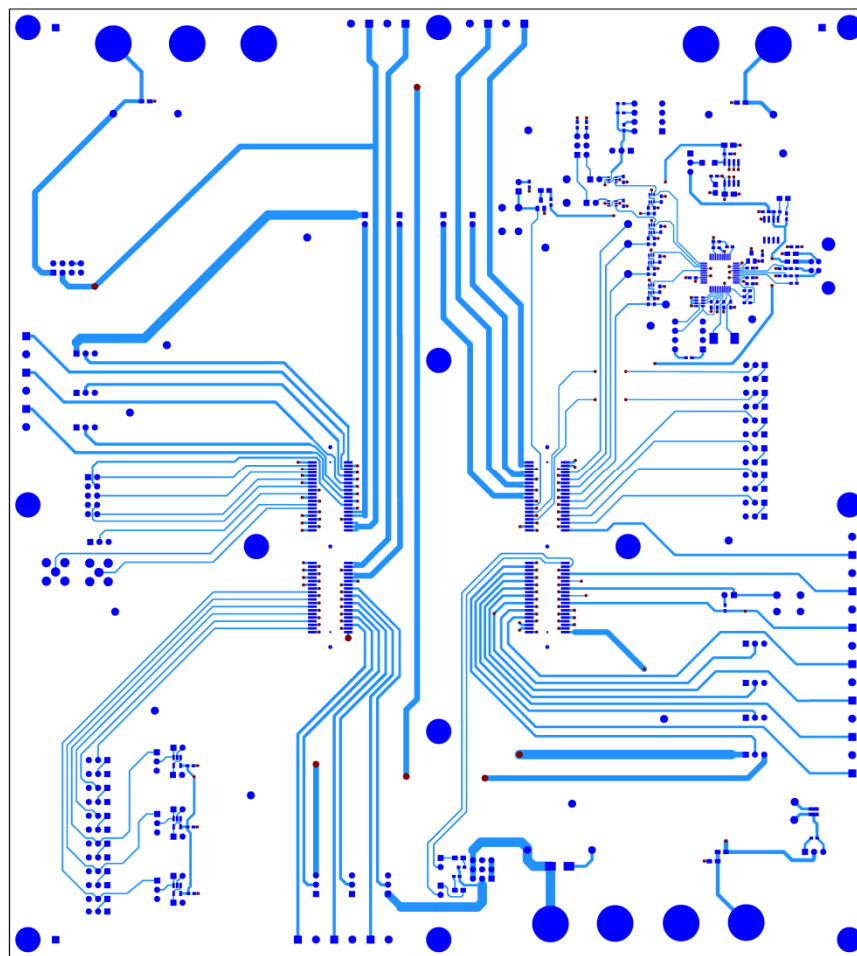
Item	RefDes	Description	Manufacturer	Manufacturer's Part Number
49	T1	BSS138 N-Channel enhancement Mode FET	Fairchild Semiconductor	BSS138
50	Y1	6.0MHz GSX-752A/351JF SM Crystal 30pF	Golledge	GSX-752A/351JF 6.0MHz
51	J5 J6 J7 J8 J9 J84 J85 J86 J87	4mm Non-Insulated Panel Socket 16A	PJP	3110I
52	LNK_J16 LNK_J17 LNK_J18 LNK_J19 LNK_J21 LNK_J23 LNK_J26 LNK_J31 LNK_J48 LNK_J50 LNK_J52 LNK_J57 LNK_J70 LNK_J76 LNK_J77 LNK_J78	0.1" OPEN JUMPER LINK RED	Protech	22-3565
53	LNK_J10B LNK_J27X LNK_J10A LNK_J11 LNK_J12 LNK_J14 LNK_J15 LNK_J29 LNK_J33 LNK_J35 LNK_J38 LNK_J40 LNK_J41 LNK_J58 LNK_J62 LNK_J65 LNK_J69 LNK_J73 LNK_J74 LNK_J79 LNK_J82	0.1" OPEN JUMPER LINK YELLOW	Protech	22-3570
54	R8	470R 0603 SMD chip resistor 1% 0.063W	Tyco	01622949-1
55	LED2 LED5 LED6	KP-2012MGC 0805 SMD Chip LED GREEN	Kingbright	KP-2012MGC
56	LED3	KP-2012SRC-PRV 0805 SMD Chip LED RED	Kingbright	KP-2012SRC-PRV
57	LED1	KP-2012SYC 0805 SMD Chip LED YELLOW	Kingbright	KP-2012SYC
58	U7 U8 U9	AD8605 Precision Op-Amp SOT23-5	Analog Devices	AD8605ARTZ-R2
59	LNK_J80	3way, 0.1" Pitch, Open, Black, Jumper Link - Block	Toby	C33-GAG1-2X3-G
60	H1 H2	2x40 1mm One-Piece Interface Connector VERTICAL	Samtec	FSI-140-10-L-D-M-AD
61	J10	3x2 2.54mm Header Vertical	Toby	THT-02-R
62	J80	3x3 2.54mm Header Vertical	Samtec	TSW-103-26-G-T
63	PCB1	PCB	Kelan Circuits Ltd	6246-EV1-REV1
Unpop				
64	C26	10uF 0805 SMD Ceramic Capacitor 6.3V X5R	MuRata	GRM21BR60J106KE19L
65	BAT1	BATTERY Rechargeable Lithium ML614-TZ21 Manganese Dioxide 3.4mAh	SANYO_ENERGY	ML614-TZ21

<i>Item</i>	<i>RefDes</i>	<i>Description</i>	<i>Manufacturer</i>	<i>Manufacturer's Part Number</i>
66	TP20	1.32mm PCB Test Terminal BLACK	Vero	20-2136
67	TP3 TP4 TP5 TP8 TP9 TP10 TP22	1.32mm PCB Test Terminal RED	Vero	20-313141
68	D1	1N5337B 4.7V 5W Zener Diode PTH	ON Semiconductor	1N5337BG
69	D2	1N5341B 6.2V 5W Zener Diode PTH	ON Semiconductor	1N5341BG
70	D3	1N5343BG 7.5V 5W Zener Diode PTH	On Semiconductor	1N5343BG

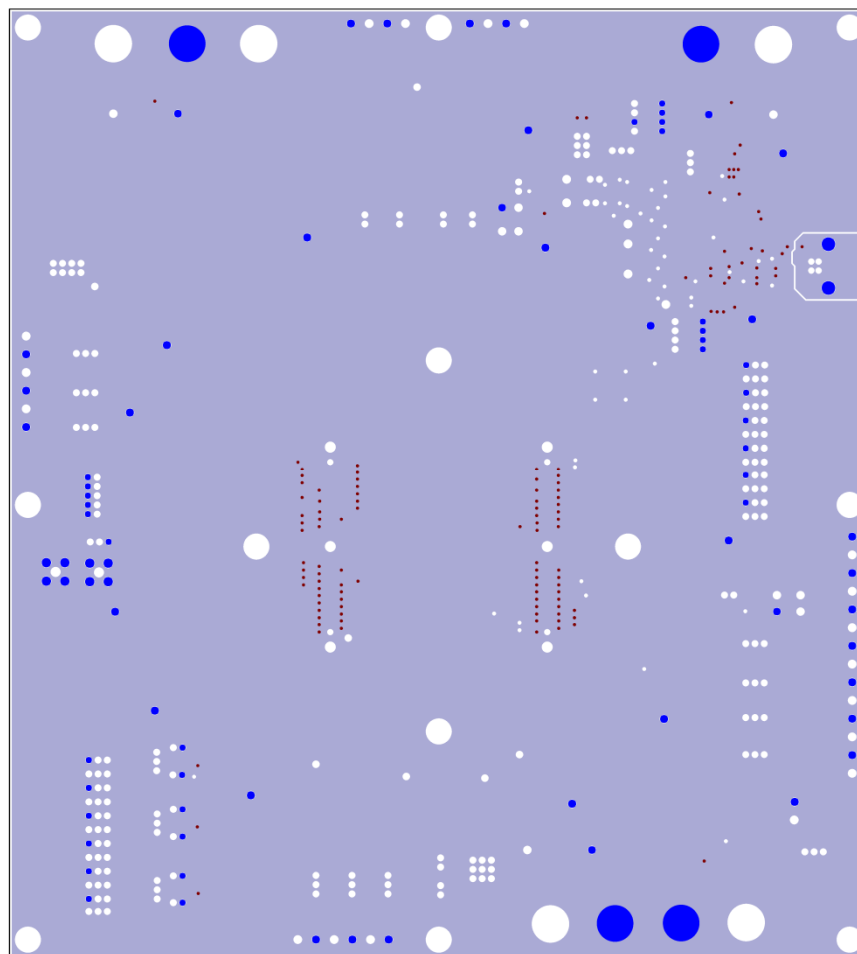
## Top Layer: Overview



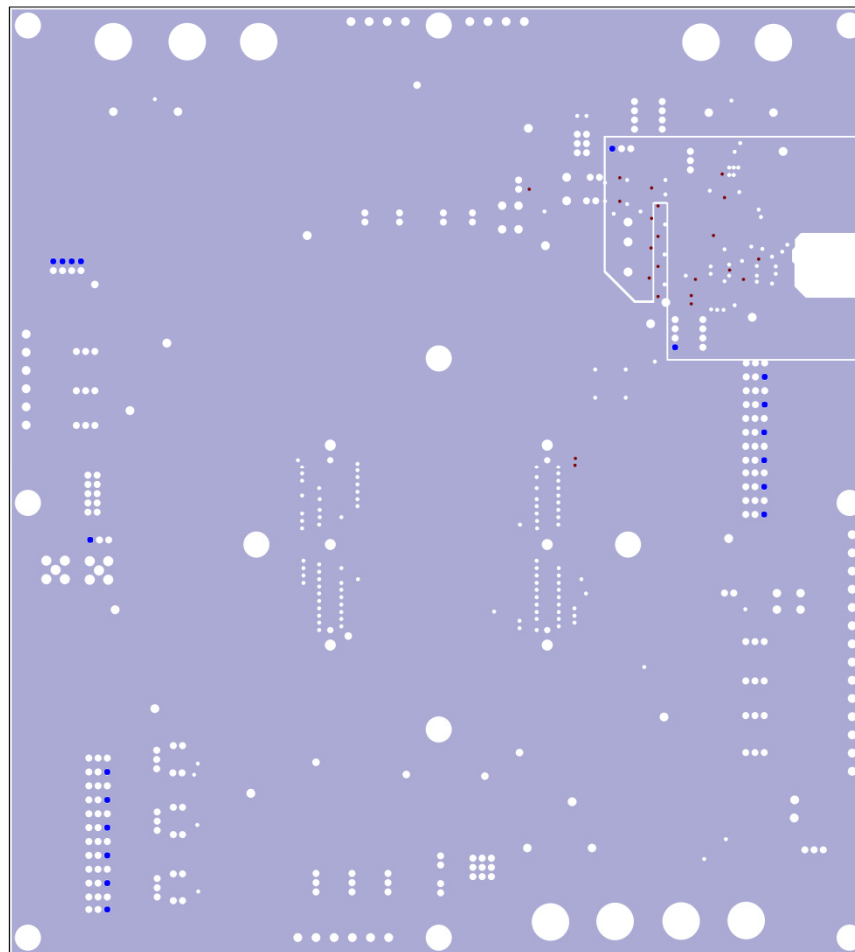
Top Layer: Silkscreen + Copper



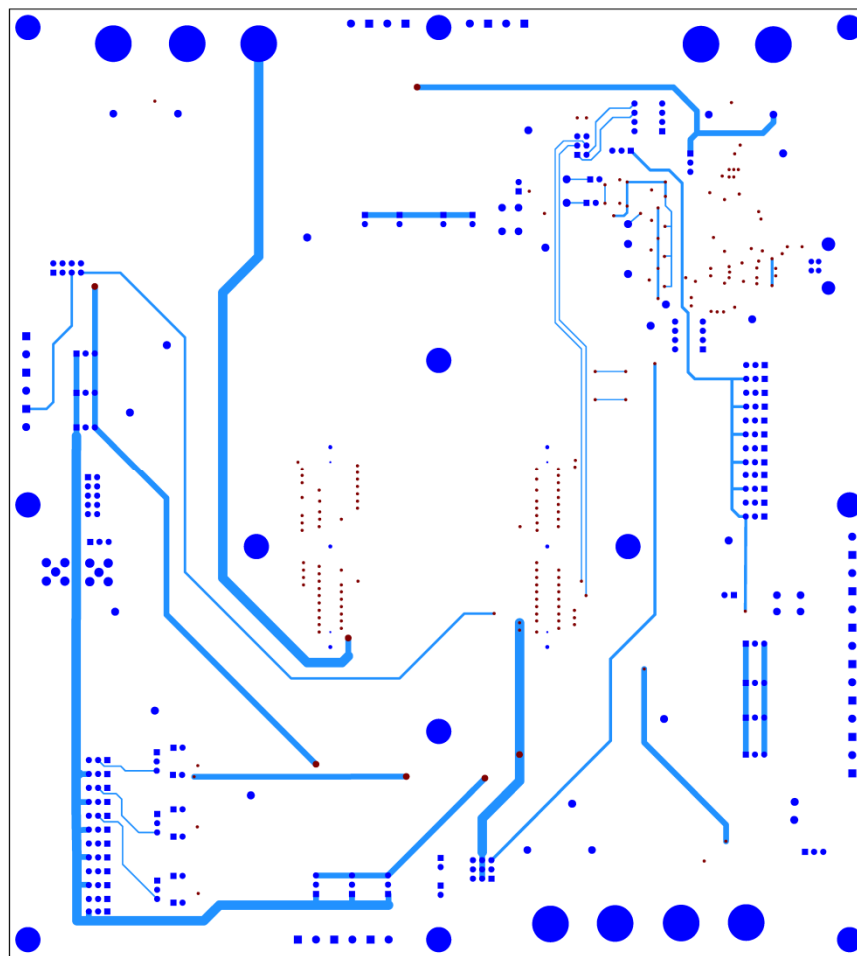
Top Layer: Copper



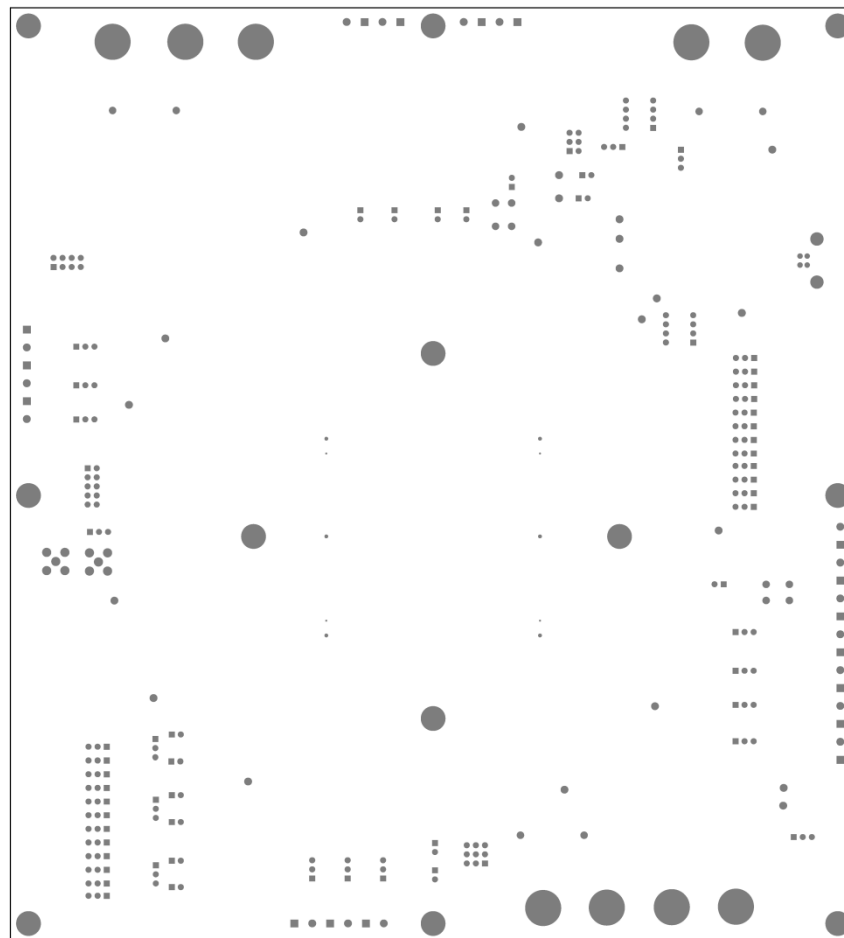
Layer 2: Copper



Layer 3: Copper



Bottom Layer: Copper



**Bottom Layer: Silkscreen + Copper**

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