Schematic modified for
CY8CKIT-064S0S2-4343W PSoC 64 Wi-Fi BT Secure Boot Pioneer Kit

CYW9-BASE-01 Pioneer Baseboard

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Drawing Numbers	
PCBA	121-60579-01
PCB	600-60552-01
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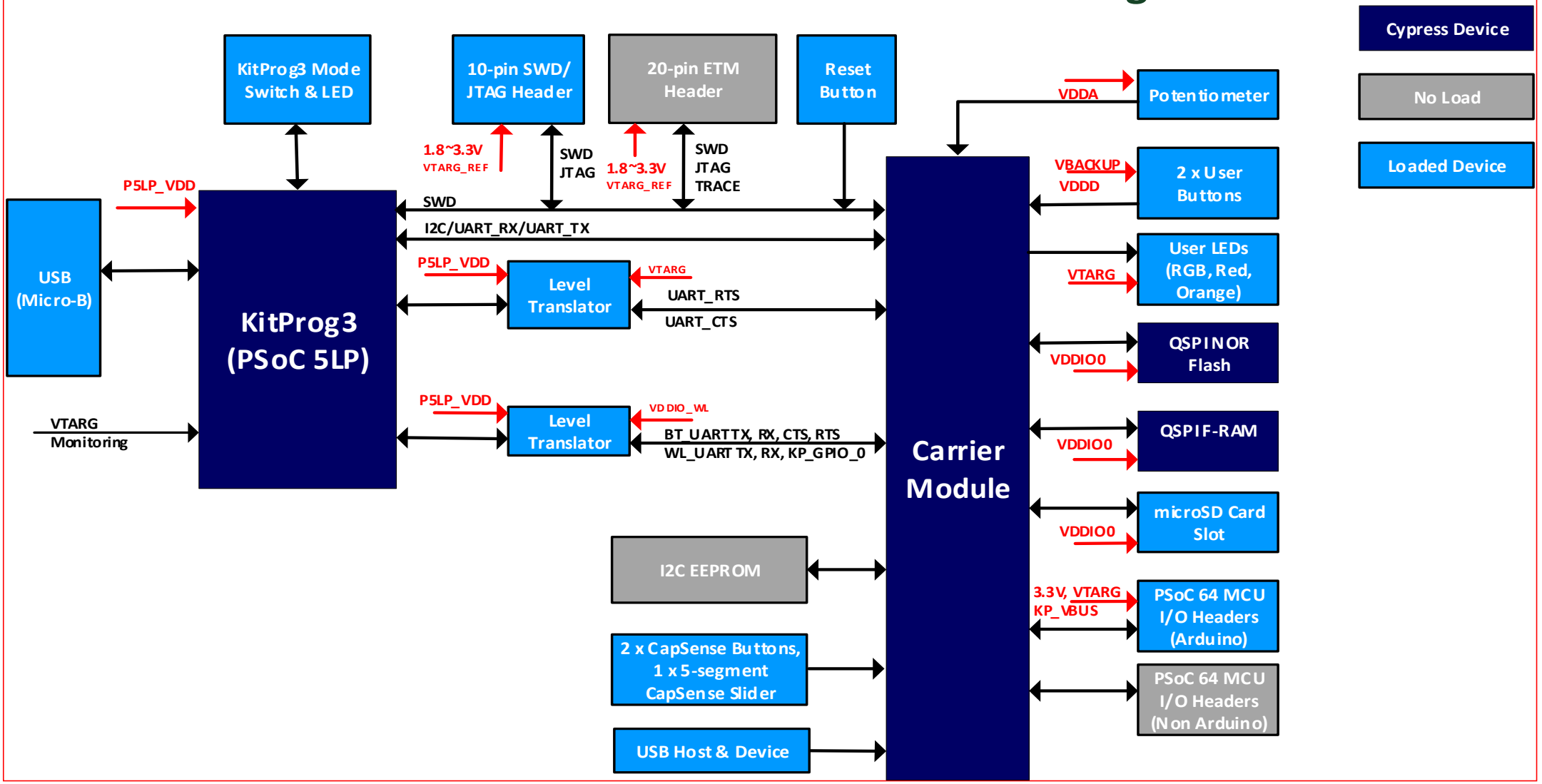
CYW9-BASE-01 Architecture Block Diagram



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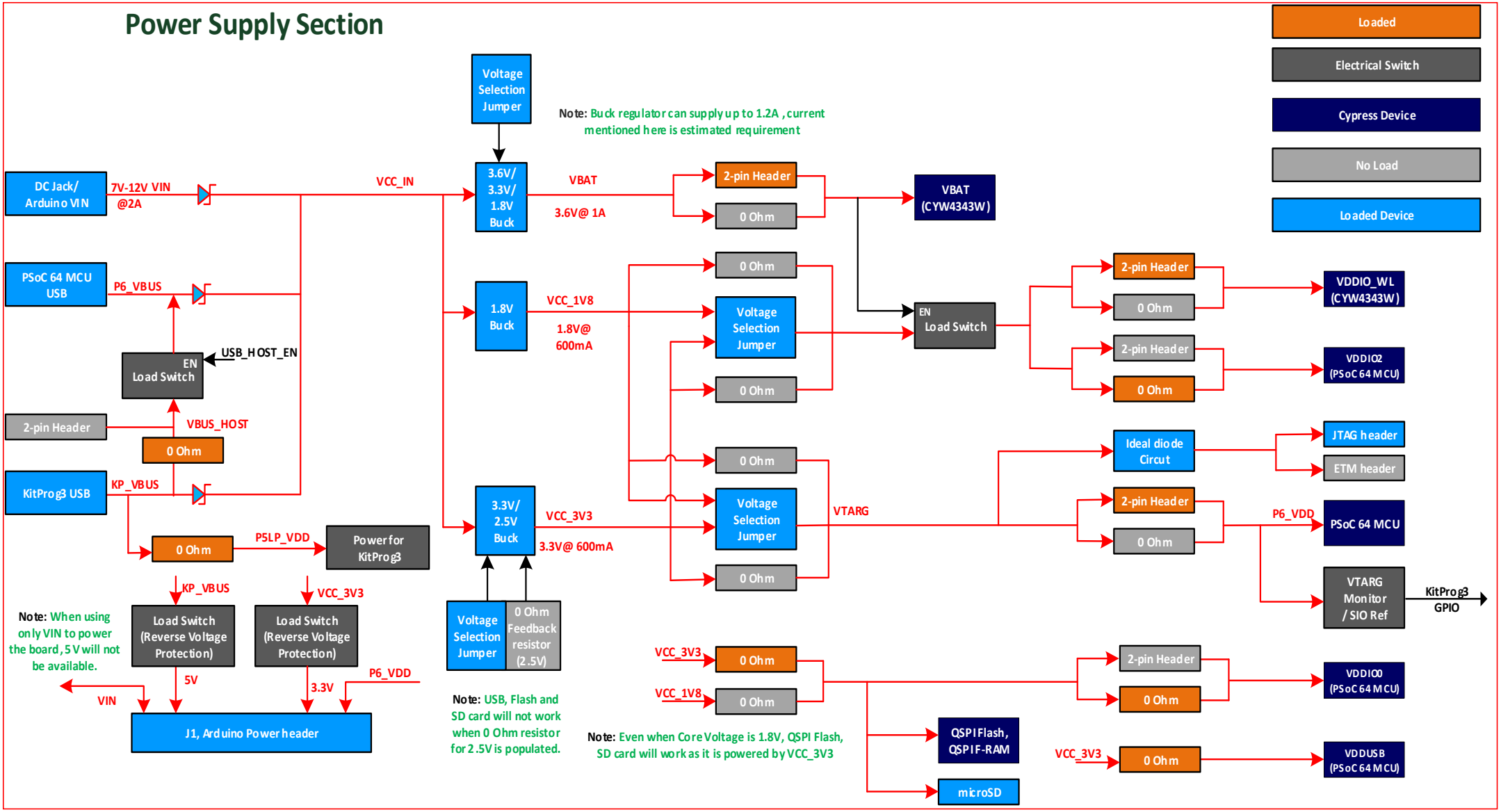
Power Supply Section



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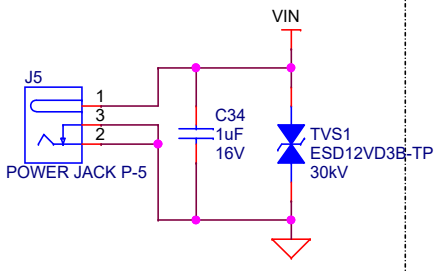
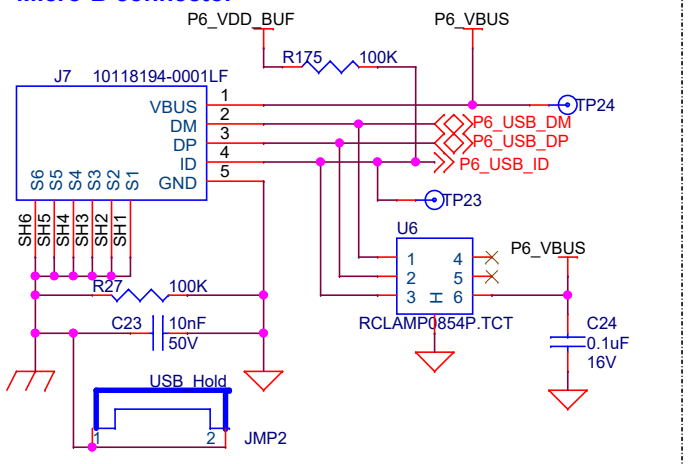
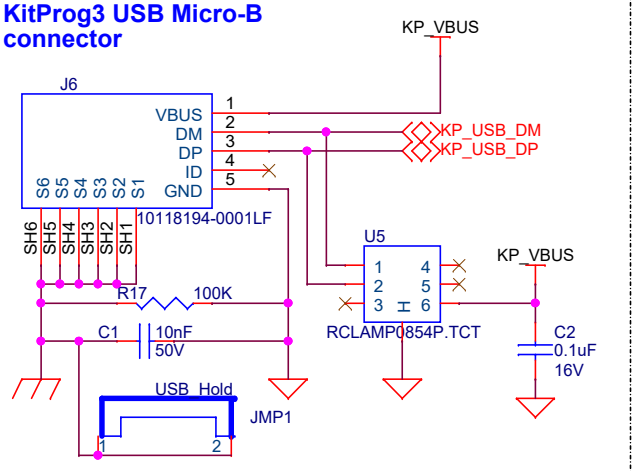
VIN Header

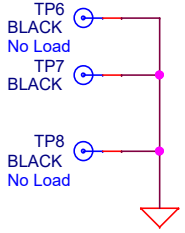


PSoC 64 MCU USB Host/Device Micro-B connector

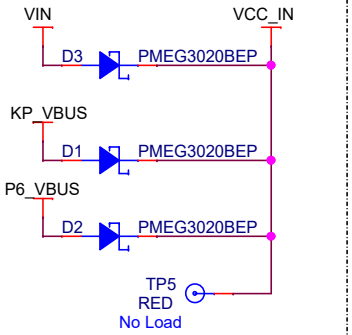


KitProg3 USB Micro-B connector

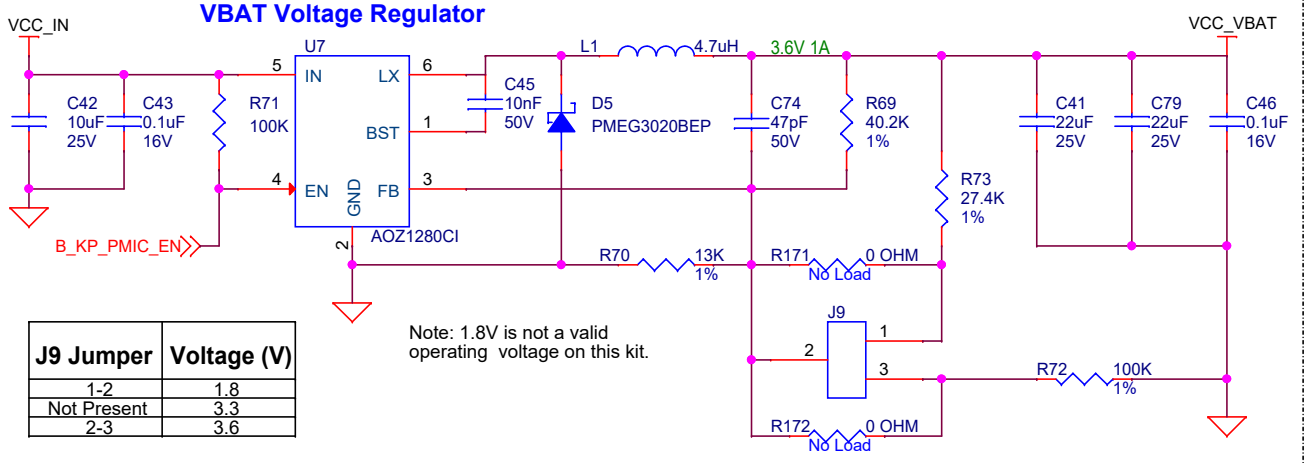




Power Supply 'OR'ing



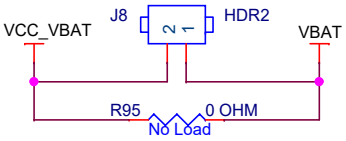
VBAT Voltage Regulator



J9 Jumper	Voltage (V)
1-2	1.8
Not Present	3.3
2-3	3.6

Note: 1.8V is not a valid operating voltage on this kit.

Current Measurement



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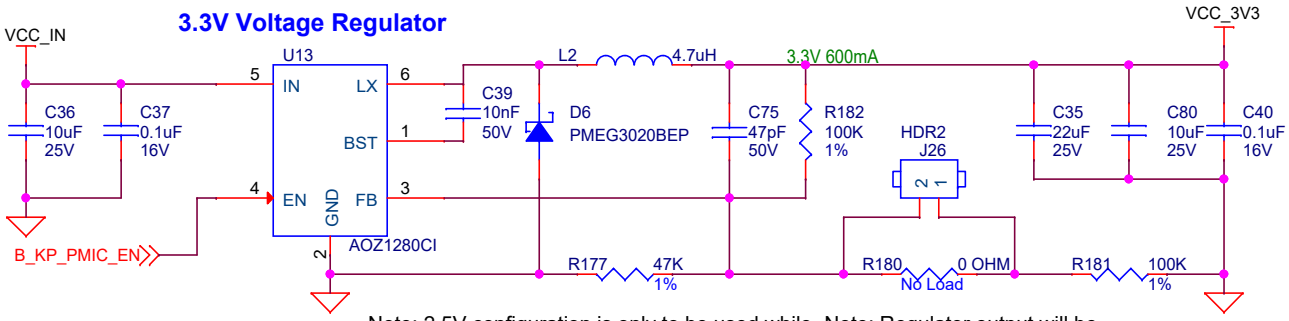
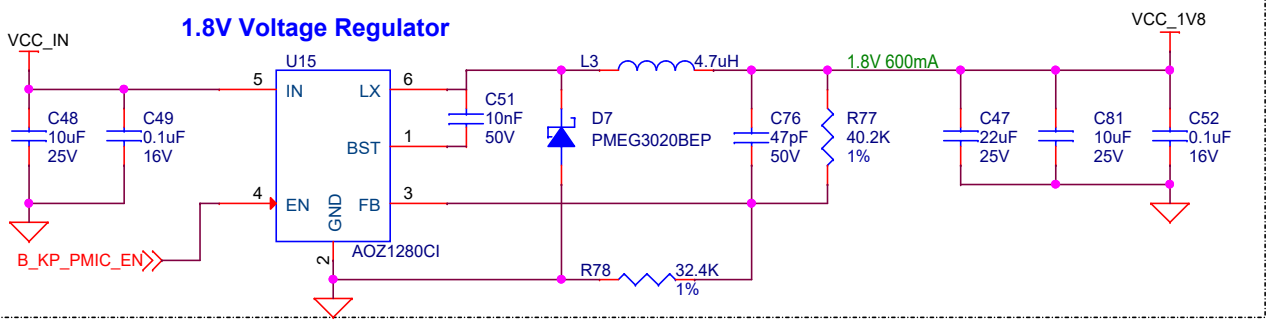
3.3V Voltage Regulator



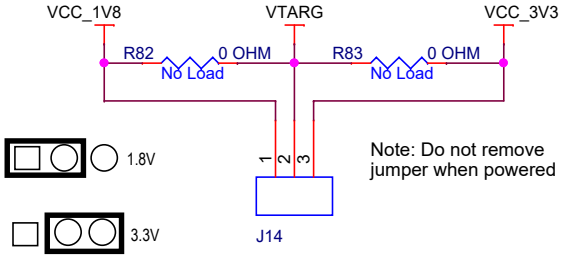
Note: 2.5V configuration is only to be used while eFuse programming. Normal operation is supported only in 3.3V configuration.

Note: Regulator output will be 3.3V when J26 jumper is loaded and 2.5V when removed.

1.8V Voltage Regulator

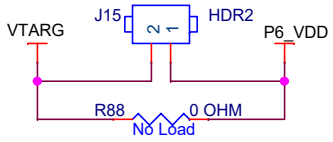


VTARG Voltage Selection Header

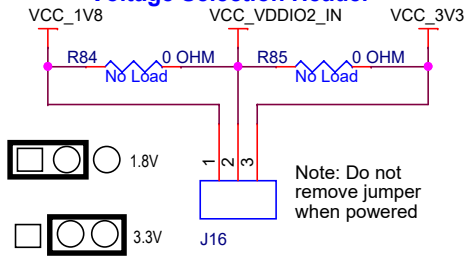


Note: Do not remove jumper when powered

P6_VDD Current Measurement

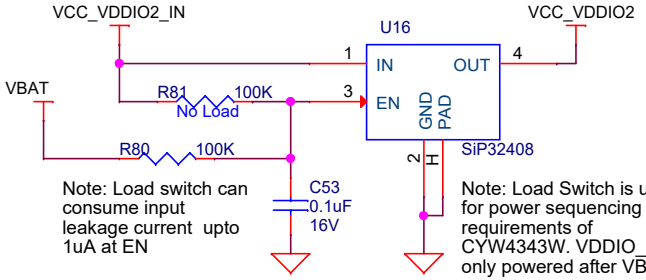


VCC_VDDIO2_IN Voltage Selection Header



Note: Do not remove jumper when powered

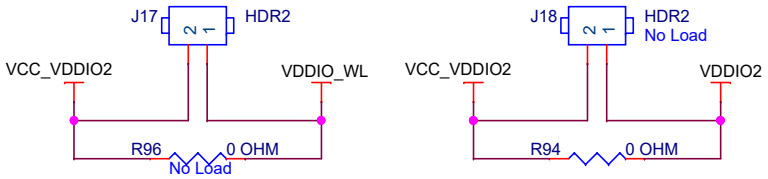
VCC_VDDIO2 Load Switch



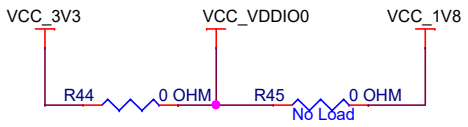
Note: Load switch can consume input leakage current upto 1uA at EN

Note: Load Switch is used for power sequencing requirements of CYW4343W. VDDIO_WL only powered after VBAT

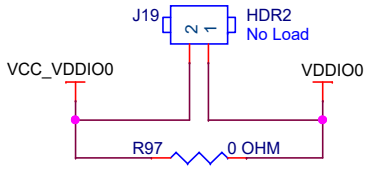
VDDIO_WL & VDDIO2 Current Measurement



VDDIO0 Voltage Selection



VDDIO0 Current Measurement



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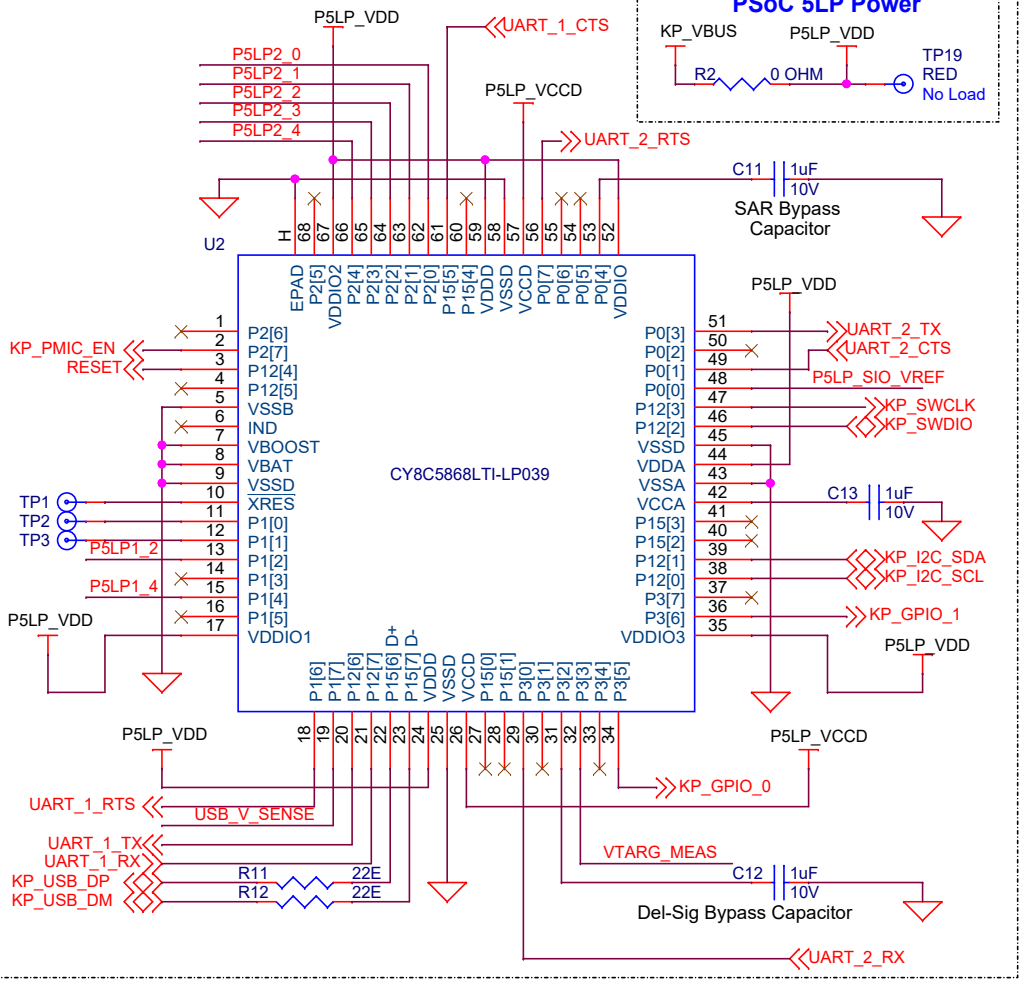
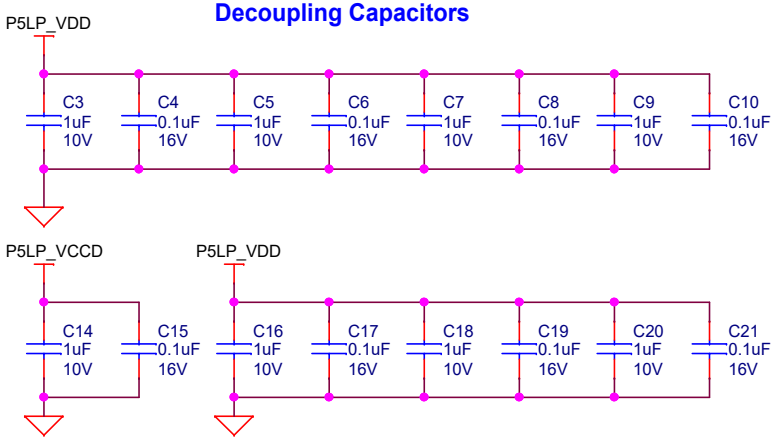
PSoC 5LP based KitProg3

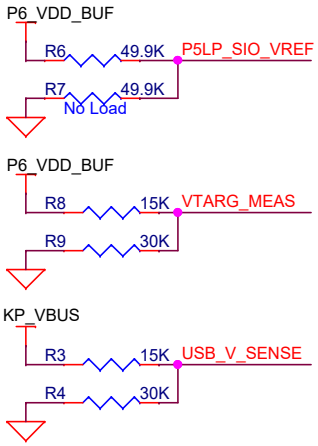


PSoC 5LP Power

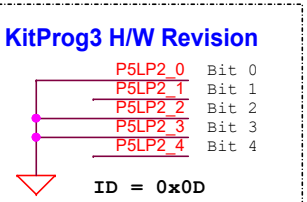
Decoupling Capacitors



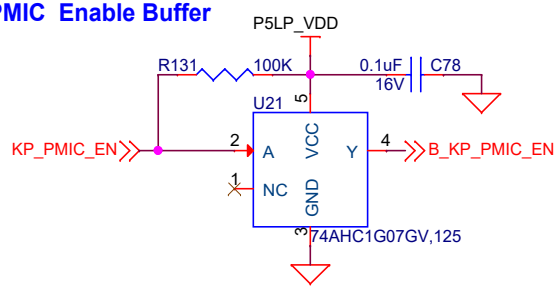
Voltage Monitoring



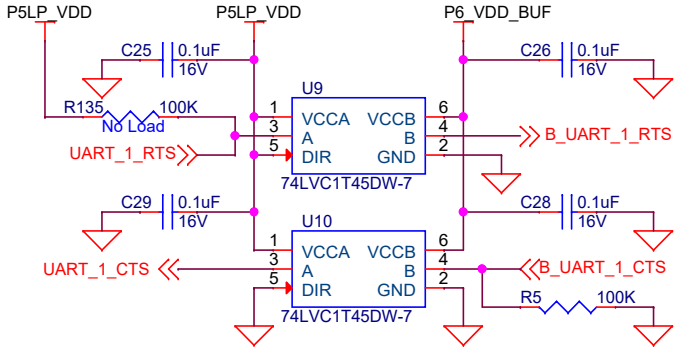
KitProg3 H/W Revision



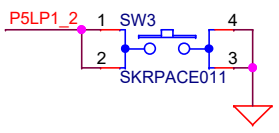
PMIC Enable Buffer



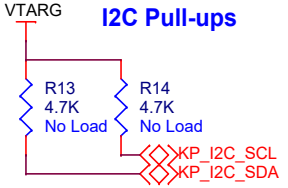
Primary UART H/W Flow Control Level Translator



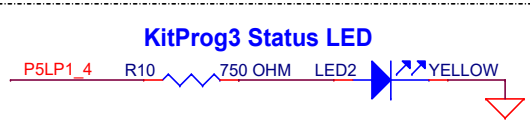
Mode Switch



I2C Pull-ups



KitProg3 Status LED



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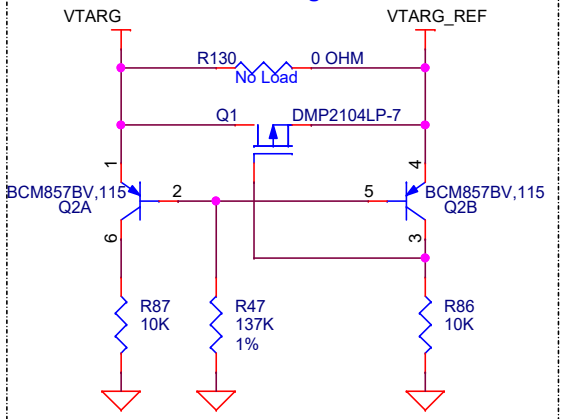
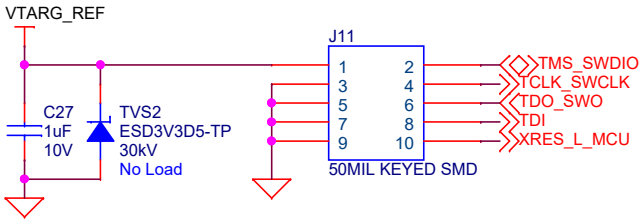
VTARG Reverse Voltage Protection



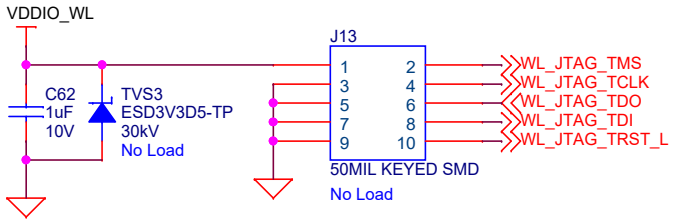
Note: VTARG_REF is only output voltage sense line for external debuggers. PSoC 64 MCU can't be powered using external debugging headers J11 and J12

Note: If R130 is loaded and external power is used, make sure to remove jumper shunt from J14 to prevent reverse voltage to on-board regulator

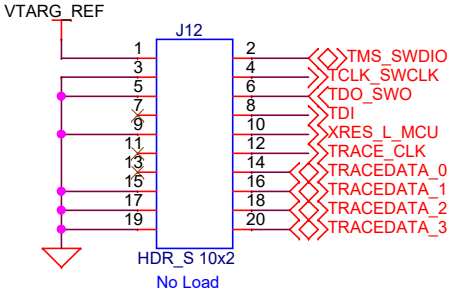
MCU 10-pin SWD/JTAG Header



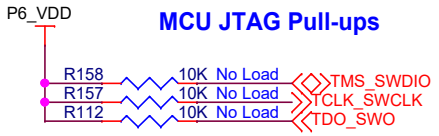
CYW4343W 10-pin SWD/JTAG Header



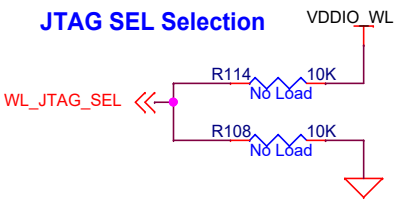
MCU 20-pin ETM Header



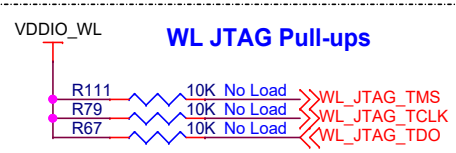
MCU JTAG Pull-ups



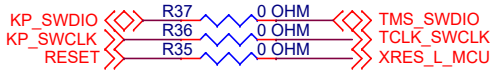
JTAG SEL Selection



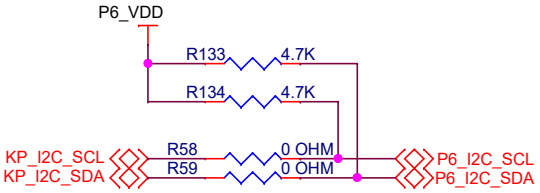
WL JTAG Pull-ups



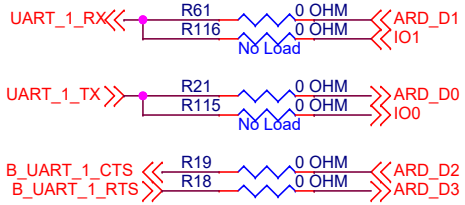
MCU SWD KitProg3 Interface



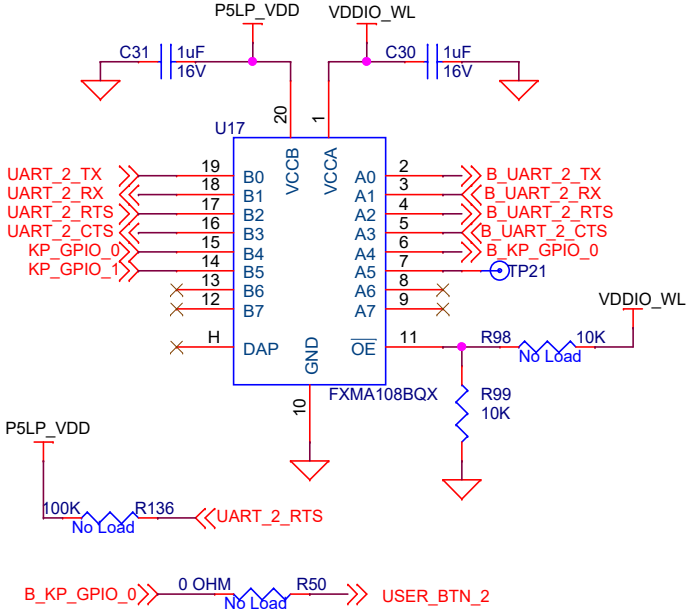
KitProg3 I2C Interface



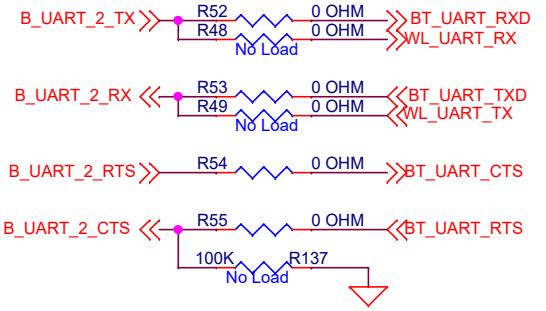
KitProg3 UART Interface



KitProg3 Level Translator for Secondary UART and GPIO



KitProg3 Secondary UART Multiplexing



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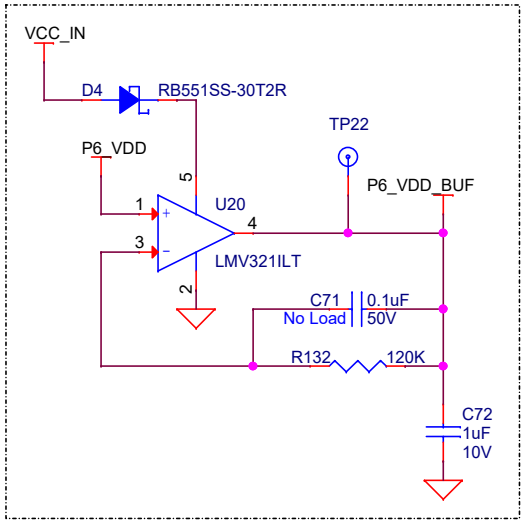

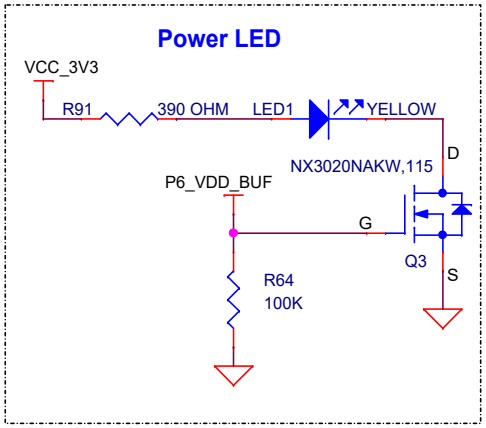

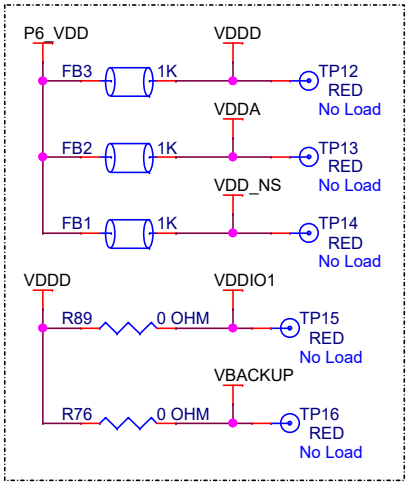

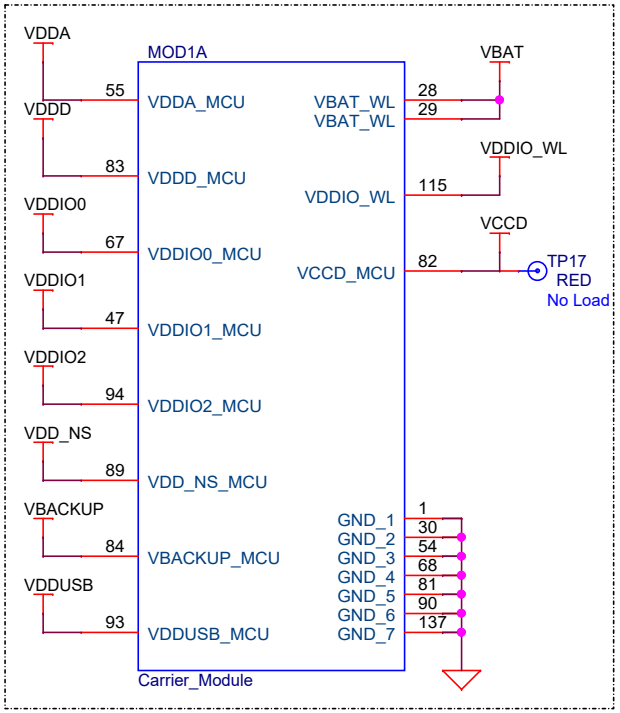

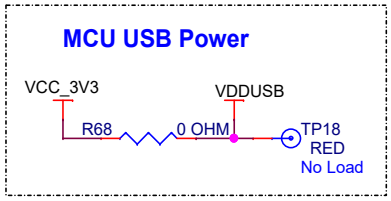

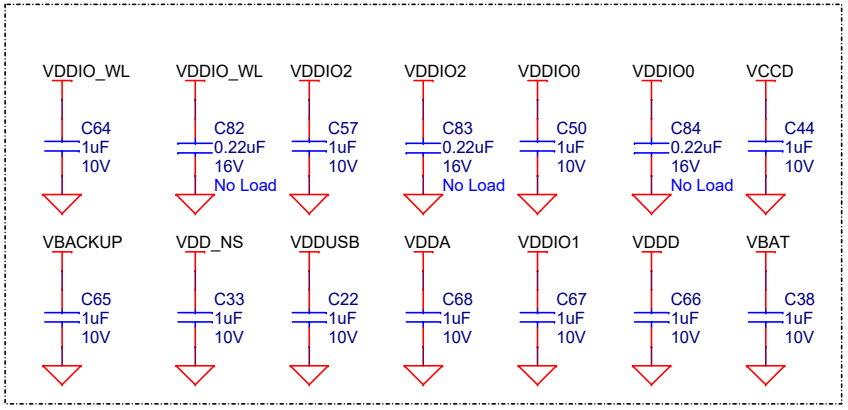

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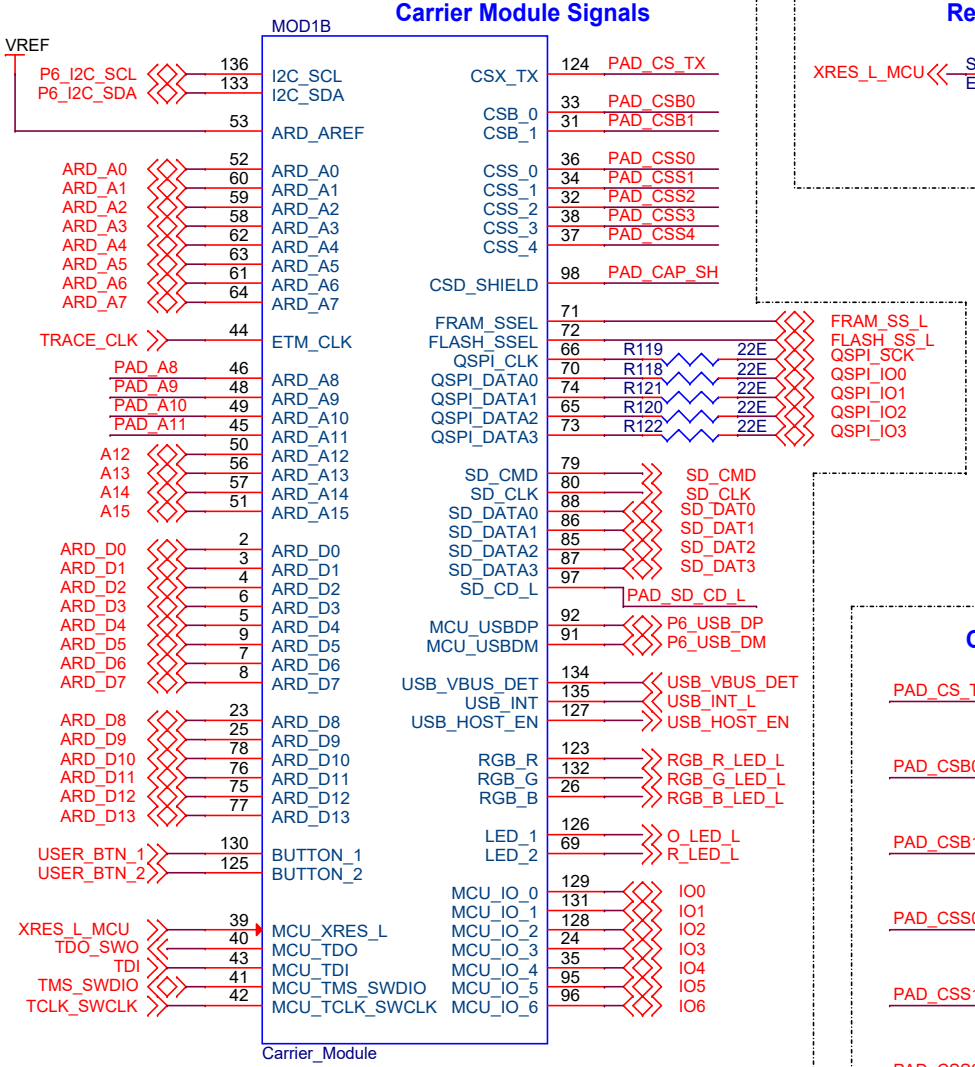
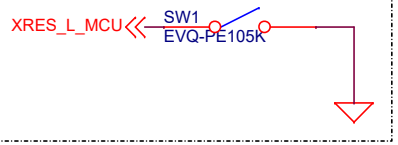
Carrier Module Signals

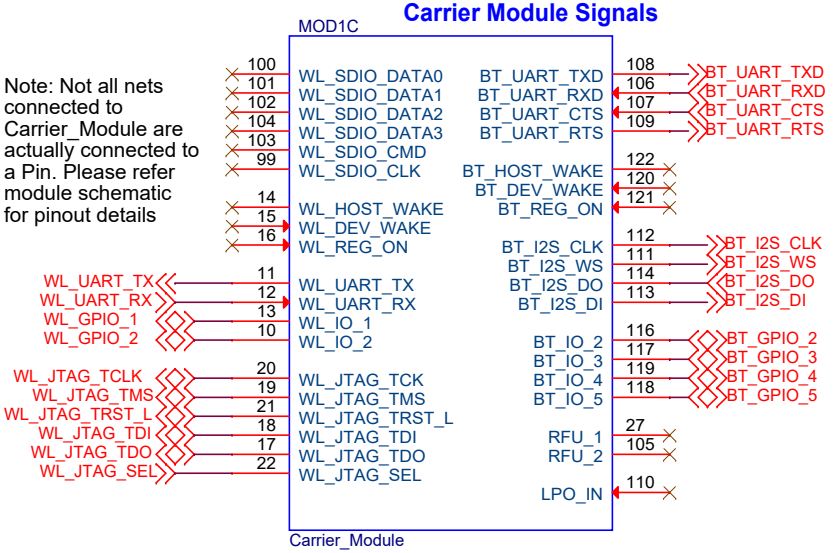


Reset Button

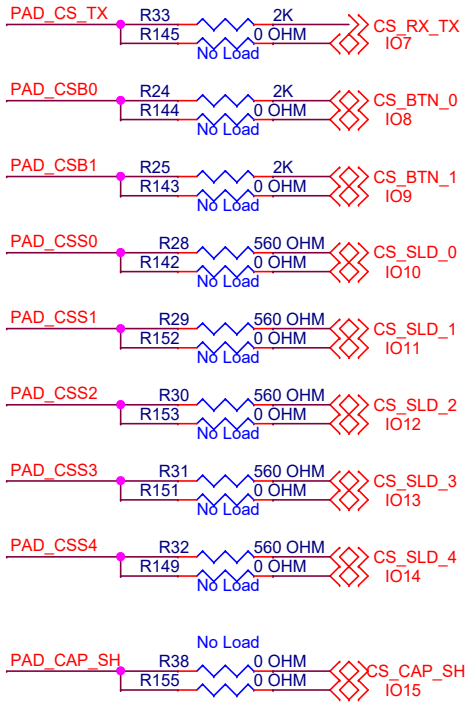


Carrier Module Signals

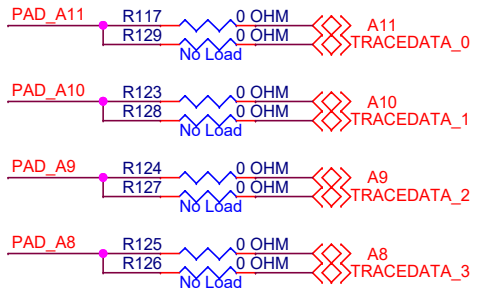
Note: Not all nets connected to Carrier_Module are actually connected to a Pin. Please refer module schematic for pinout details



CapSense Multiplexed Pins

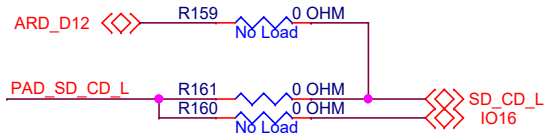


TRACE Multiplexed Pins



P6_USB_ID

Card Detect Multiplexing



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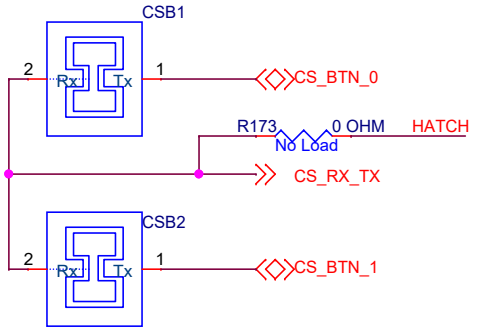
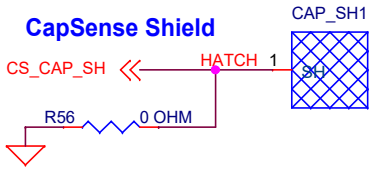
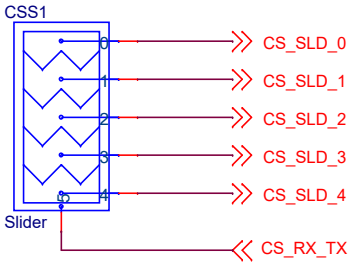
CapSense Buttons



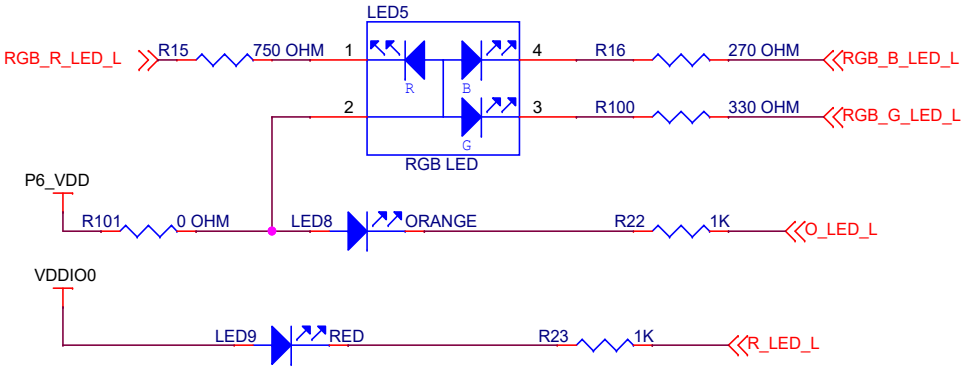
CapSense Shield



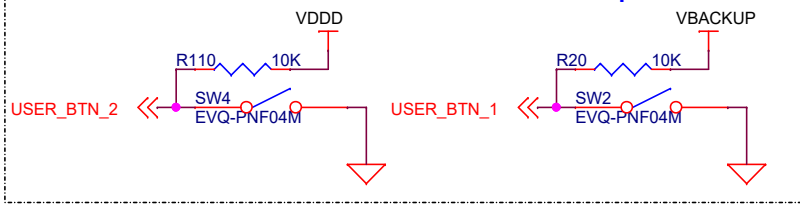
CapSense Slider



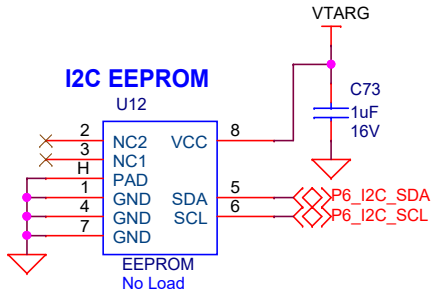
User LEDs



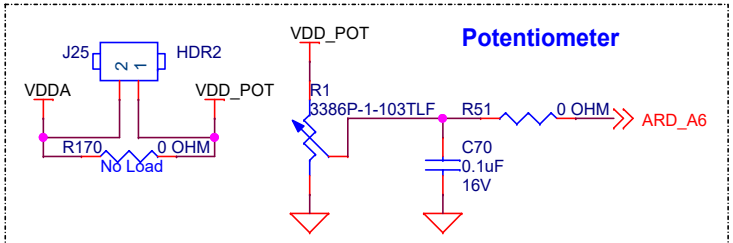
User Buttons / Hibernate Wakeup



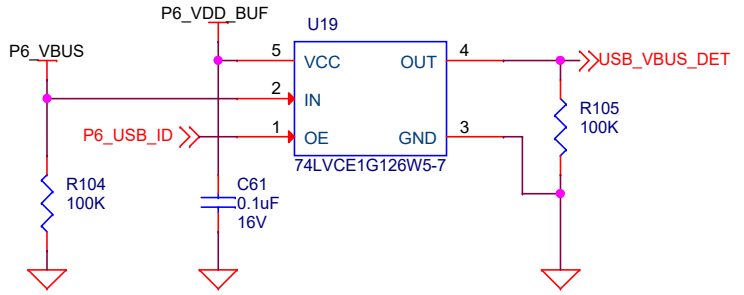
I2C EEPROM



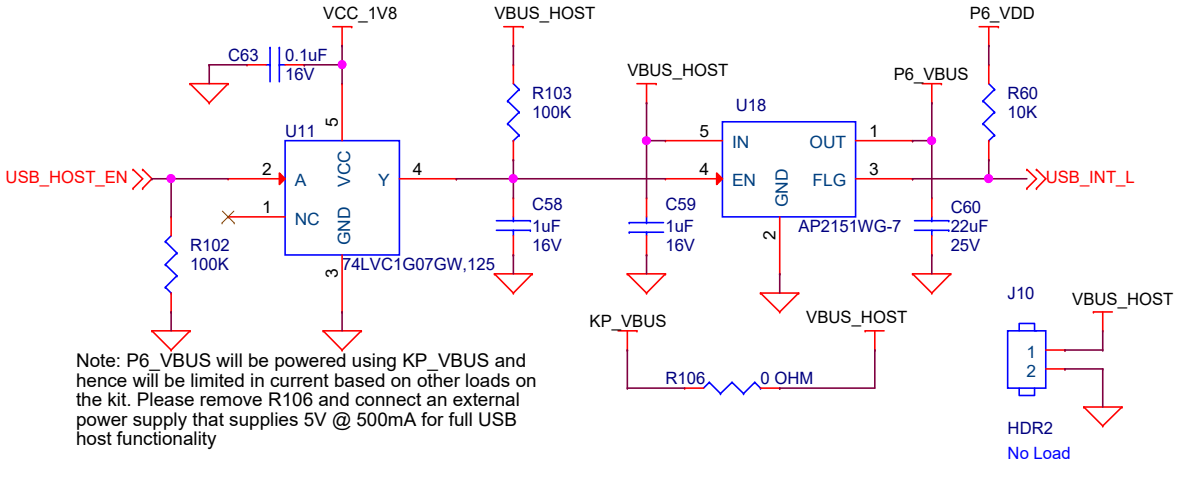
Potentiometer



USB Device Port VBUS Detect



USB Host VBUS Enable



Note: P6_VBUS will be powered using KP_VBUS and hence will be limited in current based on other loads on the kit. Please remove R106 and connect an external power supply that supplies 5V @ 500mA for full USB host functionality

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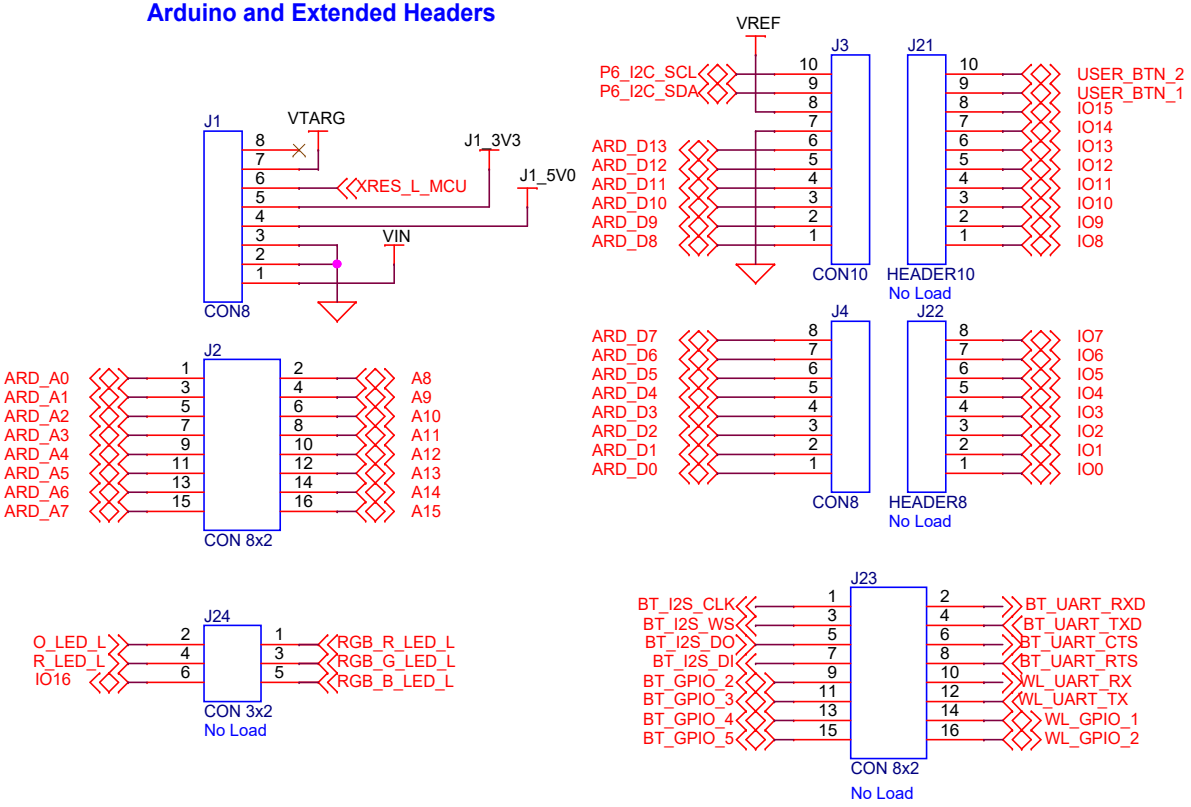
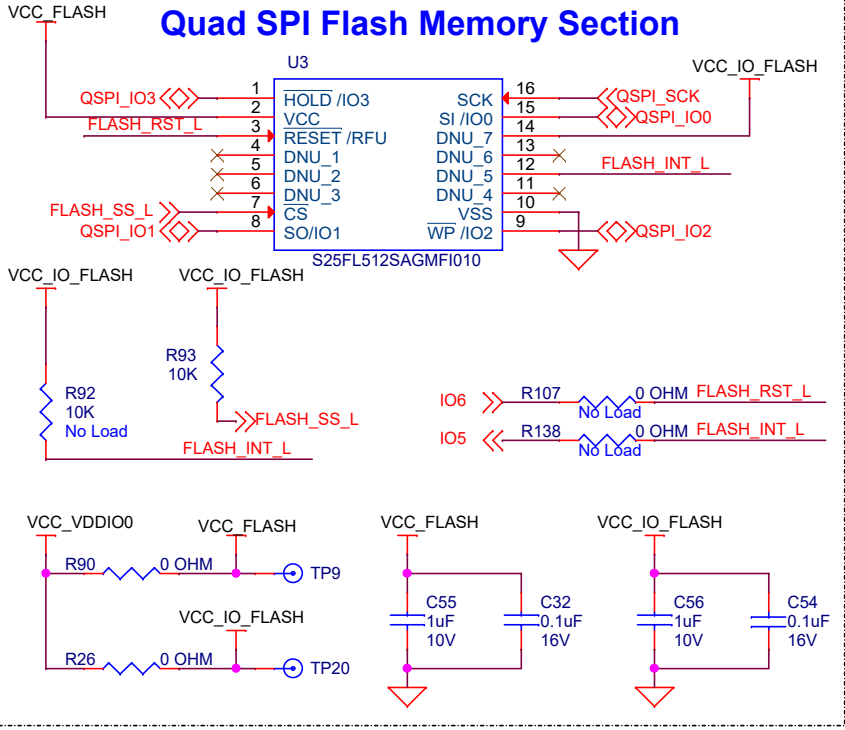
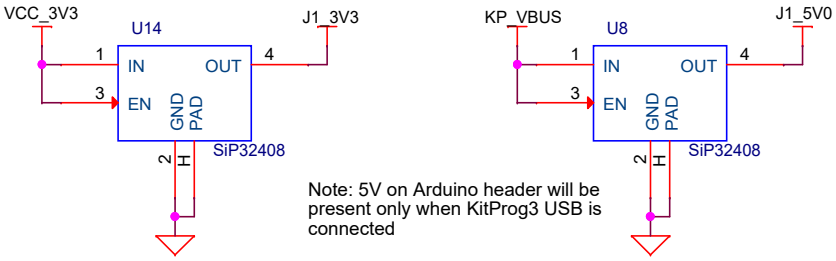
Arduino and Extended Headers



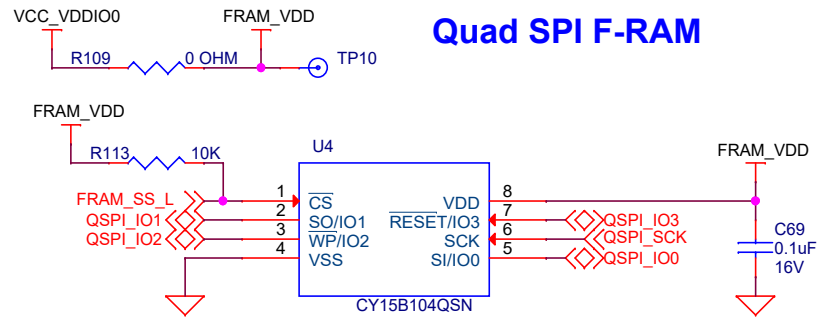
Quad SPI Flash Memory Section



Arduino Header O/P



Quad SPI F-RAM



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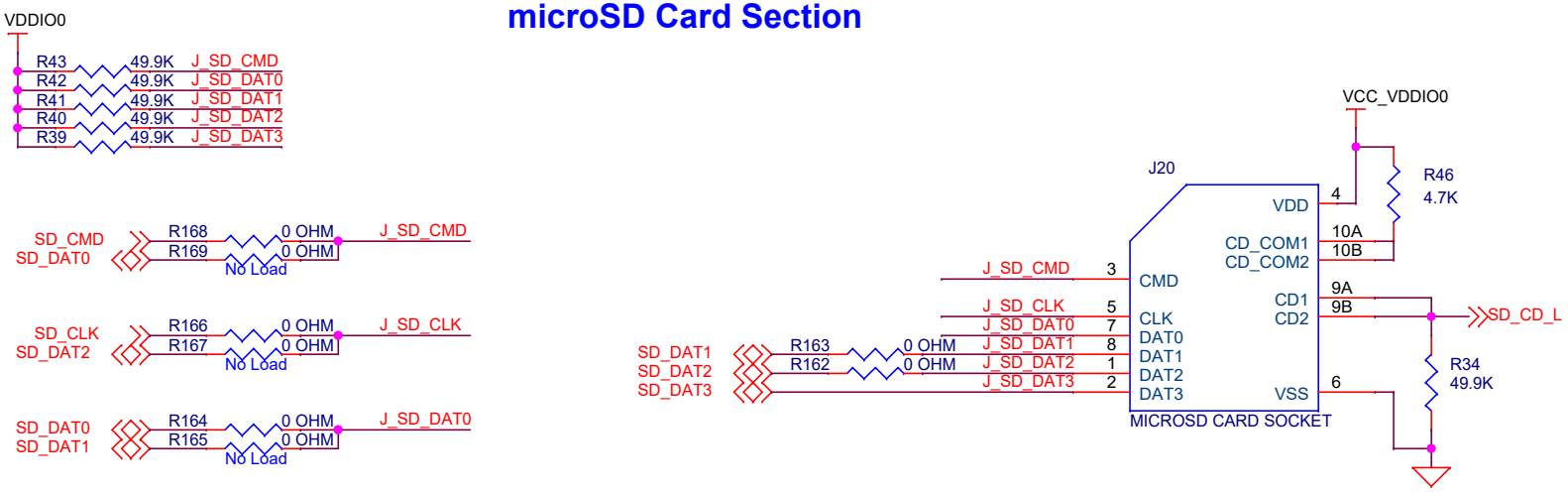
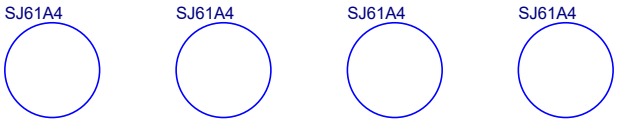
microSD Card Section

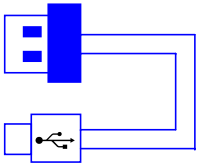


Note: Load R165, R167 and R169 and remove R162, R163, R164, R166 and R168 to change from SDHC to SPI interface for microSD card

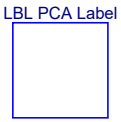
Accessories

Cylindrical Bump-ons

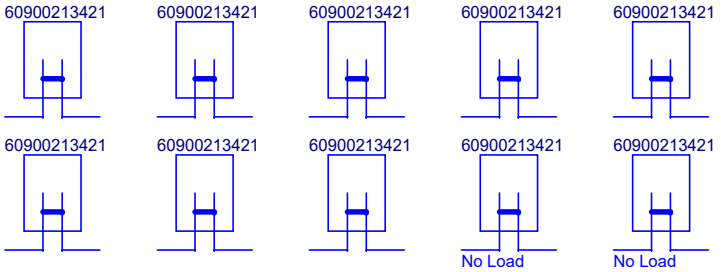




PCBA label



Jumper Shunts



Acrylic Overlay

Overlay

Color: Clear, Transparent
Finish: Matt

Dimensions:
45.21mm - length
36.93mm - height
1mm - thickness

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REVISION HISTORY

REV	DESCRIPTION OF CHANGE	DATE
01	Initial Internal Release	2019/05/13
02	Internal Release	2019/05/21
03	Internal Release	2019/07/23
04	Internal Release	2019/08/08
05	Initial Release	2019/09/18
06	Internal Release	2019/12/09
07	1. Added optional jumper header J26 at VCC_3V3 output voltage selection between 3.3V and 2.5V 2. VCC of USB Device VBUS Detect is changed from VTARG to P6_VDD_BUF	2020/01/28
08	Loaded R133, R134 instead of R13, R14	2020/02/13

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