


**Schematic modified for
CYW9P62S1-43438EVB-01 PSoC 62S1 Wi-Fi BT Pioneer Kit**

CYW9-BASE-01 Pioneer Baseboard

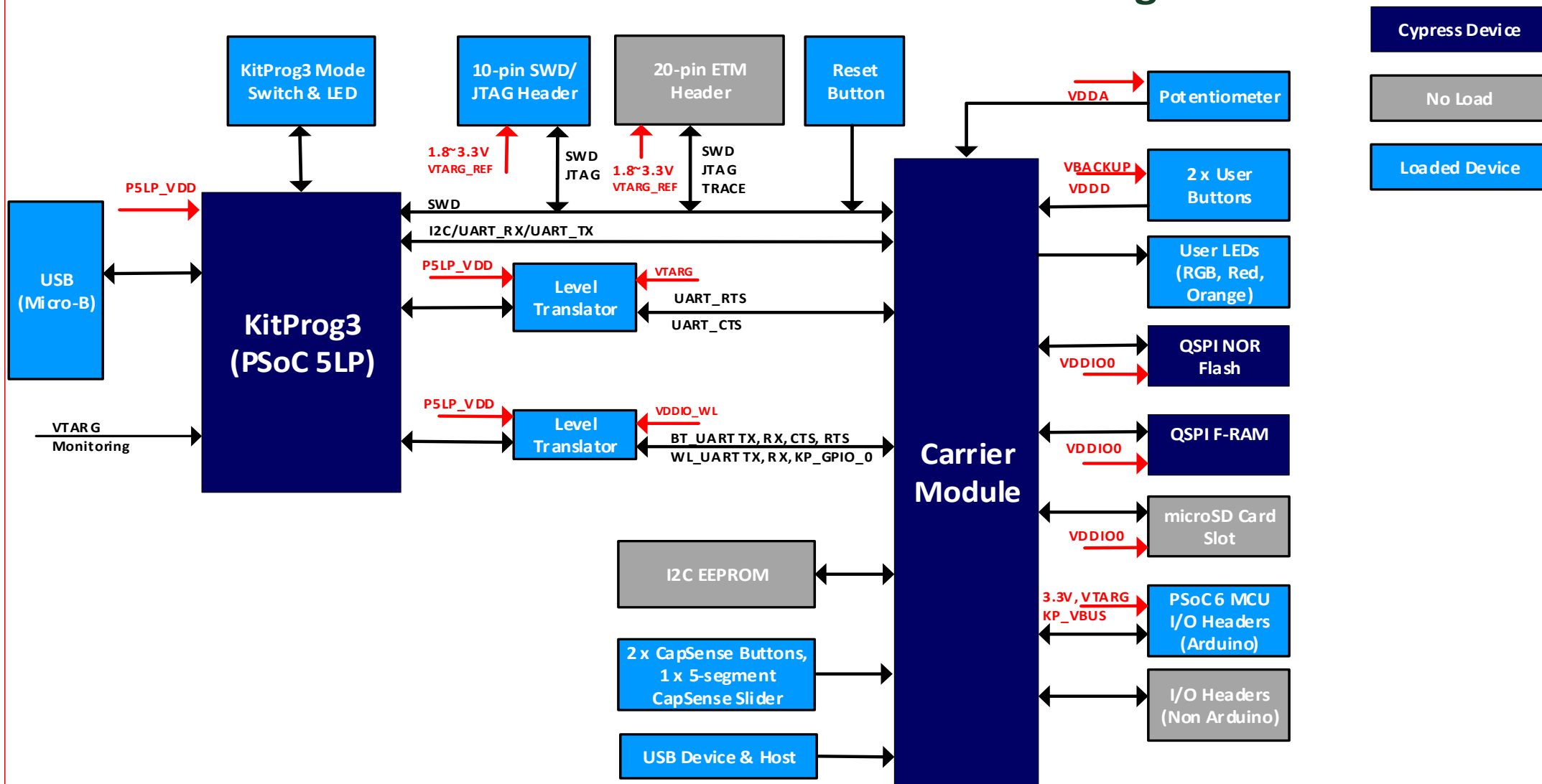
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Drawing Numbers

PCBA	121-60567-01
PCB	600-60552-01
FAB DRW	610-60552-01
ASSY DRW	620-60552-01
SCH DRW	630-60552-01

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SCH Title : CYW9-BASE-01 Pioneer Baseboard							
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CYW9-BASE-01 Architecture Block Diagram



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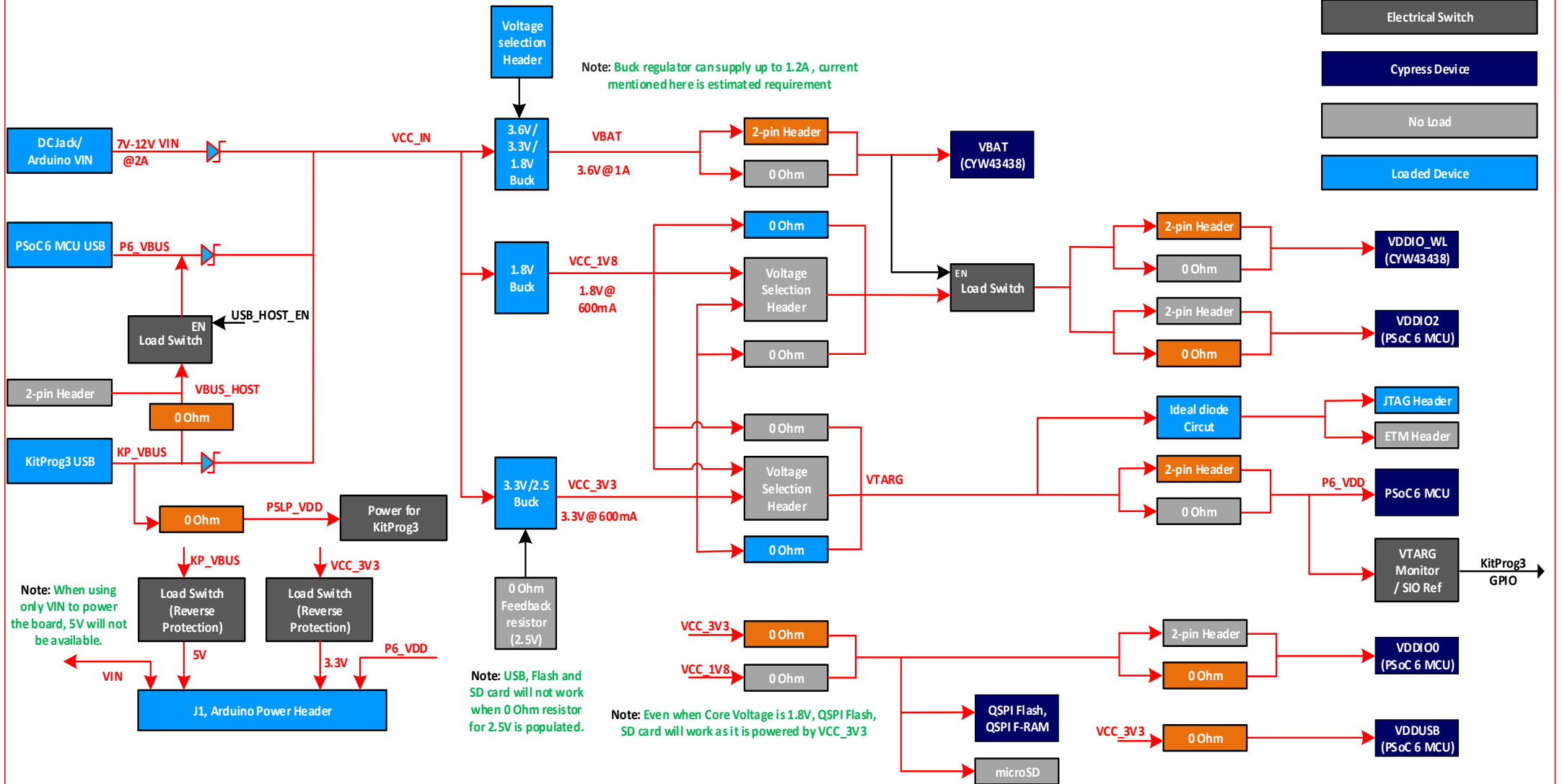
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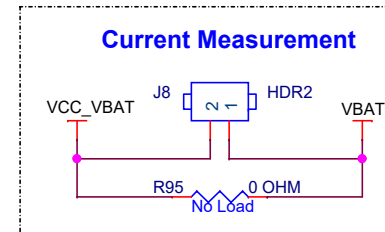
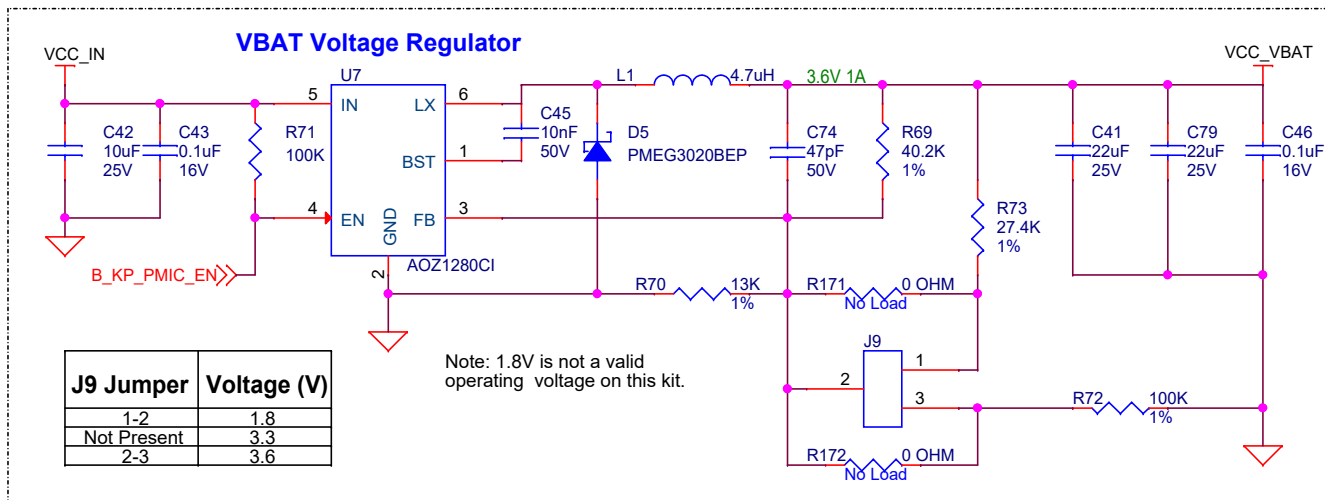
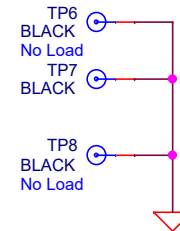
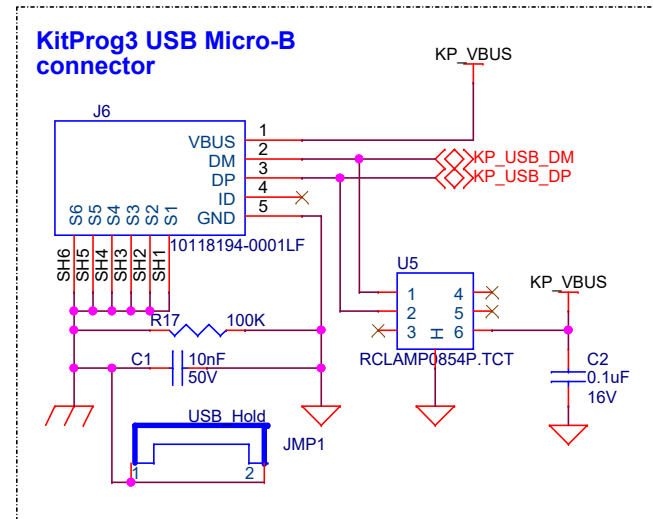
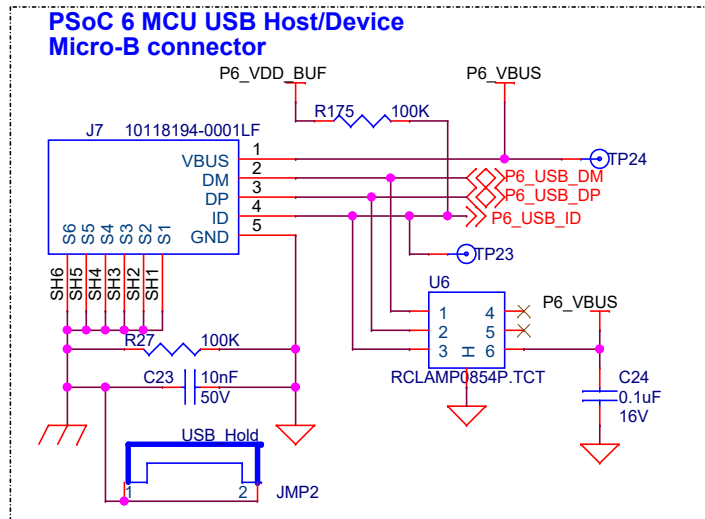
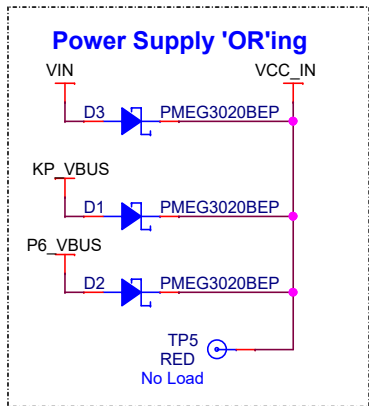
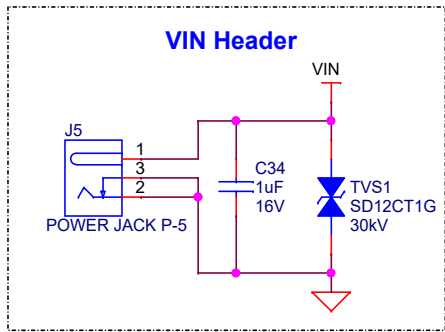
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Page Title : Functional Block Diagram

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Power Supply Section





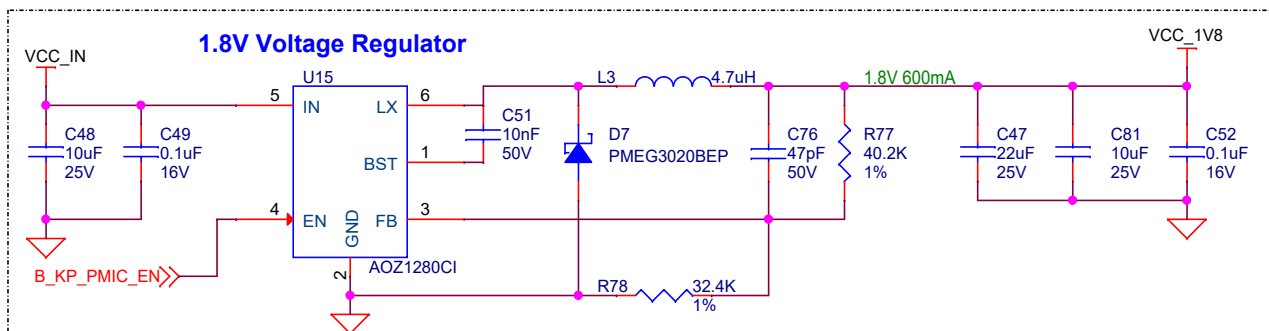
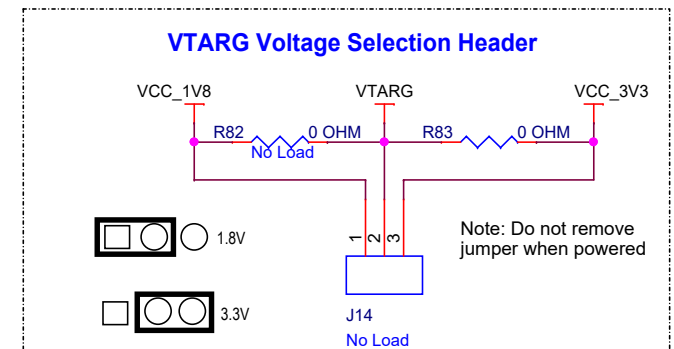
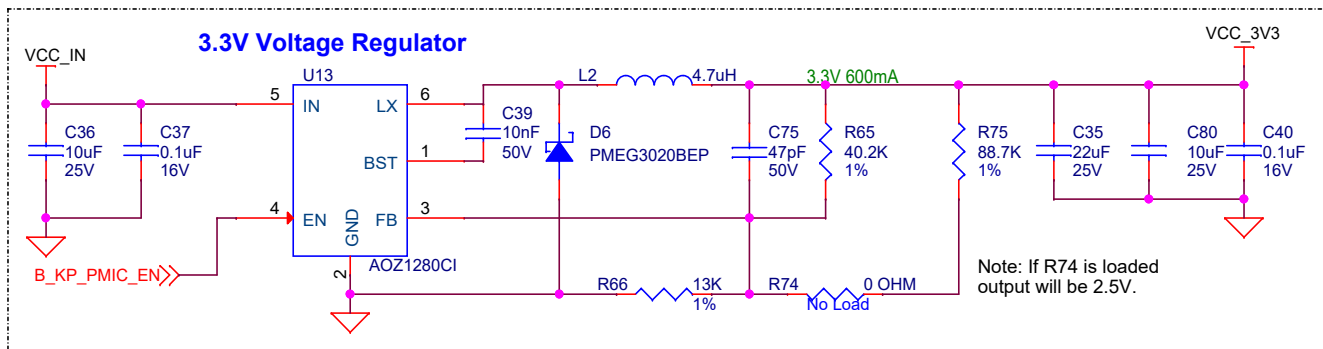
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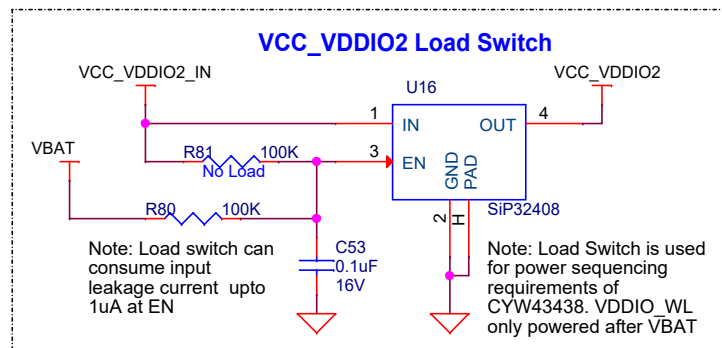
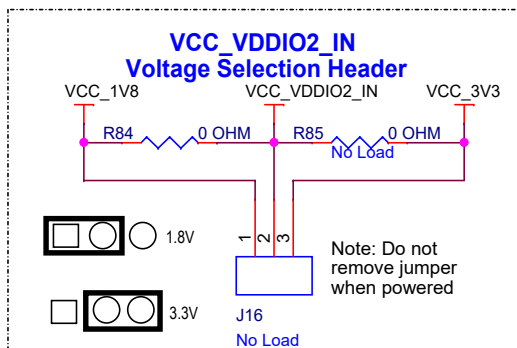
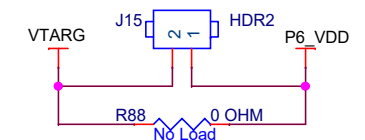
SCH Title : CYW9-BASE-01 Pioneer Baseboard

Page Title : Power Supply (1)

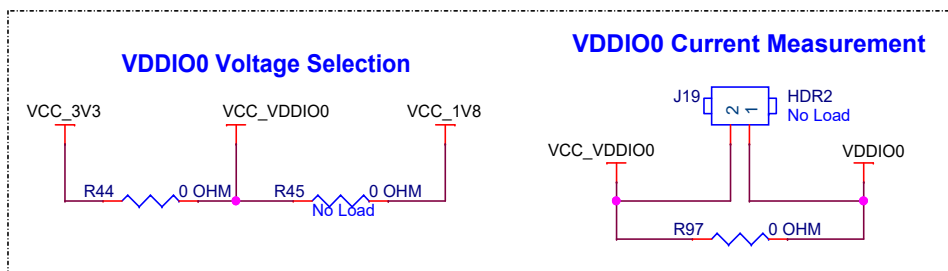
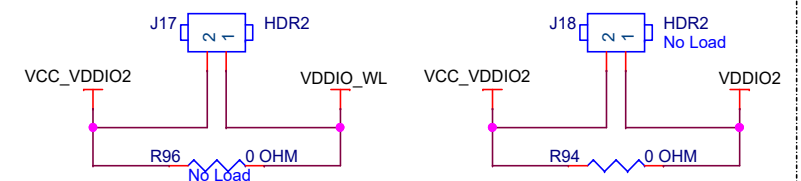
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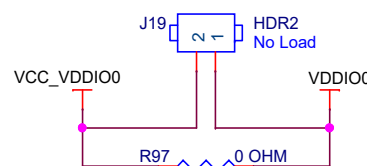
P6_VDD Current Measurement



VDDIO_WL & VDDIO2 Current Measurement



VDDIO0 Current Measurement



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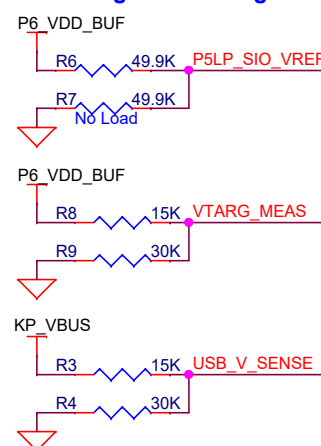
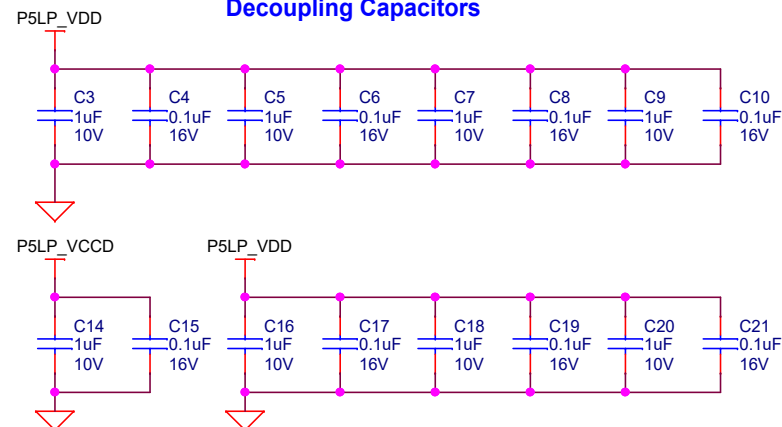
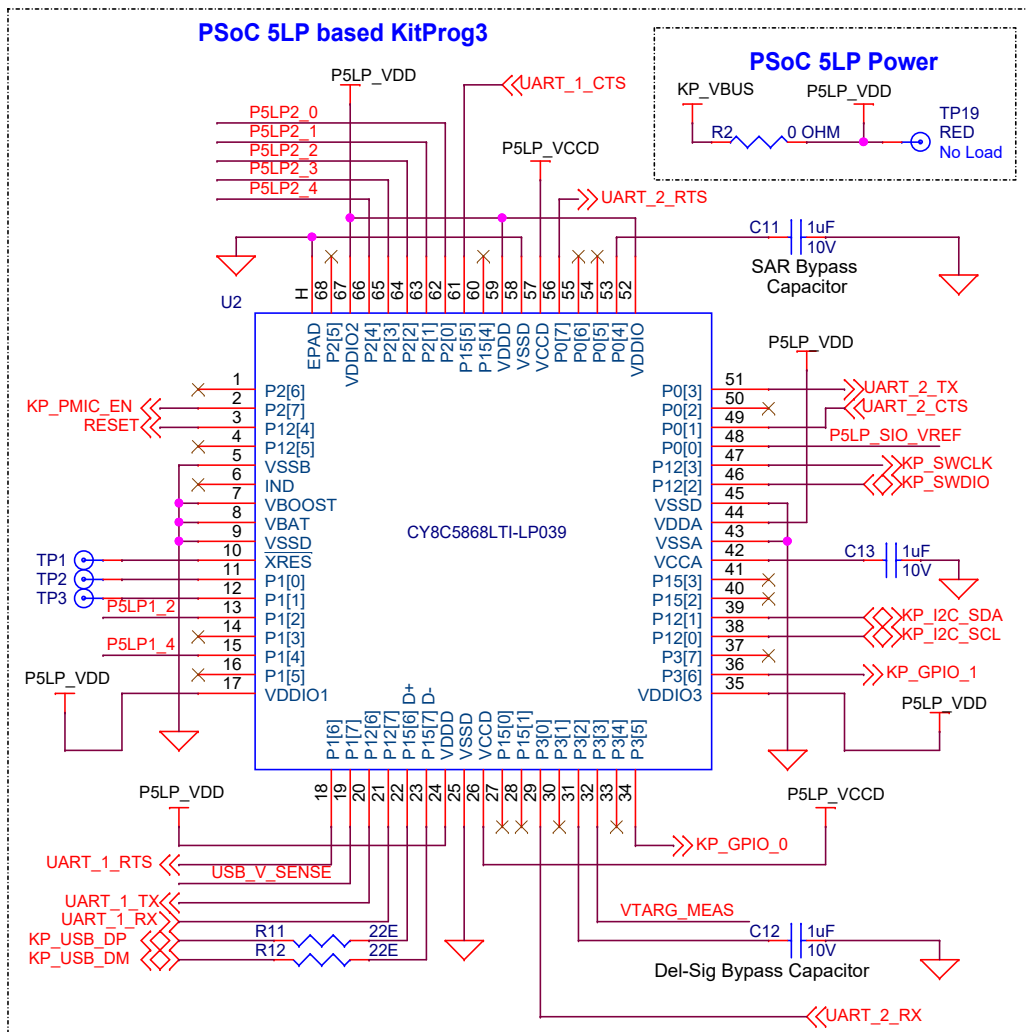
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Page Title : Power Supply (2)

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PMIC Enable Buffer

P5LP_VDD

R131 100K

0.1uF C78 16V

U21

2 A VCC

1 NC GND

4 Y

KP_PMIC_EN

B_KP_PMIC_EN

74AHC1G07GV,125

The schematic diagram illustrates the internal circuitry of the UART1 module. It features two 74LVC1T45DW-7 comparators, U9 and U10. Comparator U9 is configured to compare the UART_1_RTS signal (input 3, via resistor R135 and 100K pull-up) against a 16V reference voltage (input 5, via capacitor C25). Its output (pin 2) is B_UART_1_RTS. Comparator U10 compares the UART_1_CTS signal (input 3, via capacitor C29) against a 16V reference voltage (input 5, via capacitor C28). Its output (pin 2) is B_UART_1_CTS. Both comparators are powered by P5LP_VDD and P6_VDD_BUF, with decoupling capacitors C26 and C28. The output signals B_UART_1_RTS and B_UART_1_CTS are shown as red arrows indicating signal flow.



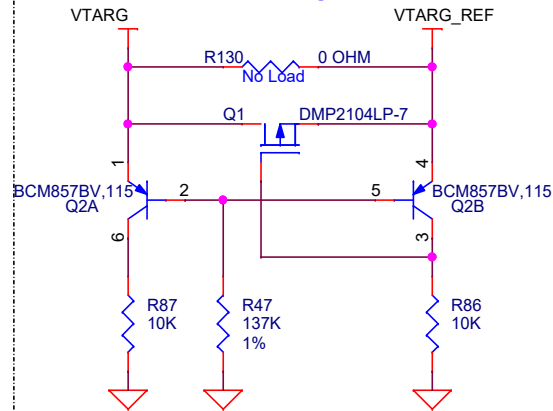
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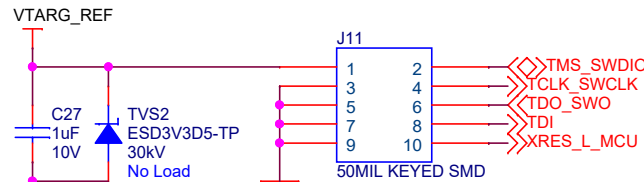
VTARG Reverse Voltage Protection



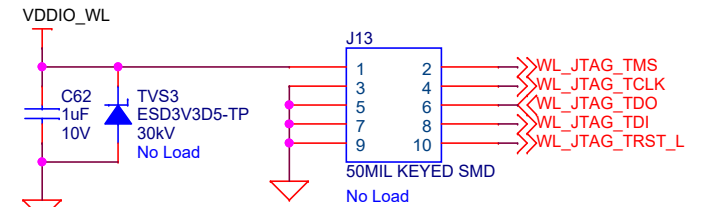
Note: VTARG_REF is only output voltage sense line for external debuggers. PSoC 6 can't be powered using external debugging headers J11 and J12

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

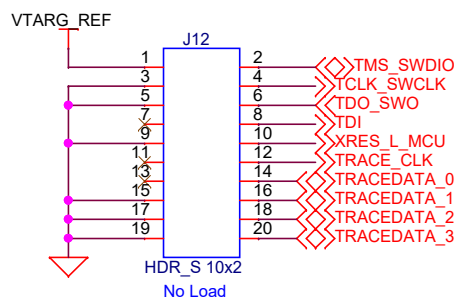
MCU 10-pin SWD/JTAG Header



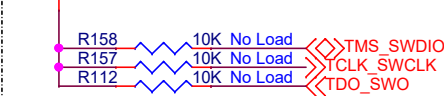
CYW43438 10-pin SWD/JTAG Header



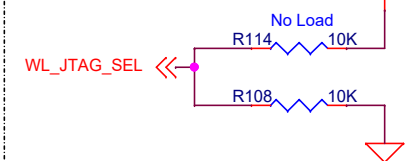
MCU 20-pin ETM Header



MCU JTAG Pull-ups



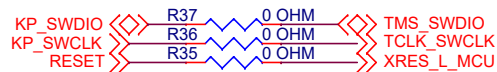
JTAG SEL Selection



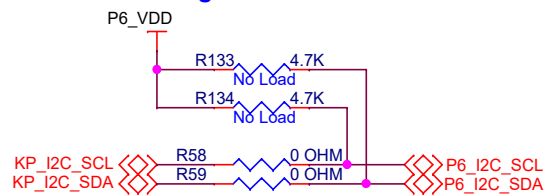
WL JTAG Pull-ups



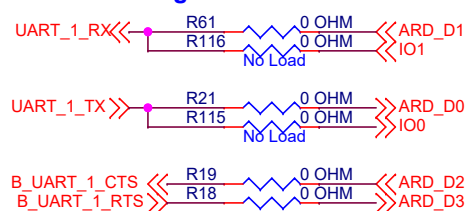
MCU SWD KitProg3 Interface



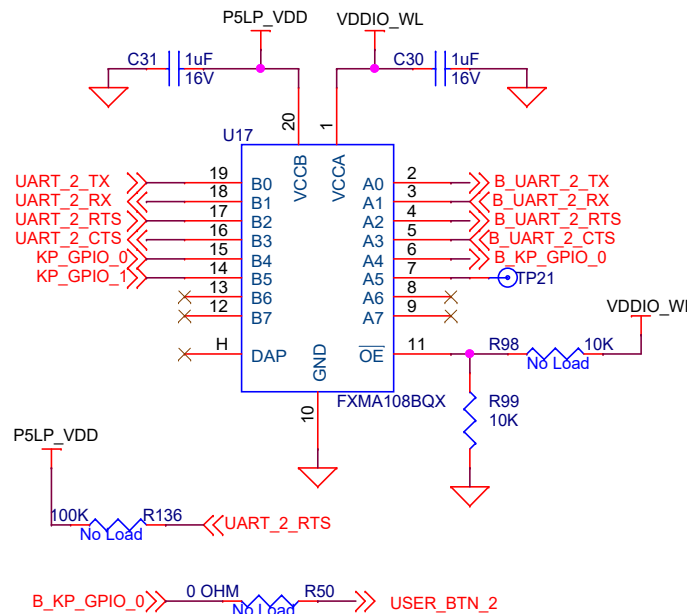
KitProg3 I2C Interface



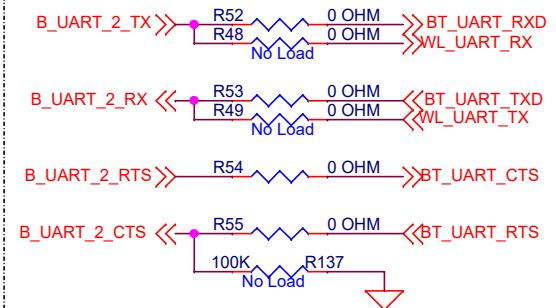
KitProg3 UART Interface



KitProg3 Level Translator for Secondary UART and GPIO



KitProg3 Secondary UART Multiplexing



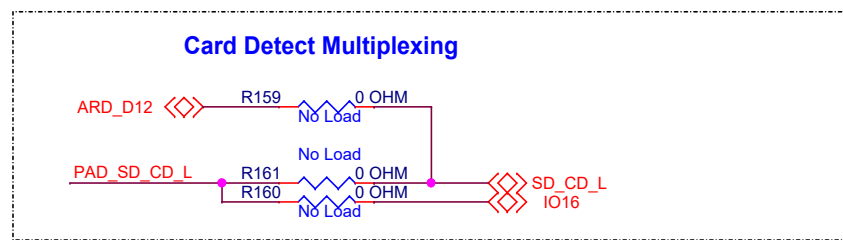
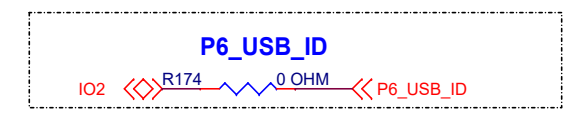
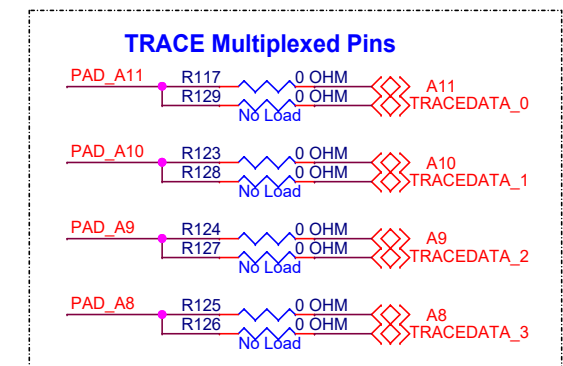
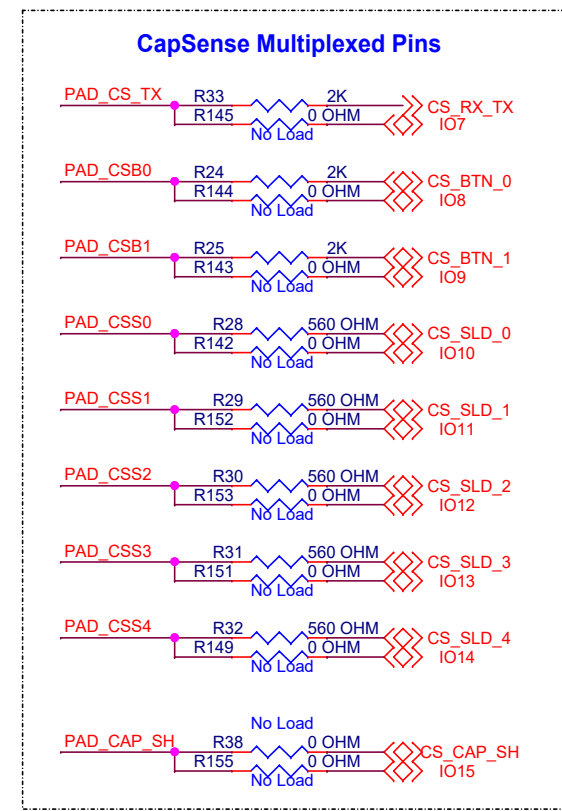
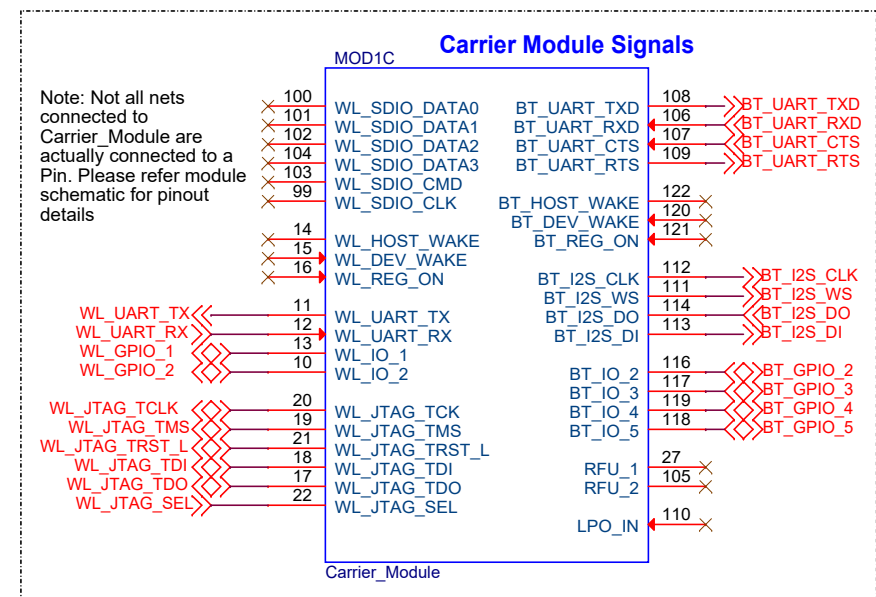
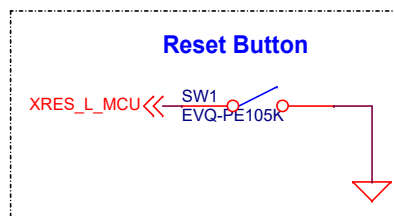
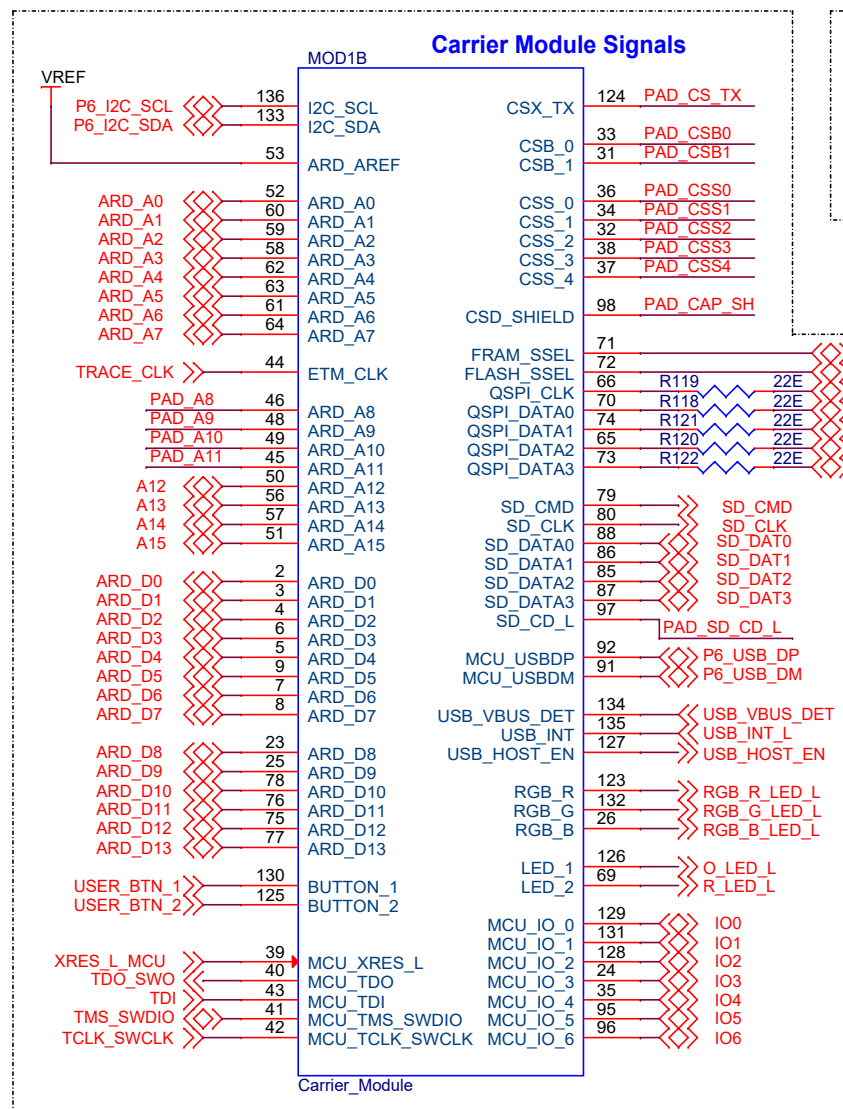
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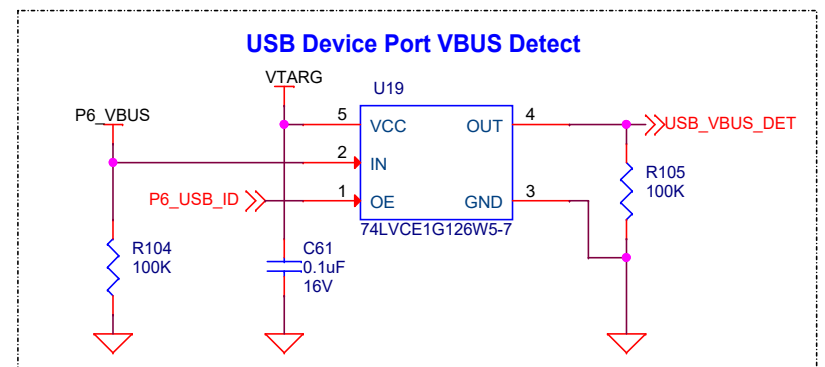
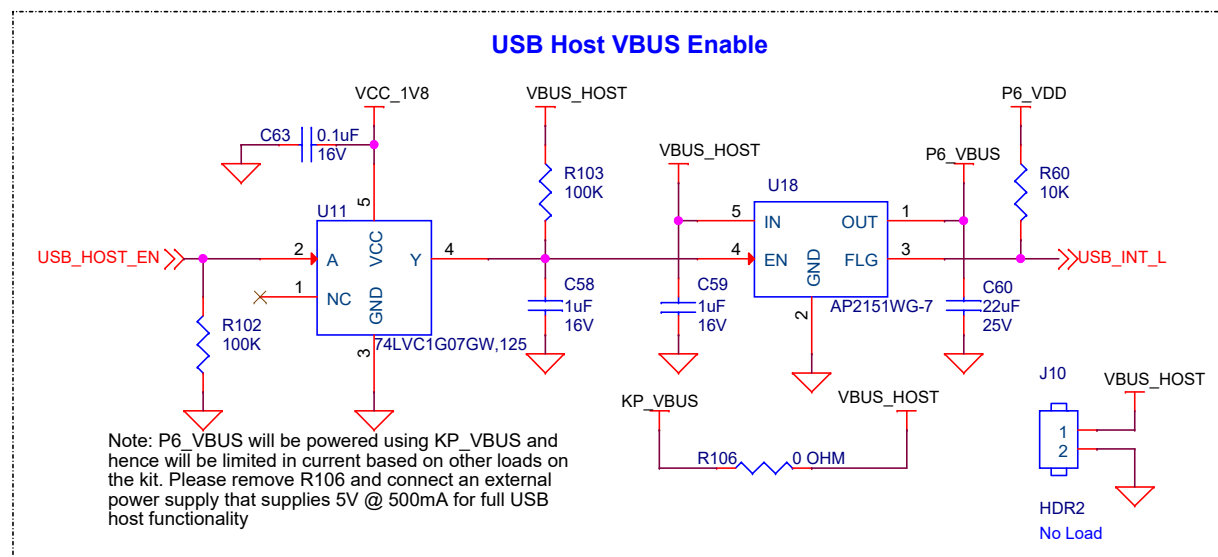
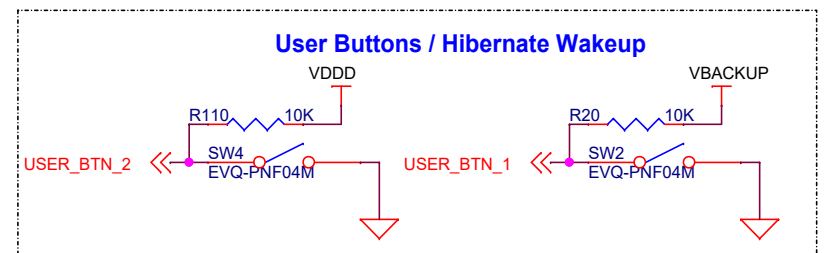
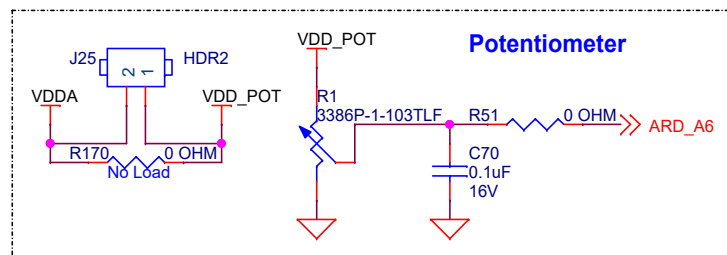
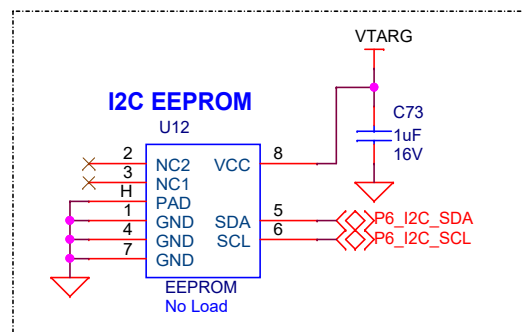
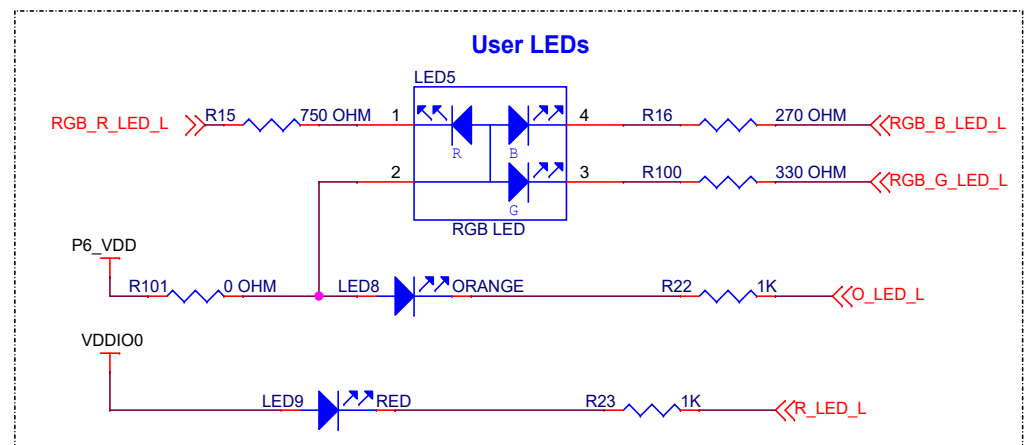
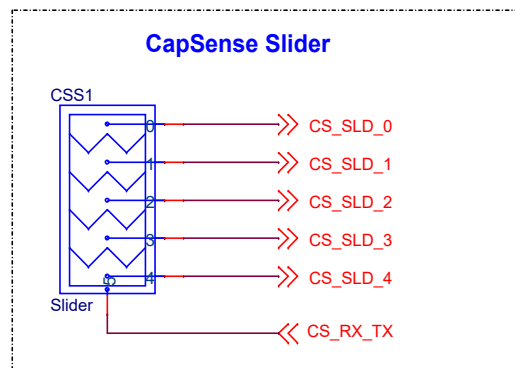
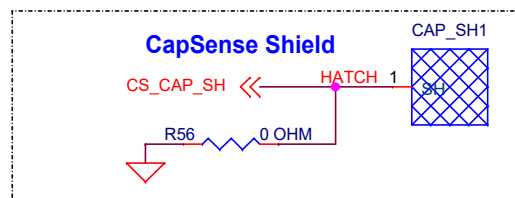
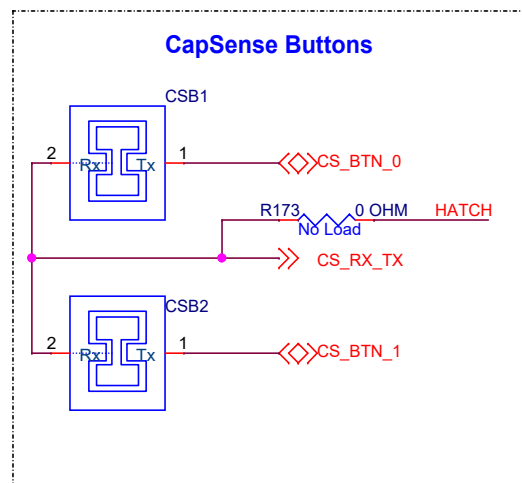
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Arduino and Extended Headers

The diagrams illustrate the following connections:

- Power and Ground:** VIN is connected to the 5V pin of header J1. The 5V pin of J1 is connected to the 3V3 pin of header J1. The GND pin of J1 is connected to the GND pin of header J1.
- Digital I/O:** ARD_D0-ARD_D13 are connected to the digital pins of headers J2, J3, J4, and J23. ARD_D0-ARD_D7 are connected to the digital pins of headers J2 and J4. ARD_D8-ARD_D13 are connected to the digital pins of headers J3 and J4.
- Analog I/O:** ARD_A0-ARD_A7 are connected to the analog pins of header J2.
- Specialized Modules:**
 - BT Module:** BT_I2S_CLK, BT_I2S_WS, BT_I2S_DO, BT_I2S_DI, BT_GPIO_2, BT_GPIO_3, BT_GPIO_4, and BT_GPIO_5 are connected to the pins of header J23.
 - WL Module:** WL_UART_RX, WL_UART_TX, WL_GPIO_1, and WL_GPIO_2 are connected to the pins of header J23.
 - RGB LEDs:** RGB_R_LED_L, RGB_G_LED_L, and RGB_B_LED_L are connected to the pins of header J24.
 - Buttons:** USER_BTN_1 and USER_BTN_2 are connected to the pins of header J21.
- Headers and Connectors:**
 - J1:** CON 8x2, No Load
 - J2:** CON 8x2, No Load
 - J3:** CON 10, No Load
 - J4:** CON 8, No Load
 - J21:** CON 10, No Load
 - J22:** CON 8, No Load
 - J23:** CON 8x2, No Load
 - J24:** CON 3x2, No Load

VCC_VDDIO0

FRAM_VDD

R109 0 OHM

TP10

Quad SPI F-RAM

FRAM_VDD

R113 10K

FRAM_SS_L

QSPI_IO1

QSPI_IO2

U4

1

2

3

4

CS

SO/IO1

WP/IO2

VSS

VDD

RESET/I/O3

SCK

SI/I/O0

8

7

6

5

QSPI_IO3

QSPI_SCK

QSPI_I/O0

FRAM_VDD

C69 0.1uF 16V

CY15B104QSN

[illegible]

Arduino Header O/P

Diagram illustrating the connection of the SiP32408 module to the Arduino Header Output (O/P).

The module (U14) is connected to the header pins as follows:

- Pin 1: IN (VCC_3V3)
- Pin 2: H (GND)
- Pin 3: EN (GND PAD)
- Pin 4: OUT (J1_3V3)

The module (U8) is connected to the header pins as follows:

- Pin 1: IN (KP_VBUS)
- Pin 2: H (GND)
- Pin 3: EN (GND PAD)
- Pin 4: OUT (J1_5V0)

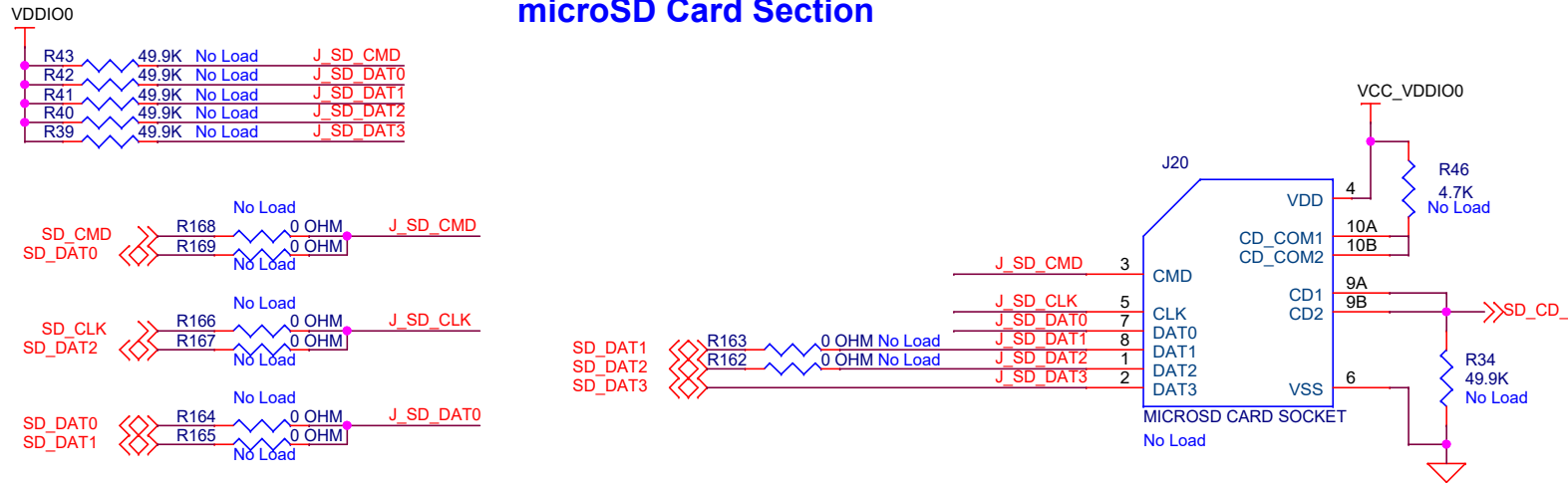
Note: 5V on Arduino Header will be present only when KitProg3 USB is connected



Note: 5V on Arduino Header will be present only when KitProg3 USB is connected

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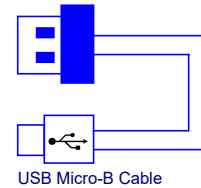
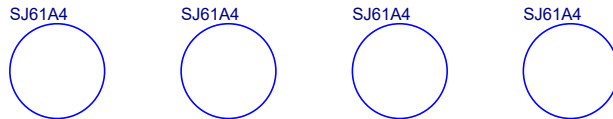
microSD Card Section



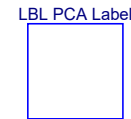
Note: Load R165, R167 and R169 and remove R162, R163, R164, R166 and R168 to change from SDHC to SPI interface for microSD card

Accessories

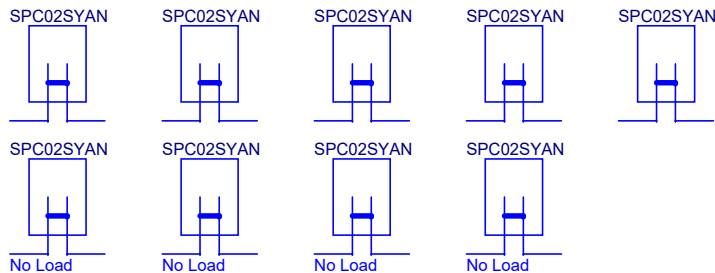
Cylindrical Bump-ons



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



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