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

CYW9-BASE-01 Pioneer Baseboard

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Power Supply Section

- **Note:** Buck regulator can supply up to 1.2A, current mentioned here is estimated requirement.

- **Note:** When using only VIN to power the board, 5V will not be available.

- **Note:** USB, Flash and SD card will not work when 0 Ohm resistor for 2.5V is populated.

- **Note:** Even when Core Voltage is 1.8V, QSPI Flash, SD card will work as it is powered by VCC_3V3.
**Current Measurement**

- **VIN Header**
  - J5 POWER JACK P-5
  - C4 1μF 16V
  - TVS1 ESD12V33C-TP
  - 30kV

- **PSoC 64 MCU USB Host/Device Micro-B connector**
  - J7 10118194-0001LF
  - R7 100K
  - P6_USB_DM
  - P6_USB_DP
  - P6_USB_ID
  - P6_VBUS

- **KitProg3 USB Micro-B connector**
  - J6 10118194-0001LF
  - U5 100K
  - C1 1μF 10V
  - C2 0.1μF 10V
  - R7 200 OHM
  - No Load

**Power Supply 'OR'ing**

- **Power Supply (1)**
  - D3 PMEG3020BEP
  - D1 PMEG3020BEP
  - D2 PMEG3020BEP
  - TP3 RED No Load

**VBAT Voltage Regulator**

- C4 10nF 50V
- C45 10nF 50V
- U7 AOZ1080C
- L1 3.6V 1A
- R7 100K
- R3 10K
- R6 1K
- R5 1K
- R4 1K
- R2 1K
- R1 1K

**Note:** 1.8V is not a valid operating voltage on this kit.
3.3V Voltage Regulator

VTARG Voltage Selection Header

1.8V Voltage Regulator

P6_VDD Current Measurement

VCC_VDDIO2_IN Voltage Selection Header

VCC_VDDIO2 Load Switch

VDDIO0 Voltage Selection

VDDIO0 Current Measurement

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.

Note: Do not remove jumper when powered

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

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

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

Note: Do not remove jumper when powered
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.

KitProg3 I2C Interface

KitProg3 UART Interface

KitProg3 Level Translator for Secondary UART and GPIO

KitProg3 Secondary UART Multiplexing

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.
CapSense Buttons

CapSense Shield

CapSense Slider

User LEDs

User Buttons / Hibernate Wakeup

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.
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.

Cylindrical Bump-ons
- SJ61A4
- SJ61A4
- SJ61A4
- SJ61A4

Jumper Shunts
- 60000213421
- 60000213421
- 60000213421
- 60000213421

Accessories
- Cylindrical Bump-ons
- Usb Micro-B Cable
- PCBA Label
- Acrylic Overlay

Color: Clear, Transparent
Dimensions: 45.21mm - length
36.00mm - height
1mm - thickness
<table>
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<th>DESCRIPTION OF CHANGE</th>
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<tr>
<td>01</td>
<td>Initial Internal Release</td>
<td>2019/05/13</td>
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| 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 |