PSoC® 6 B

CY8CKIT-02
E-INK DISPLA

GND
J16
USB PD
OUT
CHARGE LED6
PD OUTLED7
CYPD3125-40LQXI
A1
J10
A12
KITPROG2 USB

J8   2 PSoC SLP I/Os

PSLP	NC
VDD	
15.1	0.1
15.2	12.0
15.3	
12.5	12.1
3.4	3.5
12.7	12.6
3.6	GND
SWDIO	15.4
SWDCLK	1.6
RST	0.7
GND	0.3
PSLP	0.2
VDD	

VCC 5V
SW3
MODE SELECT
KITPROG_STATUS LEDs
LED2
LED1
LED4
POWERLED J18
SW4
CUSTOM APP   PMOD J14

(SCL)1.0   (SDA) VREF   (GND) GND   D(1)1.2
D(1)1.2

E UI Instru
ons:
n - Adv
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- Dis

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CY8C5868LTI-LP039
CY8CKIT-062-BLE
PSoC 6 BLE PIONEER BOARD

RST
SW1

- Disconnected
for 20 second
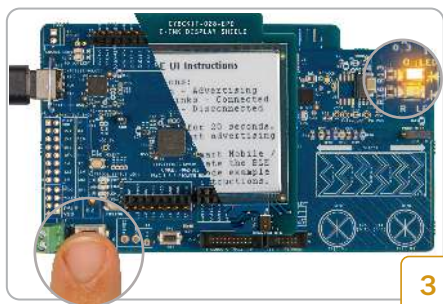art advertisi

Smart Mobile
uate the BL
ode example
structions

- Power the board by connecting it to your PC using
  provided USB cable through USB connector (J10)

- The E-INK display will now refresh and show the
  instructions to evaluate the pre-programmed code
  example: CE220167 - PSoC 6 BLE with User Interface

CYPRESS
CySmart
Bluetooth

CySmart™

Cypress Semiconductor Inc.

3+

INSTALL

10	4.3		
THOUSAND	★★★★★		
Downloads	71 ±	Tools	Similar

CySmart™ is a Bluetooth® Low Energy utility
developed by Cypress Semiconductor.

1

- Install the CySmart mobile application on your iOS or
  Android device from App Store℠ or Google Play™ store
 respectively

PSoC® 6 BLE PIONEER KIT

3

- After power up, BLE will advertise for 20 seconds. The orange LED (LED8) remains on during this period to indicate the BLE advertising state
- If the BLE advertisement has timed out (LED8 is off), press SW2 to restart advertisement


4

- Turn on Bluetooth on your mobile device and then open the CySmart application
- CySmart will list the "PSoC 6 BLE UI" Peripheral. Connect to the "PSoC 6 BLE UI" Peripheral
- A successful connection is indicated by orange LED (LED8) continuously blinking at half second intervals
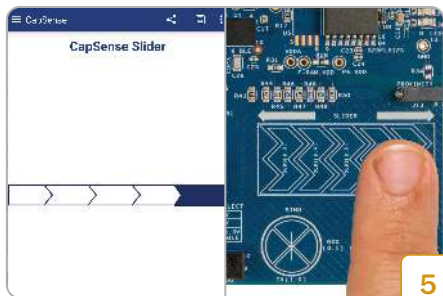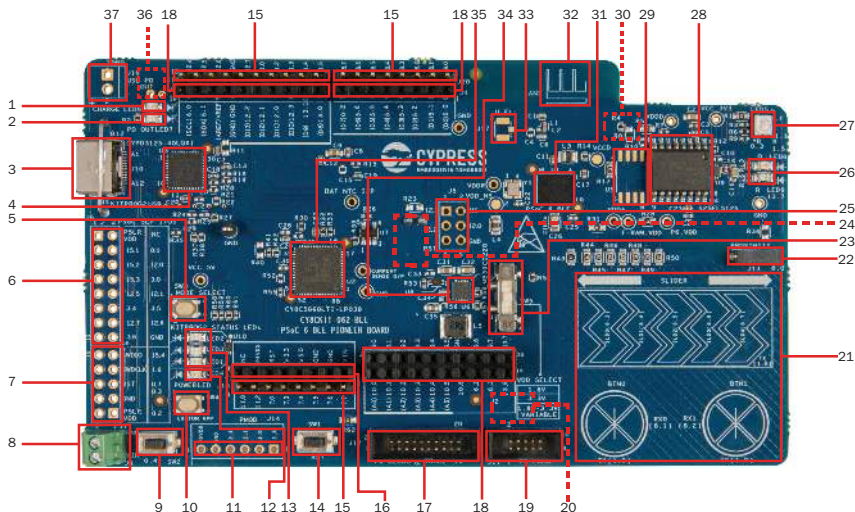

5

- When connected, the CySmart mobile application will list the services supported by the Peripheral. Scroll and select the CapSense Slider service
- Swipe your finger on the CapSense slider on the board and see a similar response on the CapSense Slider page in the CySmart application
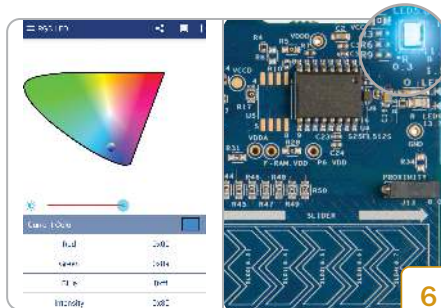
6

- Press the back button to return to the service selection page. Scroll and select the RGB LED service
- On the RGB LED service page, select a color on the color gamut to see a similar color response from the on-board RGB LED (LED5)
- For instructions to evaluate the additional features of this example, install the PSoC 6 BLE Pioneer Kit software and refer to the code example: CE220167 - PSoC 6 BLE with User Interface
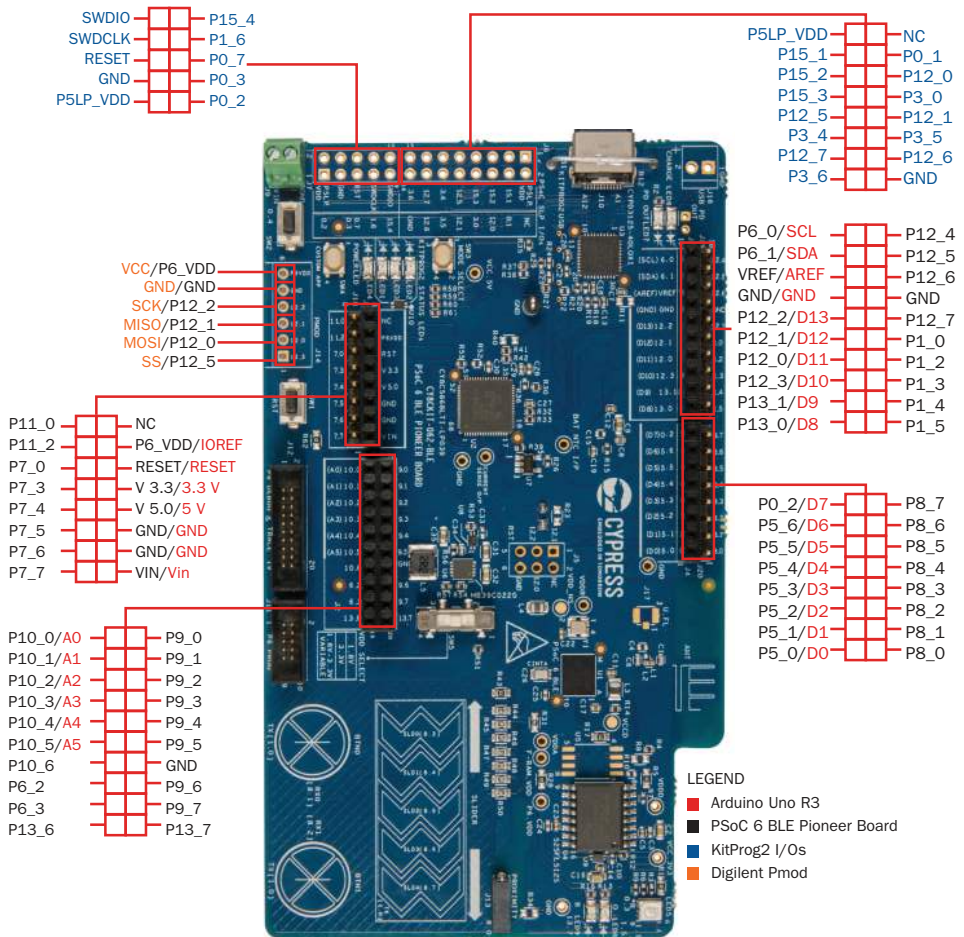
PSoC 6 BLE Pioneer Board Details

1. Battery charging indicator (LED6)
2. USB PD output voltage availability indicator (LED7)
3. KitProg2 USB connector (J10)
4. Cypress EZ-PD™ CCG3 Type-C Port Controller with PD (CYPD3125-40LQXI, U3)
5. KitProg2 programming mode selection button (SW3)
6. KitProg2 I/O header (J6)[1]
7. KitProg2 programming/custom application header (J7)[1]
8. External power supply connector (J9)
9. PSoC 6 BLE user button (SW2)
10. KitProg2 application selection button (SW4)
11. Digilent® Pmod™ compatible I/O header (J14)[1]
12. Power LED (LED4)
13. KitProg2 status LEDs (LED1, LED2, and LED3)
14. PSoC 6 BLE reset button (SW1)
15. PSoC 6 BLE I/O header (J18, J19 and J20)
16. Arduino™ Uno R3 compatible power header (J1)
17. PSoC 6 BLE debug and trace header (J12)
18. Arduino™ Uno R3 compatible PSoC 6 BLE I/O header (J2, J3 and J4)
19. PSoC 6 BLE program and debug header (J11)
20. KitProg2 programming target selection switch (SW6)[2]
21. CapSense slider and buttons
22. CapSense proximity header (J13)
23. PSoC 6 BLE VDD selection switch (SW5)
24. PSoC 6 BLE power monitoring jumper (J8)[2]
25. Arduino™ Uno R3 compatible ICSP header (J5)[1]
26. PSoC 6 BLE user LEDs (LED8 and LED9)
27. RGB LED (LED5)
28. Cypress 512-Mbit serial NOR flash memory (S25FL512S, U4)
29. Cypress serial Ferroelectric RAM (U5)[1]
30. Vbackup and PMIC control selection switch (SW7)
31. Cypress PSoC 6 BLE (CY8C6347BZI-BLD53, U1)
32. BLE antenna
33. U.FL connector for external antenna (J17)[1]
34. Cypress main voltage regulator (MB39C022G, U6)
35. KitProg2 (PSoC 5LP) programmer and debugger (CY8C5868LTI-LP039, U2)
36. Battery connector (J15)[1,2]
37. USB PD output voltage (9V/12V) connector (J16)[1]

[1]*Footprints only, not populated on the board*
[2]*Components at the bottom side of the board*

PSoC 6 BLE Pioneer Board Pinout Details

SWDIO — P15_4
SWDCLK — P1_6
RESET — P0_7
GND — P0_3
P5LP_VDD — P0_2

P5LP_VDD — NC
P15_1 — P0_1
P15_2 — P12_0
P15_3 — P3_0
P12_5 — P12_1
P3_4 — P3_5
P12_7 — P12_6
P3_6 — GND

VCC/P6_VDD
GND/GND
SCK/P12_2
MISO/P12_1
MOSI/P12_0
SS/P12_5

P6_0/SCL — P12_4
P6_1/SDA — P12_5
VREF/AREF — P12_6
GND/GND — GND
P12_2/D13 — P12_7
P12_1/D12 — P1_0
P12_0/D11 — P1_2
P12_3/D10 — P1_3
P13_1/D9 — P1_4
P13_0/D8 — P1_5

P11_0 — NC
P11_2 — P6_VDD/IOREF
P7_0 — RESET/RESET
P7_3 — V 3.3/3.3 V
P7_4 — V 5.0/5 V
P7_5 — GND/GND
P7_6 — GND/GND
P7_7 — VIN/Vin

P0_2/D7 — P8_7
P5_6/D6 — P8_6
P5_5/D5 — P8_5
P5_4/D4 — P8_4
P5_3/D3 — P8_3
P5_2/D2 — P8_2
P5_1/D1 — P8_1
P5_0/D0 — P8_0

P10_0/A0 — P9_0
P10_1/A1 — P9_1
P10_2/A2 — P9_2
P10_3/A3 — P9_3
P10_4/A4 — P9_4
P10_5/A5 — P9_5
P10_6 — GND
P6_2 — P9_6
P6_3 — P9_7
P13_6 — P13_7

LEGEND
- Arduino Uno R3
- PSoC 6 BLE Pioneer Board
- KitProg2 I/Os
- Digilent Pmod

For the latest information about this kit, visit www.cypress.com/CY8CKIT-062-BLE

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