



## E-ink Display Shield Board CY8CKIT-028-EPD

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### Ultra-low-power Display, Sensors, and Arduino Uno Compatibility

The E-ink Display Shield Board (CY8CKIT-028-EPD) has been designed such that an ultra-low-power E-ink display, sensors and a microphone can interface with Cypress' **PSoC 4** and **PSoC 6** MCUs. It comes with the features below to enable everyday objects to connect to the Internet of Things (IoT).

- Ultra-low-power 2.7 inch E-ink Display
- Motion Sensor
- Temperature Sensor
- PDM Microphone

The E-ink Display Shield Board uses the Arduino Uno pin layout, enabling this shield board to be used with Cypress' PSoc 4 and PSoc 6 MCU based Pioneer Kits.

The table below shows the pin mapping for the PSoC 4 and PSoC 6 MCU Pioneer Kits that the E-ink Display Shield is compatible with:

| Arduino | CY8CKIT-028-EPD | <a href="#">CY8CKIT-062-BLE</a><br><a href="#">CY8CKIT-062-WiFi-BT</a> | <a href="#">CY8CKIT-046</a> | <a href="#">CY8CKIT-044</a> | <a href="#">CY8CKIT-042-BLE</a> | <a href="#">CY8CKIT-042</a> |
|---------|-----------------|--|-----------------------------|-----------------------------|---------------------------------|-----------------------------|
| D10     | SSEL            | P12[3]   | P6[3]                       | P2[7]                       | P0[2]                           | P3[4]                       |
| D11     | MOSI            | P12[0]   | P6[0]                       | P6[0]                       | P0[0]                           | P3[0]                       |
| D12     | MISO            | P12[1]   | P6[1]                       | P6[1]                       | P0[1]                           | P3[1]                       |
| D13     | SCLK            | P12[2]   | P6[2]                       | P6[2]                       | P0[3]                           | P0[6]                       |
| D2      | EPD_RST         | P5[2]  | P1[0]                       | P1[0]                       | P1[6]                           | P0[7]                       |
| D3      | BUSY            | P5[3]  | P1[1]                       | P1[1]                       | P1[7]                           | P3[7]                       |
| D4      | EPD_EN          | P5[4]  | P1[2]                       | P1[2]                       | P1[3]                           | P0[0]                       |
| D5      | DISCH           | P5[5]  | P1[3]                       | P1[3]                       | P1[2]                           | P3[5]                       |
| D6      | BORDER          | P5[6]  | P5[6]                       | P5[3]                       | P1[1]                           | P1[0]                       |
| D7      | IO_EN           | P0[2]  | P5[5]                       | P5[5]                       | P1[0]                           | P2[7]                       |
| A0      | THER_VDD        | P10[0]   | P2[0]                       | P2[0]                       | P3[0]                           | P2[0]                       |
| A1      | THER_OUT        | P10[1]   | P2[1]                       | P2[1]                       | P3[1]                           | P2[1]                       |
| A2      | THER_OUT        | P10[2]   | P2[2]                       | P2[2]                       | P3[2]                           | P2[2]                       |
| A3      | THER_GND        | P10[3]   | P2[3]                       | P2[3]                       | P3[3]                           | P2[3]                       |
| A4      | PDM_CLK         | P10[4]   | P2[4]                       | P2[4]                       | P3[4]                           | P2[4]                       |
| A5      | PDM_DATA        | P10[5]   | P2[5]                       | P2[5]                       | P3[5]                           | P2[5]                       |
| SCL     | I2C_SCL         | P6[0]  | P4[0]                       | P4[0]                       | P3[5]                           | P4[0]                       |
| SDA     | I2C_SDA         | P6[1]  | P4[1]                       | P4[1]                       | P3[4]                           | P4[1]                       |

Code Example in PSoC Creator for the E-Ink Display Shield Board (CY8CKIT-028-EPD)

| Project   | Development Platform   | Description  |
|---|--|--|
| CE218133 PSoC 6 MCU E-Ink Display with CapSense | CY8CKIT-062-BLE & CY8CKIT-062-WiFi-BT kit with PSoC Creator 4.2 software | This code example show how to create a user-interface design using an E-Ink display and CapSense |

**Kit Contents:**  
E-ink Display Shield