

PSOC™ Edge E84 HMI Kit

KIT_PSE84_HMI

Kit contents

1. PSOC™ Edge E84 HMI Kit

2. USB-C to USB-C cable





- 1 Connect the PSOC™ Edge E84 HMI Kit to a PC using the KitProg3 USB Connector (J1)

Before you start:

1. Connect a USB-C cable to the KitProg3 USB connector, and connect the other end to a USB port on a PC.
2. Verify that the BOOT switch (SW5) is in the **ON** position.
3. Update the kit to the latest firmware using the tool: devkit.infineon.com

Run the pre-programmed demo

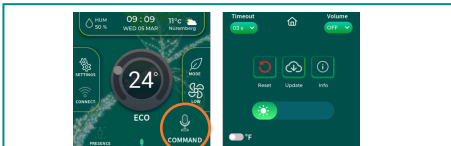
1. Press the MCU reset button (SW1) and observe the boot-up screen on the display.
2. Observe the Thermostat user interface and evaluate the features of this demo application.



- 2 Use the touch screen display to adjust Thermostat settings and explore the user interface

GUI and touch screen

- Interact with the Thermostat application using the touchscreen. Use the on-screen controls to set the target temperature, adjust the fan speed or mode, and observe the simulated thermostat operation.



- 3 Trigger Voice Assistant with: Okay Thermostat and explore voice commands

Voice commands

- Use the wake-word phrase “**Okay Thermostat**” to trigger the voice assistant, indicated by the **BLUE LED**, and issue voice commands, such as “**Go to settings**” or “**Decrease temperature by two degrees**”. Tap the “**COMMAND**” icon to view additional commands to try



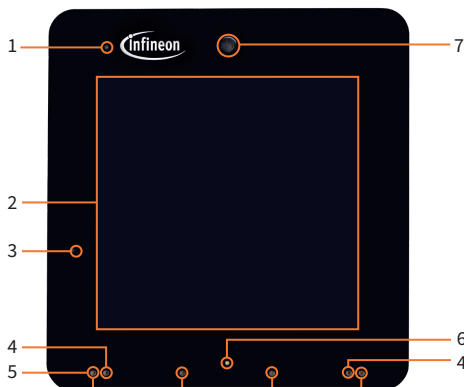
- 4 Observe radar-based presence detection with automatic idle and active screen transitions

Presence detection

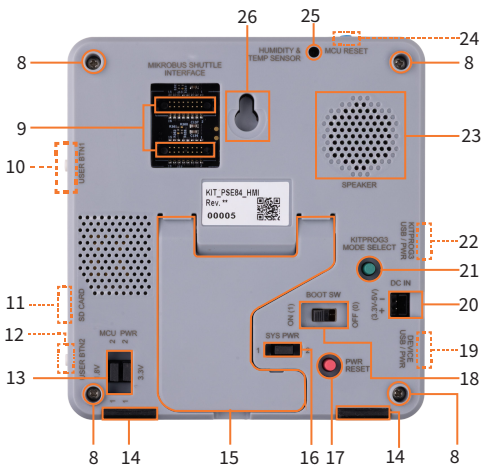
- Observe the radar-based presence detection by moving more than 1 meter away from the kit and observe that the dimming of the “**PRESENCE**” icon dims to indicate the change in detection. After a period of inactivity, the kit enters the idle state, and the screen dims. Approach the kit again to observe the display return to the active state, and the “**PRESENCE**” icon brightens to indicate detected presence.

PSOC™ Edge E84 HMI kit details

Top view



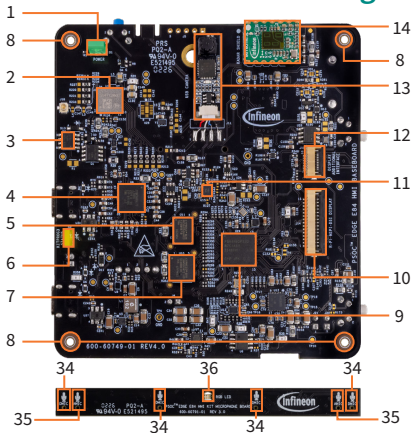
Bottom view



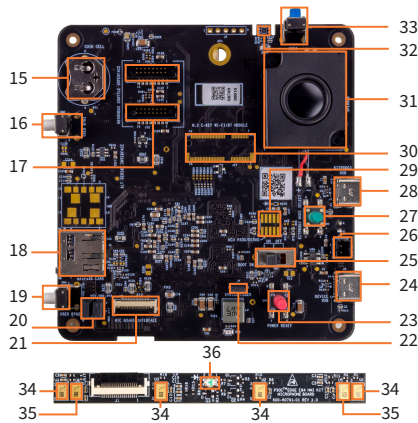
- | | |
|---|--|
| 1 Power LED | 13 PSOC™ Edge E84 MCU power monitoring headers |
| 2 3.95-inch Raspberry Pi compatible MIPI-DSI capacitive touch TFT LCD | 14 Kit rubber pad |
| 3 KitProg3 status LED | 15 Kit stand |
| 4 Analog microphones | 16 System power monitoring header |
| 5 PDM microphones | 17 System power reset switch |
| 6 RGB user LED | 18 BOOT configuration switch |
| 7 USB camera | 19 USB device Type-C connector |
| 8 M2 Phillips pan head machine screws | 20 External power supply VIN connector |
| 9 mikroBUS shuttle interface header by Mikroelektronika | 21 KitProg3 programming mode selection button |
| 10 PSOC™ Edge E84 MCU user button 1 | 22 KitProg3 program/debug USB Type-C connector |
| 11 MicroSD card interface | 23 Speaker |
| 12 PSOC™ Edge E84 MCU user button 2 | 24 PSOC™ Edge E84 MCU Reset button |
| | 25 Humidity and temperature sensor |
| | 26 Wall mount hook slot |

— Components on Front/Back
 - - - Components on Side

PSOC™ Edge E84 HMI board details



- 1 Power LED (D1)
- 2 CYW55513-based Murata Type 2FY radio module – LBEE5HY2FY (Murata) (U27)
- 3 Wi-Fi/Bluetooth® external antenna connector (J18)
- 4 KitProg3 (PSOC™ 5LP) programmer and debugger – CY8C5868LI-LP039 (U8)
- 5 512 Mbit Octal-SPI HYPERRAM™ – S80KS5123GABHI023 (U11)
- 6 KitProg3 status LED (D2)
- 7 1 Gbit Octal-SPI NOR flash – S28HS01GTGZBHI030 (U10)
- 8 M2 Mounting hole
- 9 PSOC™ Edge E84 MCU – PSE846GPS2DBZC4A (U29)
- 10 Raspberry Pi compatible 15-pin MIPI-DSI display connector (J14)
- 11 6-axis IMU – BMI270 (Bosch Sensortech) (U15)
- 12 10-pin Display I/O Connector (J15)
- 13 USB camera (ACC20)
- 14 XENSIV™ 60 GHz RADAR shield – BGT60TR13C
- 15 Coin cell retainer (BT1)
- 16 PSOC™ Edge E84 MCU user button 1 (SW2)
- 17 mikroBUS shuttle interface headers by Mikroelektronika (J12, J13)



- 18 MicroSD card interface (J8)
- 19 PSOC™ Edge E84 MCU user button 2 (SW4)
- 20 PSOC™ Edge E84 MCU power monitoring headers (J20, J21)
- 21 18-pin Microphone board interface connector (J22)
- 22 System power monitoring header (J4)
- 23 System power reset switch (SW6)
- 24 USB device Type-C connector (J3)
- 25 BOOT configuration switch (SW5)
- 26 External power supply VIN connector (J2)
- 27 KitProg3 programming mode selection button (SW3)
- 28 KitProg3 program/debug USB Type-C connector (J1)
- 29 PSOC™ Edge E84 MCU 10-pin SWD/JTAG program and debug header * (J6)
- 30 M.2 E-Key radio interface * (J17)
- 31 Speaker (ACC6)
- 32 Humidity and temperature sensor – SHT40-AD1B-R2 (Sensirion) (U19)
- 33 PSOC™ Edge E84 MCU reset button (SW1)
- 34 PDM microphones – IM73D122V01 (U1, U2, U3, U4)
- 35 Analog microphones – IM73A135V01XTSA1 (U5, U6)
- 36 RGB User LED (D1)

* Footprint only, not populated on the board

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