

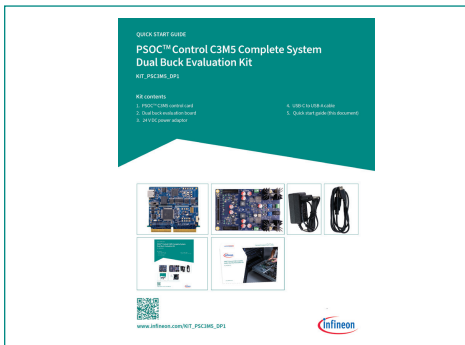
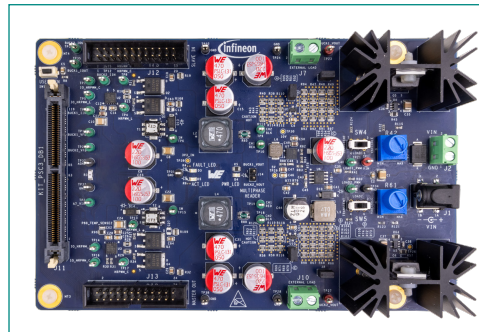
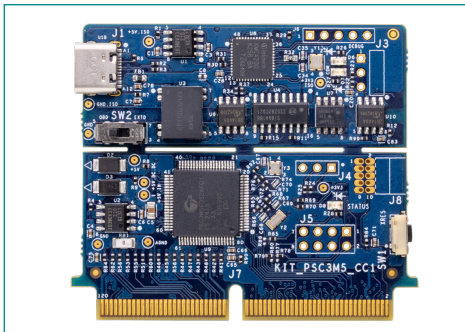
## QUICK START GUIDE

# PSOC™ Control C3M5 Complete System Dual Buck Evaluation Kit

KIT\_PSC3M5\_DP1

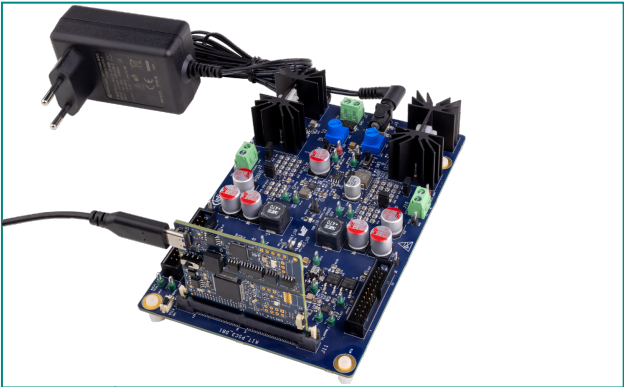
### Kit contents

1. PSOC™ C3M5 control card
2. Dual buck evaluation board
3. 24 V DC power adaptor
4. USB-C to USB-A cable
5. Quick start guide (this document)



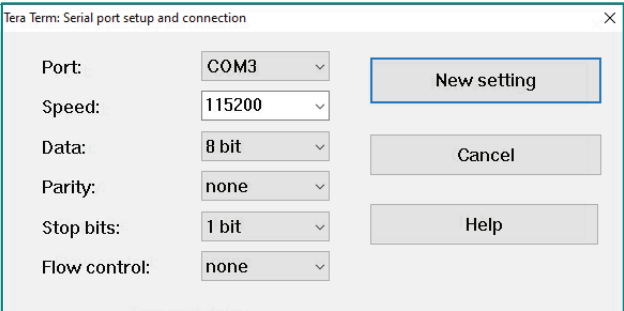
[www.infineon.com/KIT\\_PSC3M5\\_DP1](http://www.infineon.com/KIT_PSC3M5_DP1)





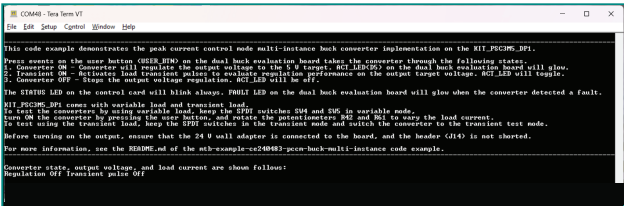
1

USB cable connected to the PSOC™ C3M5 control card USB connector



2

USB to UART COM port setup



3

UART terminal

## Before you start

1. Ensure that you have the following:
  - PC with USB-A port
  - UART terminal software such as Tera Term or PuTTY
2. Insert the PSOC™ C3M5 control card to 120-pin connector (J11) on the Dual buck evaluation board.
3. Ensure the following jumper settings on the Dual buck evaluation board.

| Jumper | Position |
|--------|----------|
| J5     | SHORT    |
| J6     | SHORT    |
| J8     | SHORT    |
| J9     | SHORT    |
| J14    | OPEN     |

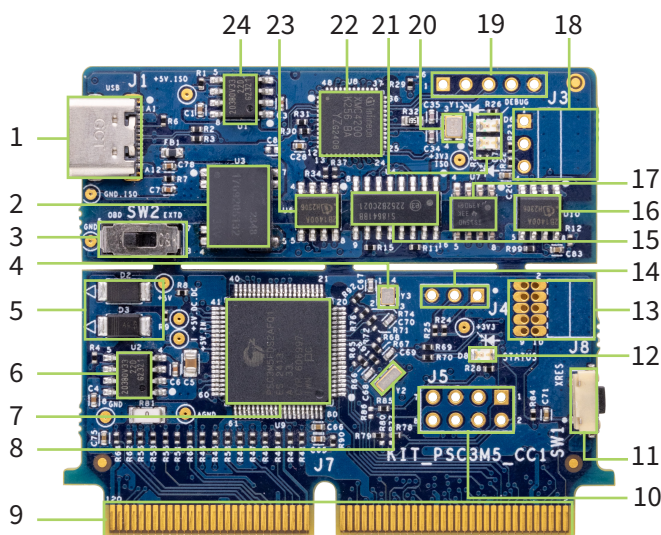
4. Set the switches (SW4, SW5) to ‘TRANSIENT’ position and the potentiometers (R42, R61) to position ‘MIN’.
5. Connect the 24 V DC power adaptor (included in the box) to barrel jack connector (J1) on the Dual buck evaluation board.
6. Connect the USB-C connector (J1) on PSOC™ C3M5 control card to the PC.

## Connect the kit with the UART terminal software

1. Open the UART terminal software and connect to the kit’s peripheral UART COM port with the following settings:
  - Baud rate: 115200, Data: 8 bit, Parity: None, Stop bit: 1 bit, Flow control: None
2. Press the reset button (SW1) on PSOC™ C3M5 control card.
3. Follow the instructions displayed on the UART terminal to use the pre-programmed code example.

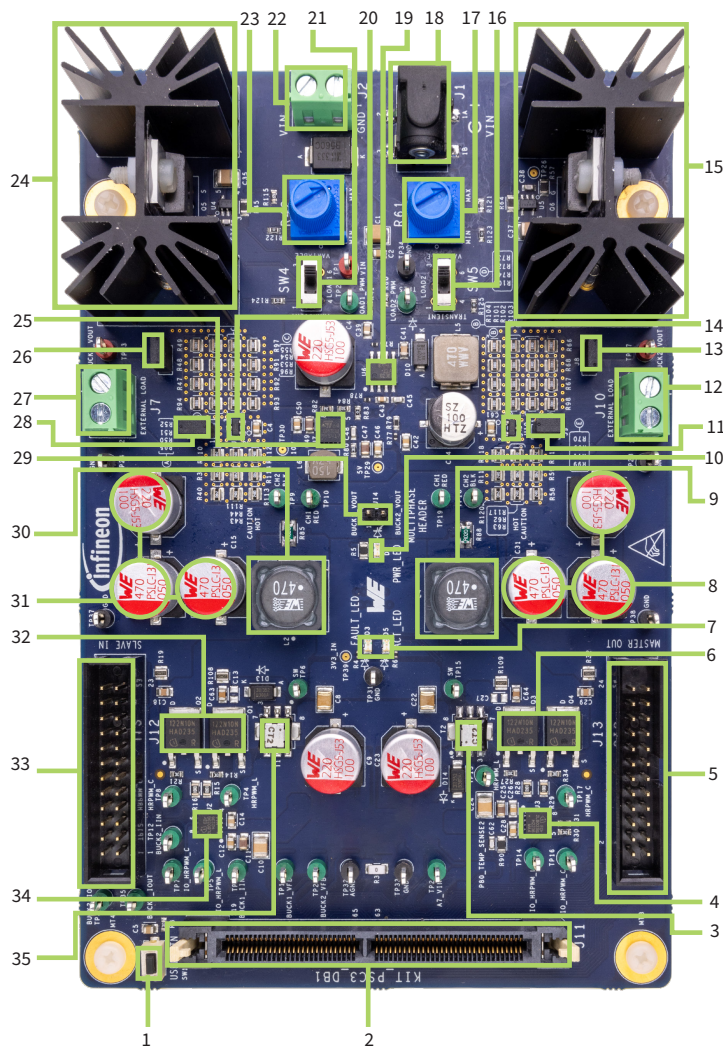
Refer to the kit guide available on the [kit website](#) for more details.

## PSOC™ C3M5 Control Card details



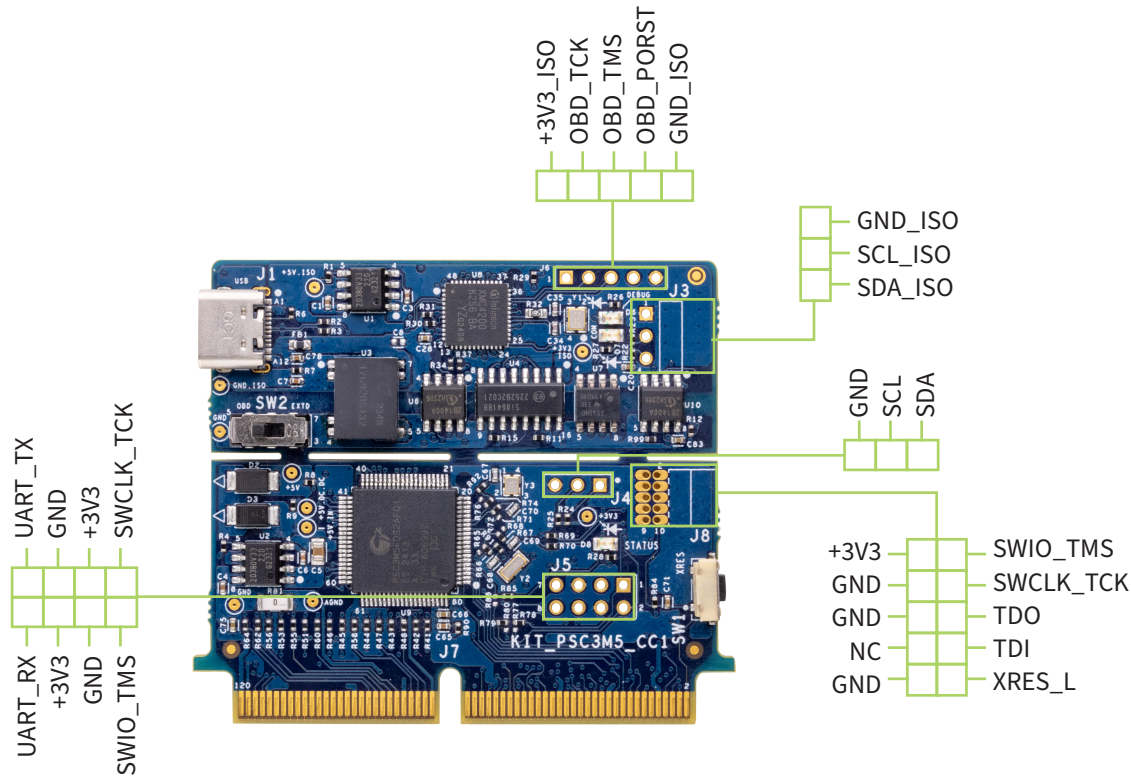
- 1 USB connector (J1)
- 2 5 V DC-DC isolator (U3)
- 3 Onboard or External debugger switch (SW2)
- 4 16MHz Crystal (Y3)
- 5 OR-ing diodes (D2 & D3)
- 6 3.3 V LDO (U2)
- 7 PSOC™ CONTROL C3M5 (PSC3M5FDS2AFQ1-U9)
- 8 32.768 KHz crystal (Y2)
- 9 120-pin connector (EDGE FINGER)
- 10 SWD & UART header (J5)
- 11 Reset button (SW1)
- 12 Status LED (D8)
- 13 SWD & JTAG header (J8)
- 14 Non-isolated I2C header (J4)
- 15 SWD digital Isolator (U4)
- 16 XRES Digital isolator (U10)
- 17 I2C digital isolator (U7)
- 18 Isolated I2C header (J3)
- 19 OBD header (J6)
- 20 12 MHz crystal (Y1)
- 21 DEBUG & COM LEDs (D6 & D7)
- 22 XMC4200 MCU (XMC4200-Q48F256 BA-U8)
- 23 UART digital isolator (U6)
- 24 Isolated 3.3 V LDO (U1)

## Dual Buck Evaluation Board details



- 1 User button (SW1)
- 2 120-pin connector (J11)
- 3 BUCK2 current transformer (T2)
- 4 BUCK2 MOSFET driver (U3)
- 5 MASTER OUT Daisy Chain connector (J13)
- 6 BUCK2 Synchronous MOSFETs (Q3, Q4)
- 7 Fault and ACT LEDs (D3, D5)
- 8 BUCK2 output capacitors (C31, C32, C33)
- 9 BUCK2 inductor (L4)
- 10 Power LED (D4)
- 11 BUCK2 static load header (J9)
- 12 BUCK2 output connector (J10)
- 13 BUCK2 dynamic load header (J8)
- 14 BUCK2 temperature sensor (U10)
- 15 BUCK2 Load MOSFET and heatsink (Q6, HS2)
- 16 BUCK2 transient and variable load switch (SW5)
- 17 BUCK2 variable load potentiometer (R61)
- 18 DC Input Voltage Barrell Jack connector (J1)
- 19 5 V buck regulator (U6)
- 20 BUCK1 temperature sensor (U1)
- 21 BUCK1 transient and variable load switch (SW4)
- 22 DC input voltage terminal connector (J2)
- 23 BUCK1 variable load potentiometer (R42)
- 24 BUCK1 Load MOSFET and heatsink (Q5, HS1)
- 25 10 V boost regulator (U7)
- 26 BUCK1 dynamic load header (J5)
- 27 BUCK1 output connector (J7)
- 28 BUCK1 static load header (J6)
- 29 Multiphase header (J14)
- 30 BUCK1 inductor (L2)
- 31 BUCK1 output capacitors (C15, C16, C19)
- 32 BUCK1 Synchronous MOSFETs (Q1 & Q2)
- 33 Slave in Daisy Chain connector (J12)
- 34 BUCK1 MOSFET driver (U2)
- 35 BUCK1 current transformer (T1)

PSOC™ C3M5 Control Card Pinout details



Dual Buck Evaluation Board Pinout details

