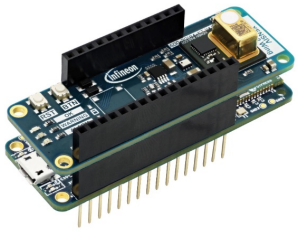

infineon CYSBSYSKIT-DEV-01 Rapid IoT Connect Developer Kit User Guide

Contents

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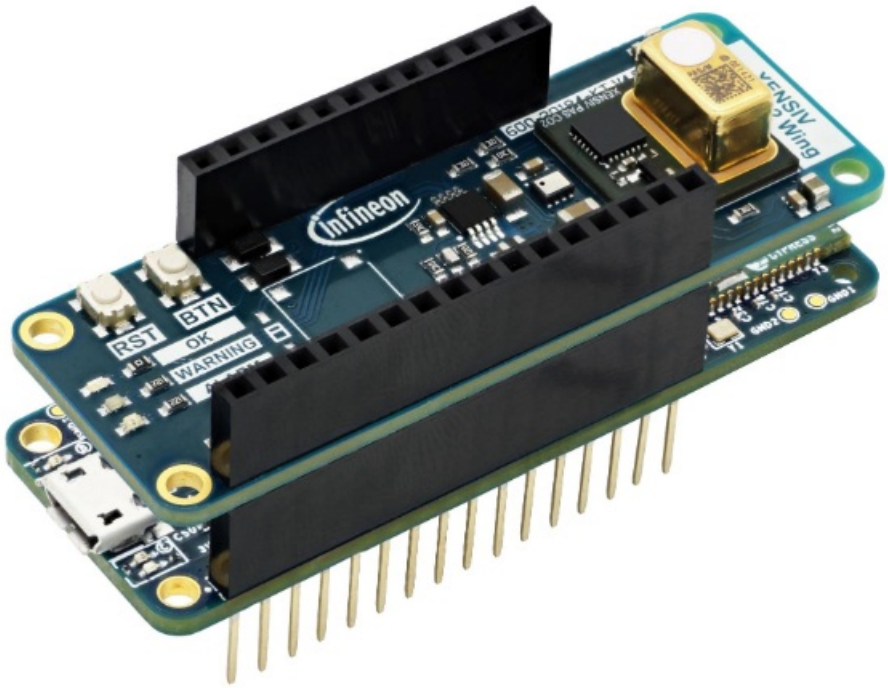


Product Information

The CYSBSYSKIT-DEV-01 Rapid IoT Connect Developer Kit is a kit that contains a CYSBSYS-RP01 system-on-module and an OPTIGATM Trust M security controller. The kit includes a board with features like a chip antenna, user button, 17.2032-MHz ECO, JTAG header, reset button, battery connector, 3.3-V regulator, Micro-B USB connector, thermistor, KitProg3 programming mode selection button, and a super capacitor (footprint only; not populated on the board). The kit is sensitive to ESD and should be held only by its stack-up headers. To avoid damage, it should be placed on a grounded, static-free surface and not slid over any surface.

Product Usage

1. Ensure that you have a JST connector (Adafruit 2750 or similar).
2. Connect the board to a PC using the USB cable provided and wait for the driver installation to complete.
3. Verify that the battery is connected and charging by checking that the corresponding LED is glowing.
4. Open a UART terminal software and connect it to the kit.
5. Press the reset button (RST_BTN) to reset the device.
6. You should see the output of the pre-loaded application (Wi-Fi scan) on the serial terminal.
7. Visit the kit website for information on Quick IoT Experience and code examples supported for this kit and kit documentation.

CYSBSYSKIT-DEV-01 Pinout:

The table below shows the pinout for the CYSBSYSKIT-DEV-01 board:

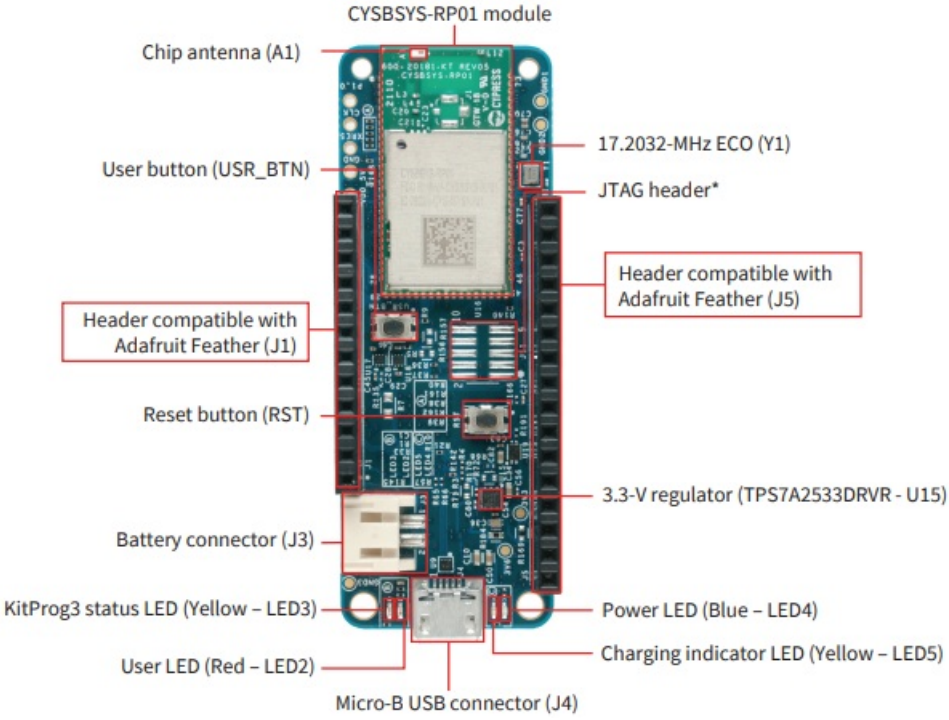
Header	Primary onboard function	PSoCTM 6 MCU pin	FeatherWings compatibility	Connection details
J1.1	VBAT			Li-Po battery supply input to turn OFF power regulators
J1.2-J1.6	EN, GPIO, GPIO, GPIO, GPIO			
J1.7-J1.8	I2C SCL, I2C SDA			
J1.9	XRES			
J1.10-J1.11			FeatherWings compatibility (SPI Clock, SPI MOSI)	
J1.12			FeatherWings compatibility (SPI MISO)	
J5.1	VDDA, VDDIO			Analog voltage for PSoCTM 6 MCU (in the Rapid IoT Connect system-on-module)
J5.2	3.3 V			
J5.3-J5.6	NC, GND, Analog, GPIO			
J5.7-J5.16	Analog, GPIO, Analog, GPIO, Analog, GPIO, Analog, GPIO, SPI Clock, SPI MOSI, SPI MISO, UART RX, UART TX, SPI CS		FeatherWings compatibility	

The USB-UART COM port setup for the serial terminal should be configured with a stop bit of 1 bit and no flow control.

Quick start guide

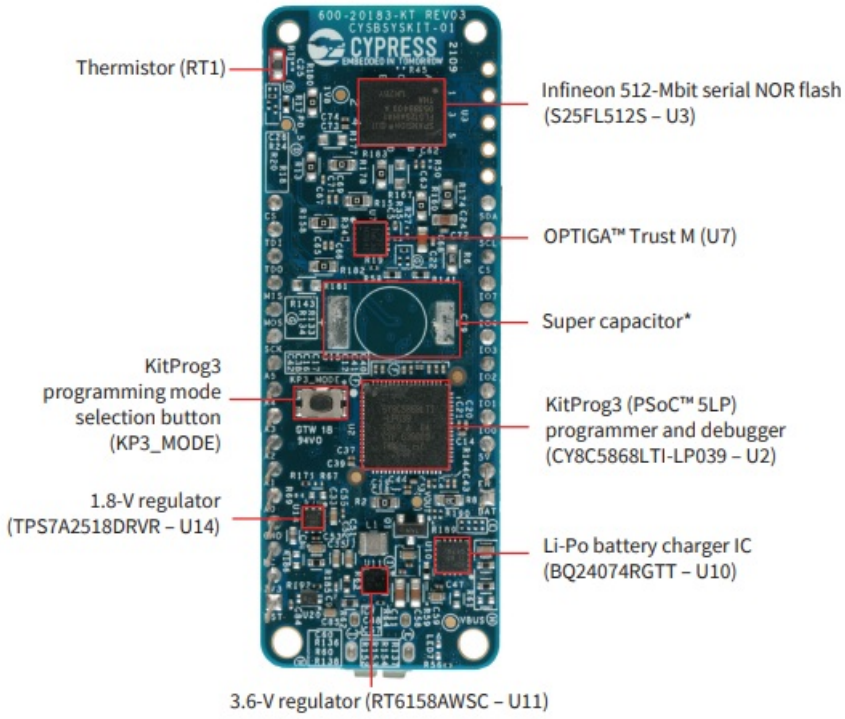
Rapid IoT Connect developer kit with CYSBSYS-RP01 system-on-module and OPTIGA™ Trust M security controller CYSBSYSKIT-DEV-01

CYSBSYSKIT-DEV-01 board top view



Kit contents
CYSBSYSKIT-DEV-01 board

CYSBSYSKIT-DEV-01 board bottom view



Footprint only; not populated on the board

IMPORTANT:
CYSBSYSKIT-DEV-01 Rapid IoT connect developer kit is sensitive to ESD. Hold the board only by its stack-up headers. After removing the board from its box, place it on a grounded, static-free surface. Use a conductive foam pad, if available. Do not slide the board over any surface.

Before you start

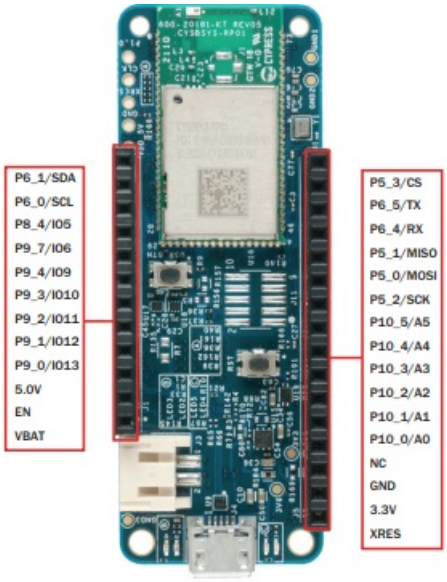
1. Ensure that you have the following:
    1. PC with USB port
    2. UART terminal software such as Tera Term or Minicom
    3. USB cable with Micro-B connector at one end
    4. (Optional) 3.7-V, 350-mAh Li-Po battery with JST connector (Adafruit 2750 or similar)
2. With the USB cable, connect the board to the PC and wait for the driver installation to complete.
3. Verify that the following LEDs glow:
    1. Power LED (Blue – LED4)
    2. KitProg3 Status LED (Yellow – LED3)
    3. Charging LED (Yellow – LED5) if the Li-Po battery is connected and charging

Connect the kit with the UART terminal software

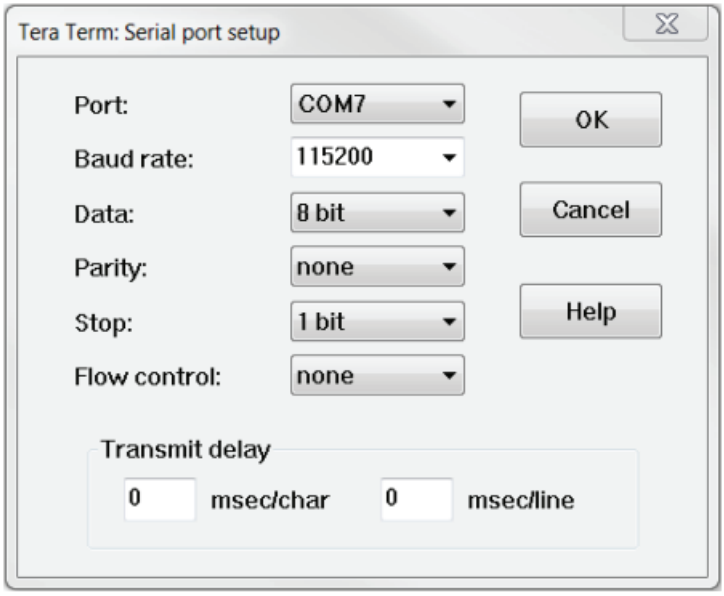
1. Open the UART terminal software and connect the kit's USB-UART COM port with the following settings:
    1. Baud rate: 115200, Data: 8 bit, Parity: None, Stop bit: 1 bit, Flow control: None
2. Press the reset button (RST_BTN) to reset the device. You should see the output of the pre-loaded application (Wi-Fi scan) on the serial terminal.

Next Steps
Visit the kit website for information on Quick IoT Experience and code examples supported for this kit and kit documentation.

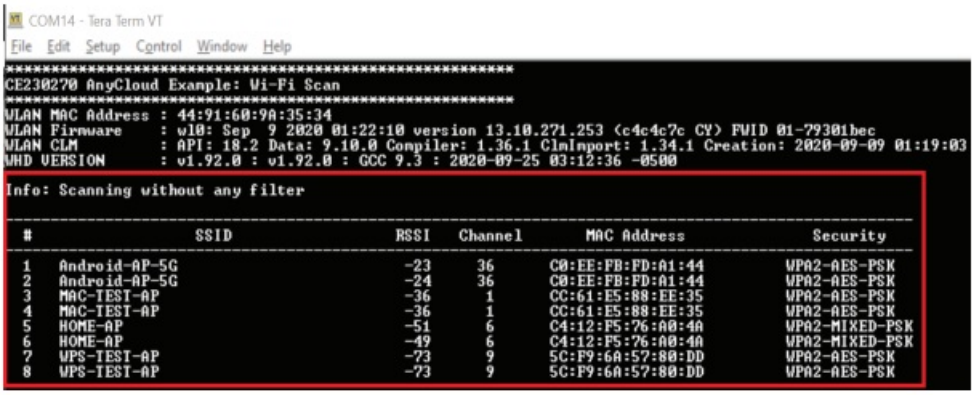
Kit with pin mapping



USB-UART COM port setup



Serial terminal

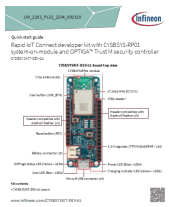


CYSBSYSKIT-DEV-01 pinout

Header	Primary onboard function	PSoC™ 6 MCU pin	FeatherWings compatibility	Connection details
J1.1	VBAT	–	–	Li-Po battery supply
J1.2	EN	–	–	Input to turn OFF power regulators
J1.3	VBUS	–	–	USB power
J1.4	GPIO	P9_0	GPIO13	–
J1.5	GPIO	P9_1	GPIO12	–
J1.6	GPIO	P9_2	GPIO11	–

J1.7	GPIO	P9_3	GPIO10	–
J1.8	GPIO	P9_4	GPIO9	–
J1.9	GPIO	P9_7	GPIO6	–
J1.10	GPIO	P8_4	GPIO5	–
J1.11	I2C SCL	P6_0	SCL	Connected to KitProg3
J1.12	I2C SDA	P6_1	SDA	Connected to KitProg3
J5.1	XRES	XRES	XRES	–
J5.2	3.3 V	VDDA, VDDIO	VCC	Analog voltage for PSoC™ 6 MCU (in the Rapid IoT Connect system-on-module)
J5.3	NC	–	–	Not connected
J5.4	GND	–	GND	–
J5.5	Analog GPIO	P10_0	A0	–
J5.6	Analog GPIO	P10_1	A1	–
J5.7	Analog GPIO	P10_2	A2	–
J5.8	Analog GPIO	P10_3	A3	–
J5.9	Analog GPIO	P10_4	A4	–
J5.10	Analog GPIO	P10_5	A5	–
J5.11	SPI Clock	P5_2	SCK	SPI clock
J5.12	SPI MOSI	P5_0	MOSI	SPI Master Out / Slave In (MOSI)
J5.13	SPI MISO	P5_1	MISO	SPI Master In / Slave Out (MISO
J5.14	UART RX	P6_4	RX	Connected to KitProg3
J5.15	UART TX	P6_5	TX	Connected to KitProg3
J5.16	SPI CS	P5_3	GPIO14	SPI Chip Select

Documents / Resources

	infineon CYSBSYSKIT-DEV-01 Rapid IoT Connect Developer Kit [pdf] User Guide CYSBSYSKIT-DEV-01, CYSBSYSKIT-DEV-01 Rapid IoT Connect Developer Kit, Rapid IoT Connect Developer Kit, IoT Connect Developer Kit, Developer Kit