



Part Number: LP-EM-CC2340R5

and visit dev.ti.com

CC5340K2

Meet the

Connect your LaunchPad to a computer

JahmqolavaC

pe_Aupune

SmartRF Studio 8
A powerful application to
evaluate radio performance.
Simpletink Sdx and
Simpletink Sdx and
Advanced software and
tutorials to easily ramp your
development with your new
LaunchPad.



Professional Software tools LaunchPads are supported by

watch variables, profile code, inspect memory and more.

capability. Set breakpoints,

features and full debug-

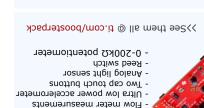
provide industrial-grade

professional IDEs that

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Software Tools





SimpleLink ULP Sense

BoosterPack

BoosterPack
- 1.28 128 x 128 pixel LCD
(LS013B7DH03)
- microSD card slot
- DCDC 3V to 5V converter

Sharp* 128x128 Memory LCD and microSD card BoosterPack



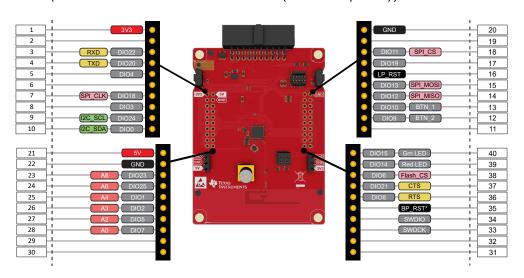
BoosterPack Ecosystem

The BoosterPack™ connector

SWRU588

INSTRUMENTS

The pinout to connect BoosterPack accessories (available separately) are shown below.



XDS110 EnergyTrace™ Technology

The LP-EM-CC2340R5 is compatible with EnergyTrace technology.

EnergyTrace implements a new method for measuring MCU current consumption. It uses a DC-DC solution to measure the time density of charge pulses, allowing accuracy on ultra low power measurements. Its high dynamic range (700 nA to 400 mA) and fast sampling rate (256 kSPS) captures the complete operational profile of the wireless MCU.

EnergyTrace Profile

EnergyTrace Profile runtime and energy data for low power modes along with each function run during Active Mode.

Graphical Power Data in Code Composer Studio

These two tabs of the EnergyTrace Technology window show a graph over time of power and energy.

Available in the LP-XDS110ET debug probe and selected LaunchPads

Find more information at ti.com/EnergyTrace

UART (DIO20, DIO22), **Reset** (LP_RST) and **JTAG** (SWCK and SWD) are also present in the LP-EM Debug Connector. Power (**GND**, **3V3** and **5V**) is also provided.

^{*}This function is not connected to the LaunchPad connector by default.

A closer look at your new LaunchPad development kit

Featured microcontroller: CC2340R5

This LaunchPad is great for...

- Battery-operated wireless applications operating in the 2.4GHz ISM RF band
- Add RF capabilities to your product using one of the supported protocols: Bluetooth[®] 5.3 Low Energy, Zigbee[®], SimpleLink[™] 15.4 stack and proprietary protocols

What comes in the box? LP-EM-CC2340R5 LaunchPad This Ouick 10-pin 2-wire Start Guide Debug Cable Power Cable CC2340R5 Microcontroller - One 24-bit and three 16-bit timers - 48 MHz CPU - ADC with 12 channels, 12 bits and up to 1.2M - 512 kB Flash, 36 kB RAM samples/s - Programmable radio supporting - Serial communications: UART, SPI, I2C various protocols and up to +5 dBm - One comparator at 2.4 GHz - Real-time clock - Low power consumption

Hardware setup

What do you need?

To use your new LaunchPad, you need to connect an external debug probe to either the 20-pin LP-EM debug connector on the edge of the board or to the 10-pin debug connector and supply power separately.

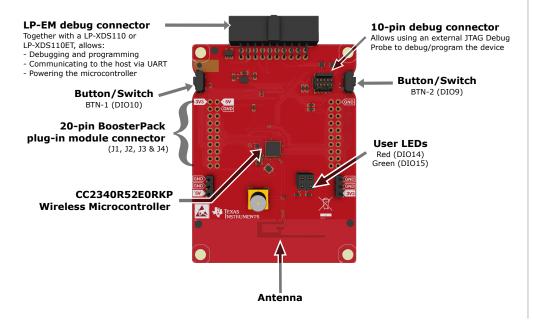
Option 1: Using the LP-EM debug connector

This is the easiest way to setup the hardware. It requires either an **LP-XDS110** or **LP-XDS110ET** debug probe (sold separately).

Simply connect the connector at the edge of the debug probe to its counterpart on the LaunchPad and connect the USB port of the debug probe to the host computer. A secondary UART communications channel will also be available and power to the LaunchPad will be provided directly.



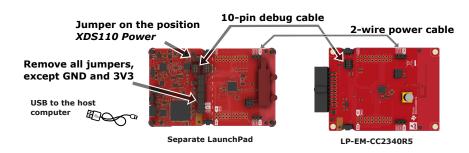
LP-EM-CC2340R5 Overview



Option 2: Using the 10-pin debug connector

Either a standalone debug probe or a separate LaunchPad with a built-in debug probe can be used.

Connect the two boards as shown in the picture below:



For additional details, consult dev.ti.com/?id=LP-EM-CC2340R5

When using the 10-pin debug connector, the UART communications channel must be wired separately (this connector does not carry UART signals).

If using a standalone debug probe, consult its documentation to see if it supports the ARM Cortex-M 10-pin standard.

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