

Using mbed Compiler to develop code on Freescale FRDM board

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The mbed Compiler delivers full online editor. it provides a lightweight online C/C++ IDE that is pre-configured to let you quickly write programs, compile and download them to run on your mbed Microcontroller. The only weakness is that it doesn't have debug feature. In fact, you don't have to install or set up anything to get running with mbed. Because it is a web app, you can log in from anywhere and carry on where you left off, and you are free to work on Windows, Mac, iOS, Android, Linux, or all of them.

Currently, mbed Compiler support:

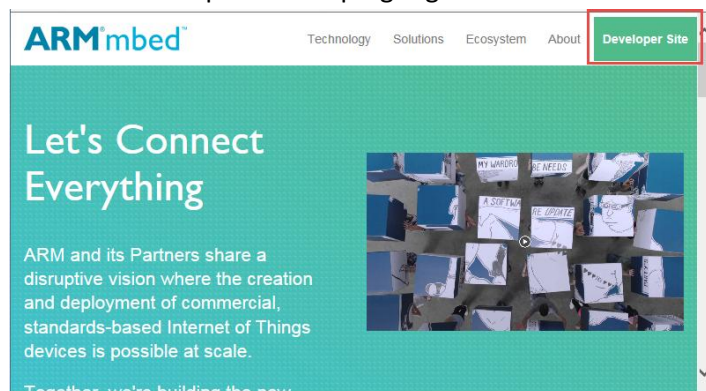
- FRDM-KL25Z
- FRDM-KL46Z
- FRDM-KL05Z
- FRDM-K20D50M
- FRDM-K22F
- Ethernet IoT Starter Kit

This article will introduce how to use mbed Compiler to develop code on Freescale FRDM board.

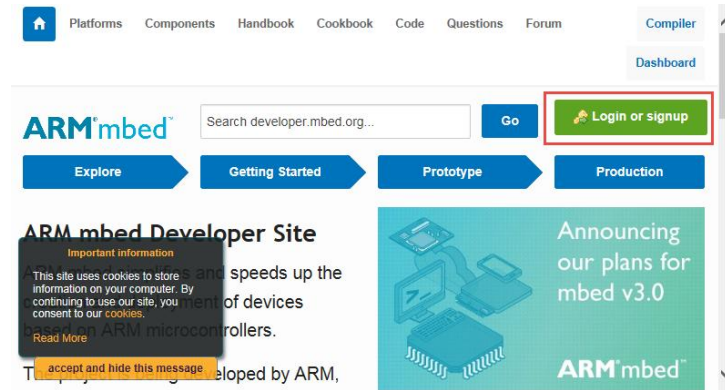
1. Mbed Compiler IDE setup:

On www.mbed.com

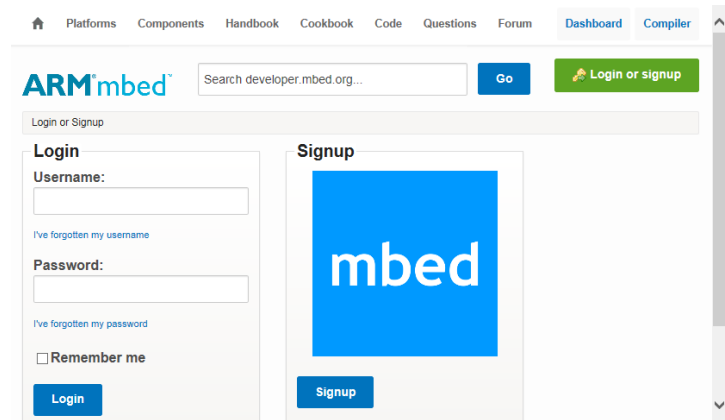
- 1) Click on "Developer Site" top right green button



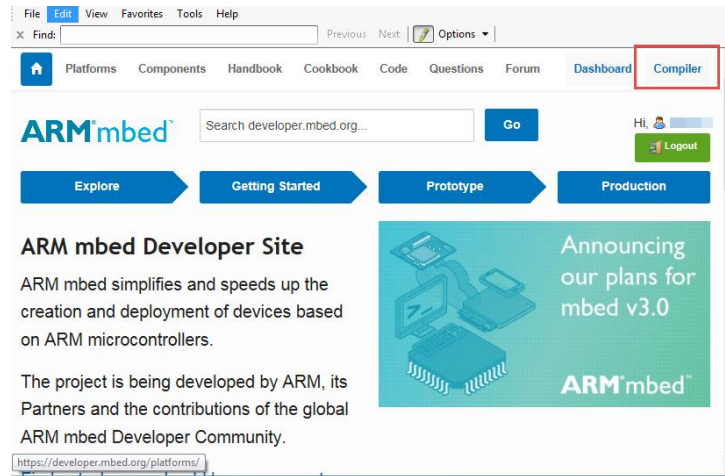
2) Click on "Login or signup" top right green button



3) Enter your "Login" and "Password", if you are new user, signup.

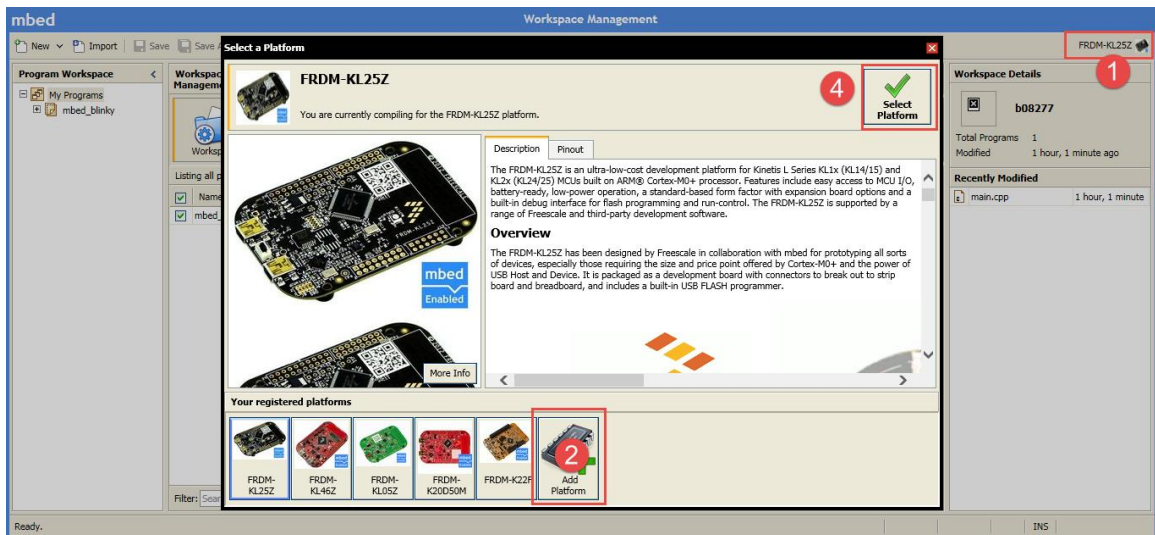


4) Click on "Compiler" top right grey button

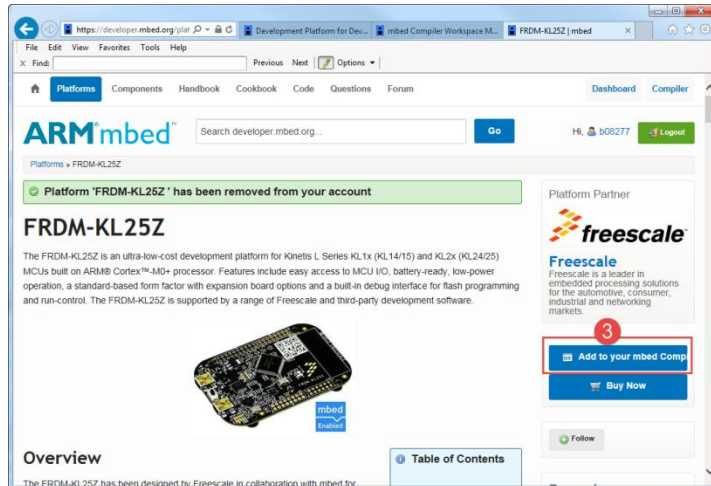


2. Add platform:

In MBED Compiler IDE

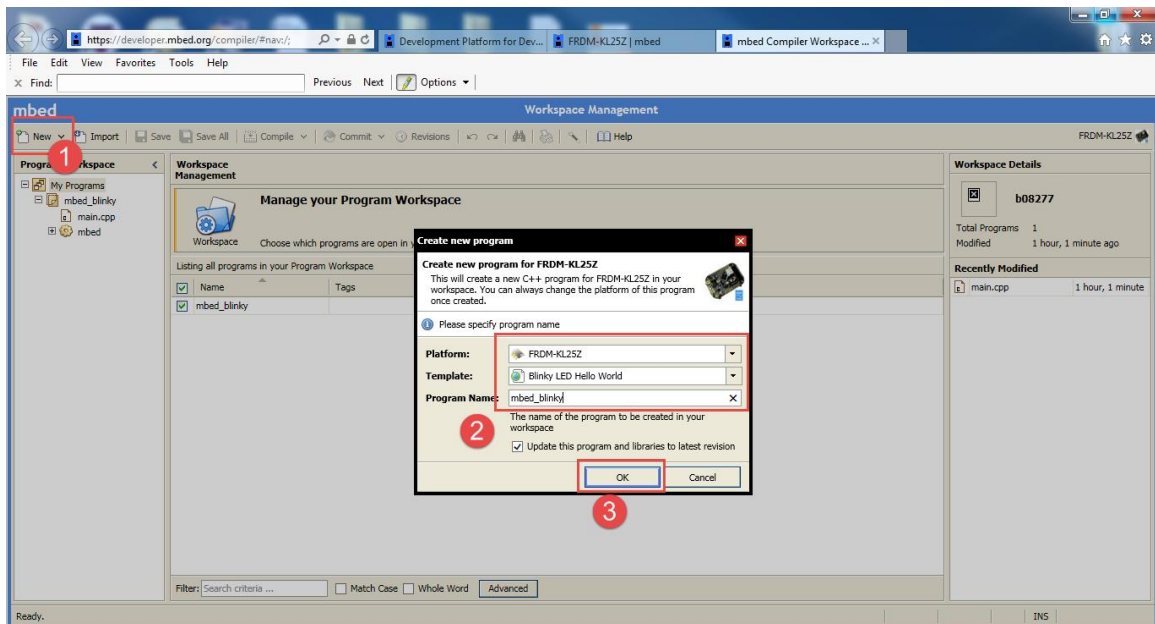


- 1) Select a compilation platform
- 2) Click on “Add Platform”
- 3) Select “FRDM-KL25Z” platform in the list and Click on “Add to your mbed Compiler” button

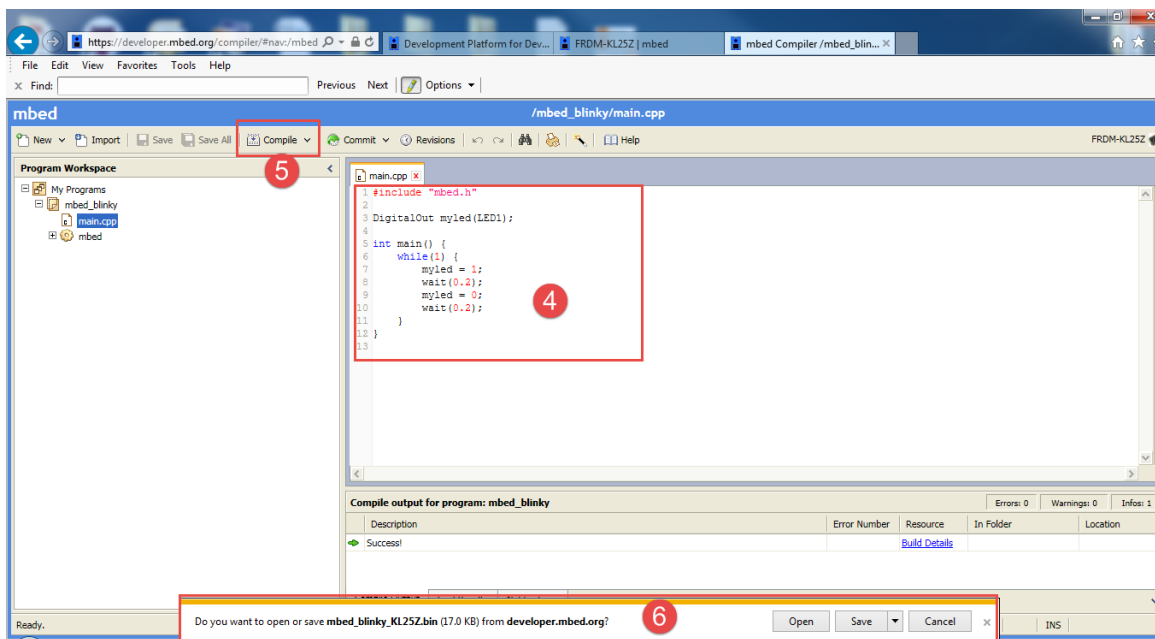


- 4) Click on “Select Platform”

3. Create a new project based on FRDM-KL25



- 1) In IDE, click on “new”
- 2) Choose platform as “FRDM-KKL25Z”, Template as “Blinky LED Hello World”, name the project.
- 3) Click on “OK”
- 4) Open main.cpp. the default code is for blinking on board LED. Users can add or modify the code based on customized project.



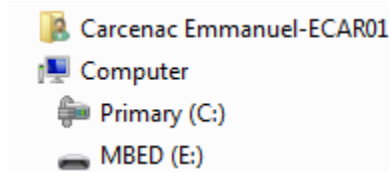
- 5) Compiler code
- 6) If build success, it will generate a bin file, save it to your disk. We need use it to burn flash.

4. Board setup for programming flash

- 1) Connect the USB cable between your PC and the OpenSDA USB port on the FRDM-KL25Z board.
- 2) Setup the FRDM-KL25Z to accept code from the mbed online compiler. Flash the appropriate bootloader file (mbed_if_v2.0_frdm-kl25z.htm) and simply unplug / plug your OpenSDA USB connection. All instructions also available at mbed.org (<https://mbed.org/handbook/mbed-FRDM-KL25z-Upgrade>)



- 3) When the process completes, a USB drive named “MBED” will appear.



- 4) Drag “mbed_blinky_KL25Z.bin” file into the “MBED” drive.
- 5) Power off then power on. We can see on board LED is blinking.

Summary: we can use mbed Online Compiler edit, build, generate binary file. But CAN'T debug. With mbed FRDM KL25z Upgrade package, we can burn binary file to board with drag and drop.

Its really simple, and its free, because it is a web based compiler, multi-platforms are supported. so lets get started!

Reference:

- EUF-IND-T1417_MC34931S_HandsOnTraining
- <http://www.mbed.com/>