

# EFM<sup>®</sup>32

... the world's most energy friendly microcontrollers

## Quick Start Guide

### EFM32 Gecko Development Kit

0 1 2 3 4

**Congratulations with your new EFM32 Gecko Development Kit.  
It contains the following:**

- EFM32 Development Kit Motherboard
- EFM32 MCU Board
- EFM32 Prototyping Board
- USB Cable
- CD with IAR development environment

**Please follow these simple steps to start developing and debugging an application on the Development Kit.**

**1: Install IAR Embedded Workbench from the CD, or download and install Keil MDK-ARM from [www.keil.com/arm/mdk.asp](http://www.keil.com/arm/mdk.asp)**



**2: Download and install the J-Link software from [www.segger.com/cms/jlink-software.html](http://www.segger.com/cms/jlink-software.html)**

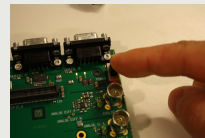


When asked during installation, make all applications use the newest JLinkARM.dll.

**3: Connect the Development Kit to the PC using the USB cable.**



**4: Power up the Development Kit.**



**5: Go to [www.energymicro.com/downloads](http://www.energymicro.com/downloads) to download and install "EFM32\_Gecko\_DK\_Installer.zip".**



**6: Please refer to the following sections for details on how to proceed for the individual development environments.**

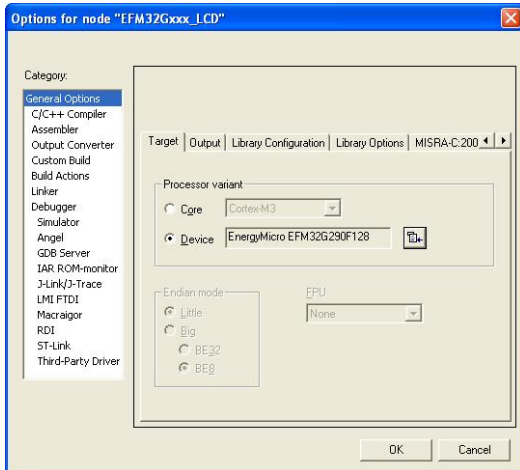
**For details on the Kit please refer to the EFM32 Gecko Development Kit User Manual.**

# 1 IAR

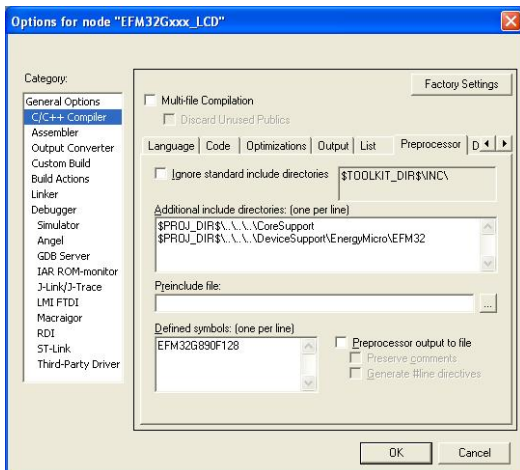
- Open the IAR example project (default location):

C:\Program Files\EnergyMicro\EFM32 Gecko DK\boards\EFM32\_Gxxx\_DK\examples\blink\iar

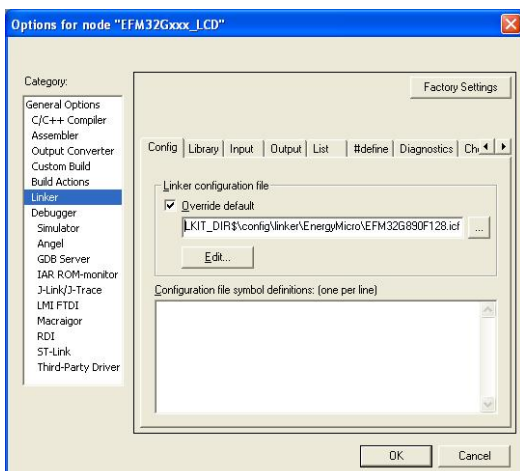
- Open project options (Project->Options).
- Select correct EFM32 device (e.g. "EFM32G890F128") to set corresponding debugger register definition file.



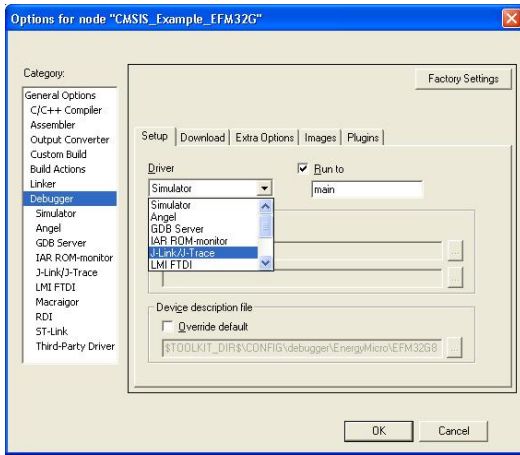
- Under C/C++ Compiler tab, add partnumber (e.g. "EFM32G890F128") to the "Define" field. This selects the correct device in the EFM32 header file.



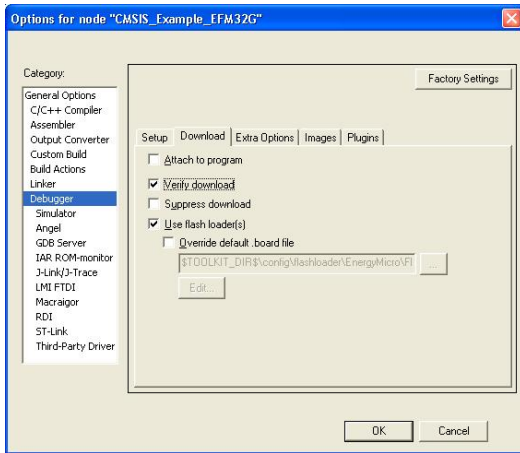
- In order to set correct constraints of the flash and ram, select linker file according to the chosen EFM32 device.



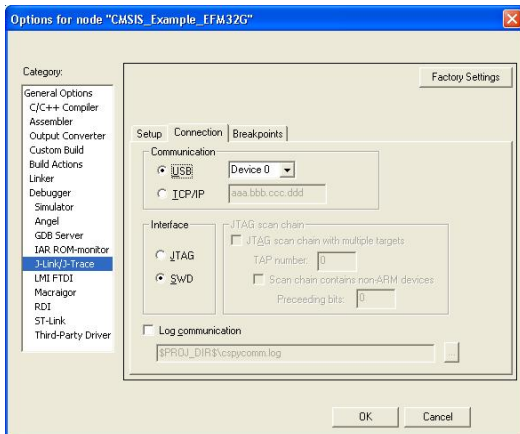
- Set debugger driver to "J-Link/J-Trace" (This is the debugger embedded on the EFM32 Kit).



- Tick off "Verify download" and "Use flash loader(s)" under the Download tab in order to program the flash.



- Set the J-Link driver to use "SWD", USB Device 0. The EFM32 only supports Serial Wire Debug (SWD).

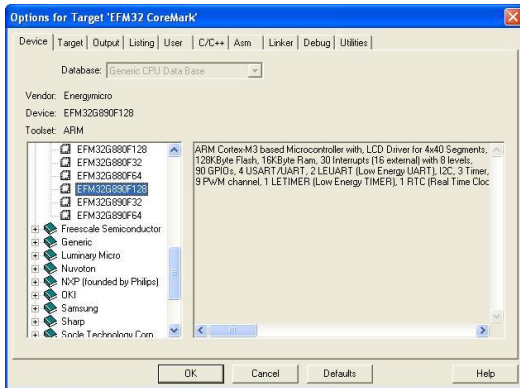


- Compile, download and start debugging by pressing CTRL+D.

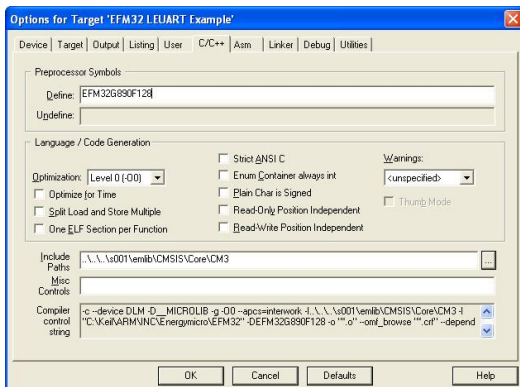
For details on the development environment please refer to the relevant user guides from IAR.

## 2 Keil

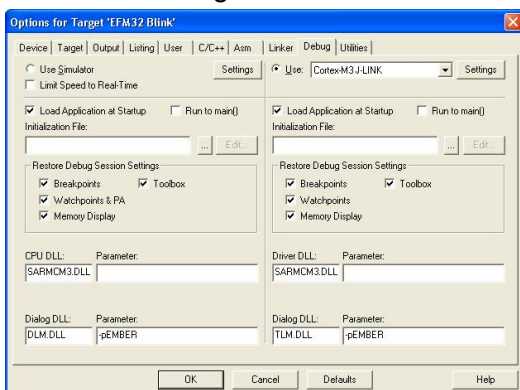
- Copy the file "JLinkARM.dll" from C:\Program File\SEGGER\JLinkARM\_Vxxxx\ (xxxx corresponds to the version number) into the folder (default location) C:\Keil\ARM\Segger\.
- Open the Keil example project (default location):  
C:\Program Files\EnergyMicro\EFM32 Gecko DK\boards\EFM32\_Gxxx\_DK\examples\blink\arm
- Open project options (Project->Options for Target).
- Select correct EFM32 device (e.g. "EFM32G890F128") to set correct memory ranges etc.



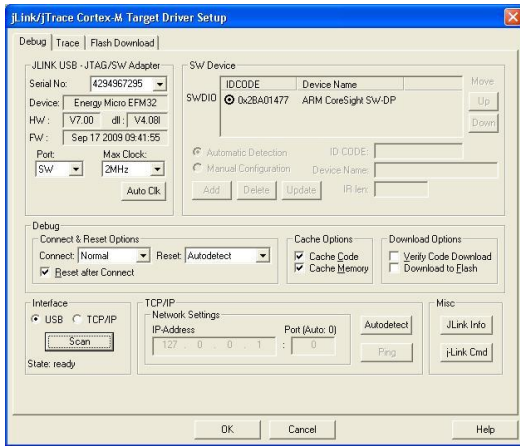
- Under C/C++ tab add partnumber (e.g. "EFM32G890F128") to the "Define" field. This selects the correct header-file for your EFM32.



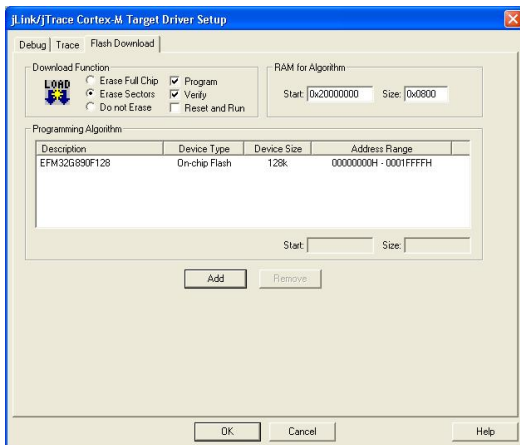
- Under the Debug tab set to use "Cortex-M 3 JLink" for debugging. Then press "Settings".



- Press "Scan" and set Port to "SW". The Device field shows "Energy Micro EFM32" as illustrated.



- Under the "Flash Download" tab make sure that the EFM32 flash loader is selected.

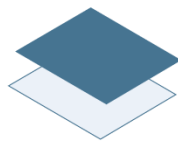


**Note**

If the EFM32G890F128 flash loader cannot be found, check that the file EFM32.FLW is present under your Keil installation directory, typically C:\Keil\ARM\Flash\EFM32.FLW. If it is not, your version is too old. You either need to upgrade to a more recent version or get this file from the MDK-ARM support file package at [www.energymicro.com/downloads](http://www.energymicro.com/downloads).

- Compile, download and start debugging by pressing CTRL+F5.

For details on the development environment please refer to the relevant user guides from Keil.



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