



Developing in C/C++ with Eclipse Indigo on Windows

This article illustrates how to use Eclipse Indigo IDE to cross compiling your C/C++ code on a Windows PC and run it on a FOX Bo



Eclipse is a multi-language software development environment comprising an IDE and a plug-in system to be written primarily in Java and can be used to develop applications in Java and, by means of the various plug languages as well, including C, C++, Python, Perl, PHP, and others ([read more...](#)).

Install Eclipse Indigo

Download **Eclipse IDE for C/C++ Developers** for Windows from the Eclipse website:

- Eclipse IDE for C/C++ Developers

Uncompress the ZIP file directly in the working directory (i.e. c:\eclipse) and execute **eclipse.exe** to run Eclipse on your desktop.

The welcome screen will appear:

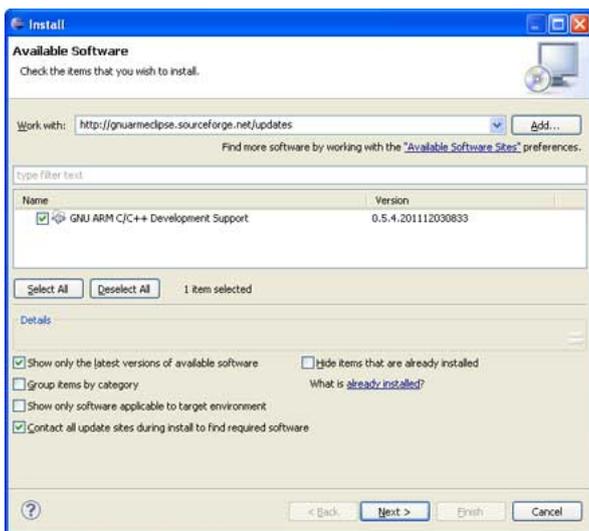


Install the ARM plugins

To make the cross compilation procedure simple, install a plugin called **GNU ARM Eclipse Plug-in**.

Open the install form selecting the "Help -> Install New Software..." menu item then copy in the "Work with:" field this URL: "http://gnuarmclipse.sourceforge.net/updates".

Uncheck the "Group items by category" to display the ARM plugins available.



Check the **GNU ARM C/C++ Development Support** item and press the Next button.

Sourcery CodeBench Lite 2011.09-70 for ARM GNU/Linux

Sourcery CodeBench Lite 2011.09-70 for ARM GNU/Linux is a complete C/C++ development environment based on the GNU Tool freely available and has a quick installer that also manages the path variables to simplify the calls to the executable everywhere in the computer.

Go to <https://sourcery.mentor.com/sgpp/lite/arm/portal/release2029> and download the **IA32 Windows Installer** version (about

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Run the executable file to install it and select the **Typical** installation.



When the message box "Chose Install Folder" appears, type a simple path like `c:\codesourcery` avoid using the default path. On m XP for example the default path is `C:\Program Files\CodeSourcery\Sourcery_CodeBench_Lite_for_ARM_GNU_Linux` that Eclipse v not manage.



The last step to carry out is to remove the part "linux-gnu" in the filename of some executable files located in `c:\codesourcery\bin`. For example `arm-none-linux-gnueabi-gcc.exe` must become `arm-none-eabi-gcc.exe` used by default by the Eclipse ARM plugin.

List of renaming to do:

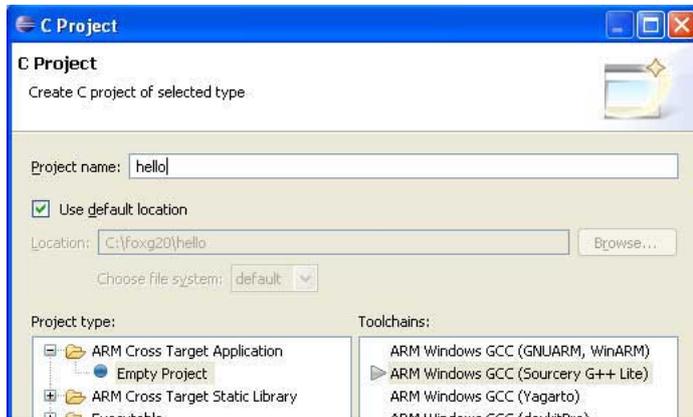
Original name	New name
arm-none-linux-gnueabi-gcc.exe	arm-none-eabi-gcc.exe
arm-none-linux-gnueabi-gdb.exe	arm-none-eabi-gdb.exe
arm-none-linux-gnueabi-ld.exe	arm-none-eabi-ld.exe
arm-none-linux-gnueabi-objcopy.exe	arm-none-eabi-objcopy.exe
arm-none-linux-gnueabi-objdump.exe	arm-none-eabi-objdump.exe
arm-none-linux-gnueabi-size.exe	arm-none-eabi-size.exe

Eclipse should be able now to call the xcross executables needed to deploy the FOXG20 ARM processor.

Create your first project

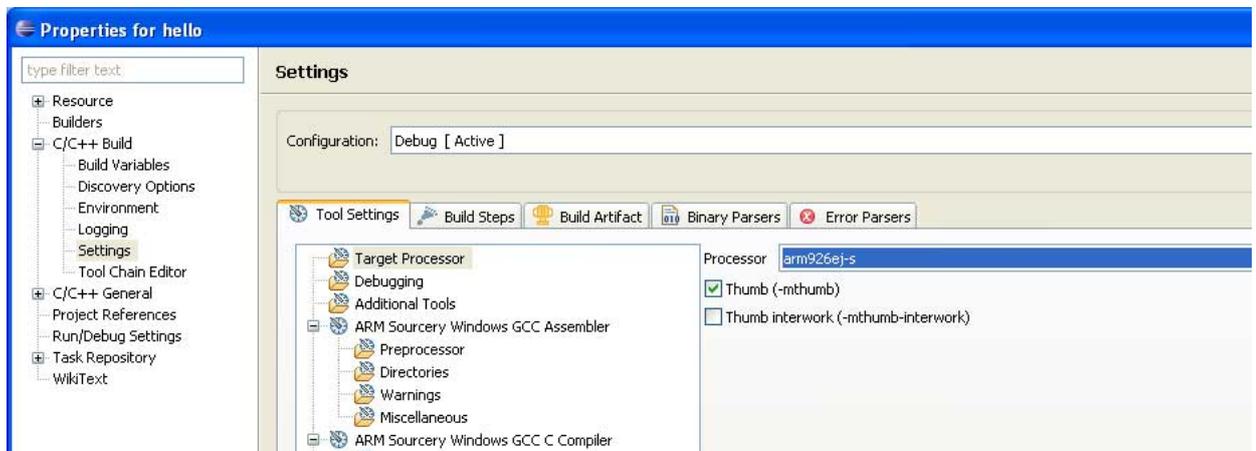
Create a new C Project in Eclipse starting from the menu:

```
File
|
+- New
  +- C Project
```



Insert your project name (for example **hello**) and select the toolchains *ARM Windows GCC (Sourcery G++ Lite)* then press the **Next** button. On the next form press **Advanced setting...** button.

The project properties form will appear.



Set:

```

C/C++ Build
|
+- Settings. Tab: Tool Settings:
|   |
|   +- Target processor: arm926ej-s
|   +- Thumb (-mthumb): checked
+- Debugging
|   |
|   +- Debug format: Toolchain default
+- Additional tools
|   |
|   +- Create Flash Image: unchecked
+- AARM Sourcery Windows GCC C Linker
|   |
|   +- Do not use standard start files: unchecked
    
```

Type the **OK** button and **Finish** button to save and continue.

Create a new source file:

```

Menu
|
+- File
|   +- Source File
    
```

and call it for example **hello.c** then fill it with the classic Hello World ! example listed below:

```

#include "stdio.h"

int main(void) {
    printf("Hello world !\n");
    return 0;
}
    
```

Compile the source selecting **Project -> Build project**

Run on the FOX Board G20

After a build, you will obtain a file called **hello.elf**. Copy this file on the FOX Board G20 and set it as executable with the command:

```
debarm:~# chmod +x hello.elf
```

The run it:

```
debarm:~# ./hello.elf
Hello world !
```

Related links

- [Sourcery CodeBench Lite Edition](#)
- [GNU ARM Eclipse Plug-in web site](#)

Credits

Thanks to Andrea Leganza for the original contents of this article.



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