



CoiNel ARM-USB-JTAG with CooCox CoLink on Keil MDK Setup Manual

Introduction:

This document is intended to guide the reader the process of setup of CoiNel ARM-USB-JTAG with CooCox Colink on Keil MDK.

CoiNel ARM-USB-JTAG enables you to:

- Download programs to your target hardware
- Examine memory and registers
- Single-step through programs and insert multiple breakpoints
- Run programs in real-time
- Program Flash Memory
- Connect using JTAG

The setup involves the hardware connection and software installation and settings

Hardware:

You will require the following hardware to check the USB JTAG

- CoiNel ARM-USB-JTAG
- Target board
- USB A to B Type connector cable.

Connect target board and to the PC's USB Port via CoiNel ARM-USB-JTAG.



Software:

Pre-requisites

Make sure that you have installed Kiel Microvision for ARM (MDK-ARM) installed on your PC

The following USB driver and plugin need to be installed to test the USB JTAG

- 1. CoiNel ARM-USB-JTAG drivers.**
- 2. CooCox Colink plug in setup.**

Procedure to Install

- 1. CoiNel ARM-USB-JTAG drivers.**

Download and install the FTDI driver for CoiNel ARM-USB-JTAG from the following link.

<http://www.ftdichip.com/Drivers/VCP.htm>

When you click on the above link, a new web browser window will pop up taking you to the FTDI driver installation page (You can also copy the above link and paste it in the web browser (internet explorer/firefox etc) address link in case the clicking option doesnot work). Scrolling the page down will show you options as given below.

Currently Supported VCP Drivers:

Operating System	Release Date	Processor Architecture							
		x86 (32-bit)	x64 (64-bit)	PPC	ARM	MIPSII	MIPSIV	SH4	
Windows*	2011-04-12	2.08.14	2.08.14	-	-	-	-	-	Ave
	2011-08-26	2.08.17 (Beta)	2.08.17 (Beta)	-	-	-	-	-	
Linux	2009-05-14	1.5.0	1.5.0	-	-	-	-	-	I
Mac OS X	2011-02-28	2.2.16	2.2.16	2.2.16	-	-	-	-	Cu c
Windows CE 4.2-5.2**	2010-02-11	1.1.0.6	-	-	1.1.0.6	1.1.0.6	1.1.0.6	1.1.0.6	
Windows CE 6.0	2010-02-11	1.1.0.6	-	-	1.1.0.6	1.1.0.6	1.1.0.6	1.1.0.6	

Select appropriate versions as required.

Eg: When if you are using Windows XP (32 bit). Select 2.08.14 or 2.08.17 (Beta) and download/save file in a specific path.

For more details on how to install the VCP driver, click on the link in the above website.

▶ Virtual COM Port Drivers

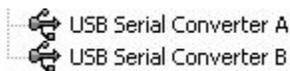
This page contains the VCP drivers currently available for FTDI devices.

For D2XX Direct drivers, please click [here](#).

Installation guides are available from the [Installation Guides](#) page of the [Documents](#) section of this site for selected operating systems.

Install the driver as given in the installation guide.

After installing these drivers you should see USB Composite Device and USB serial converter A and B in Universal Bus Controllers listing in device manager options as shown below.

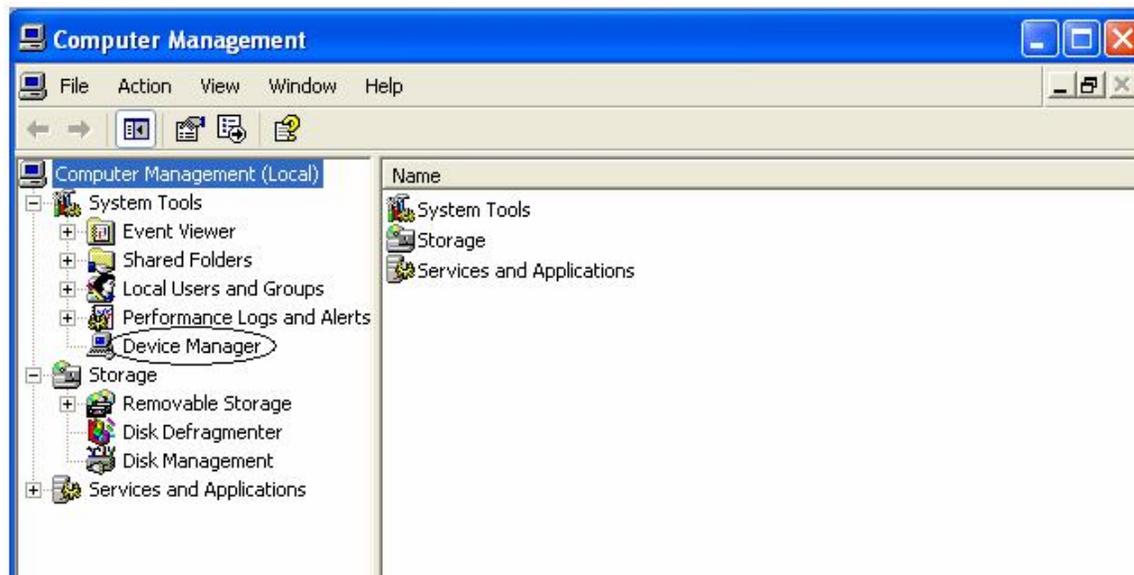


How to open device Manager

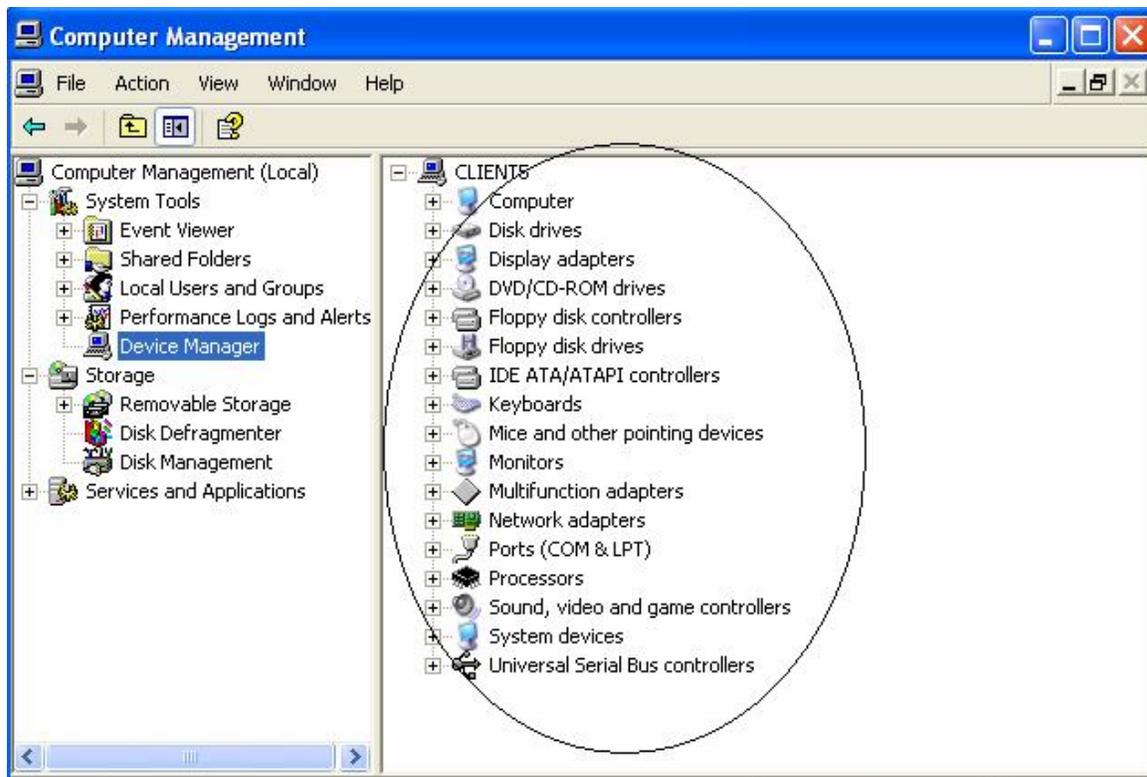


Right Click on My Computer → Select Manage and left Click

Computer Management Window will pop up as given in the next figure



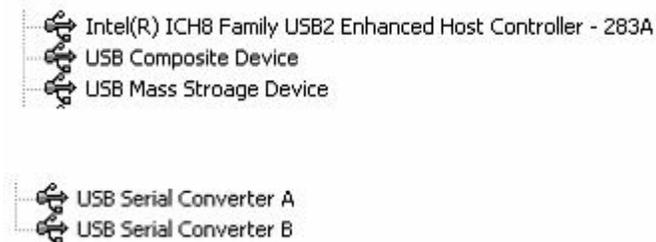
Select Device Manager Option. Doing this will show Device Manager contents on the left side of the window as given below.



Click on USB Serial Bus Controllers Options



Here you should be able to see the composite device and USB Serial Converter A and B.



This would confirm that CoInel ARM-USB-JTAG drivers are installed properly.

2. CooCox Colink MDK Plugin Inastall and Setup:

Download the CooCox colink setup file from the below given link.

<http://www.cooCox.org/downloadfile/4coinel/CoMDKPlugin-1.4.2.1.exe>

Opening the link above will start the installer.



Click save file and give the path where you want to save this setup file.

The file by name CoMDKPlugin-1.4.2.1.exe would have been saved in the path that you had given.

Open that path and double click on the Setup file. Setup window will open as shown below.

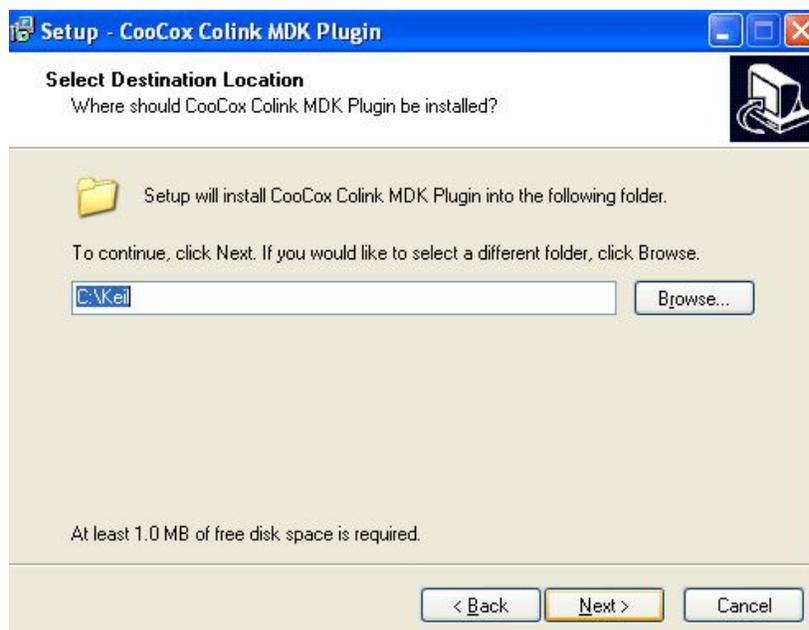


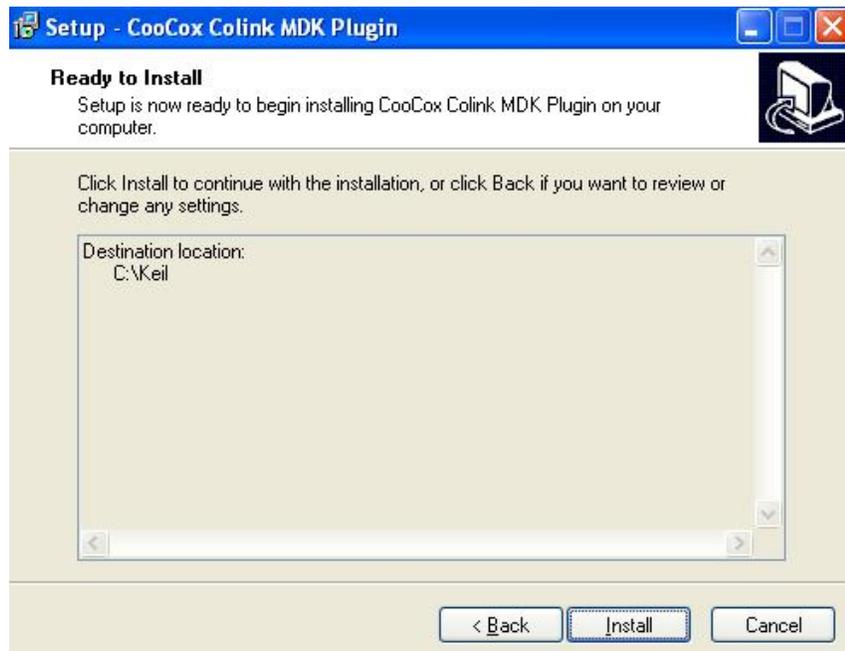
Click Run

The installer will start as shown below.

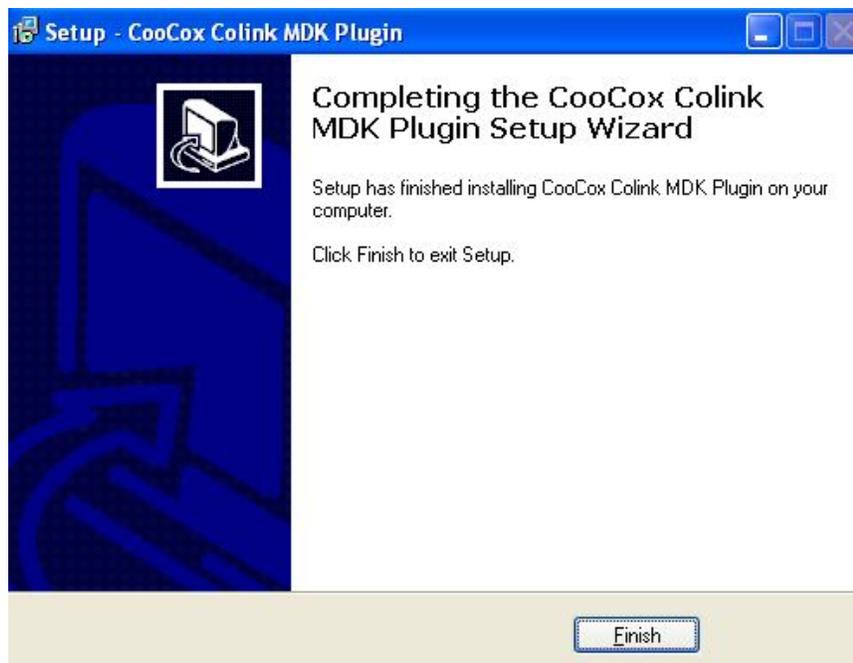


- Click next.
- Give the path where keil is installed (generally its c:\Keil). CooCox CoLink MDK plugin takes default path as shown in fig above.
- After giving the appropriate path. Click next.





- Click install.

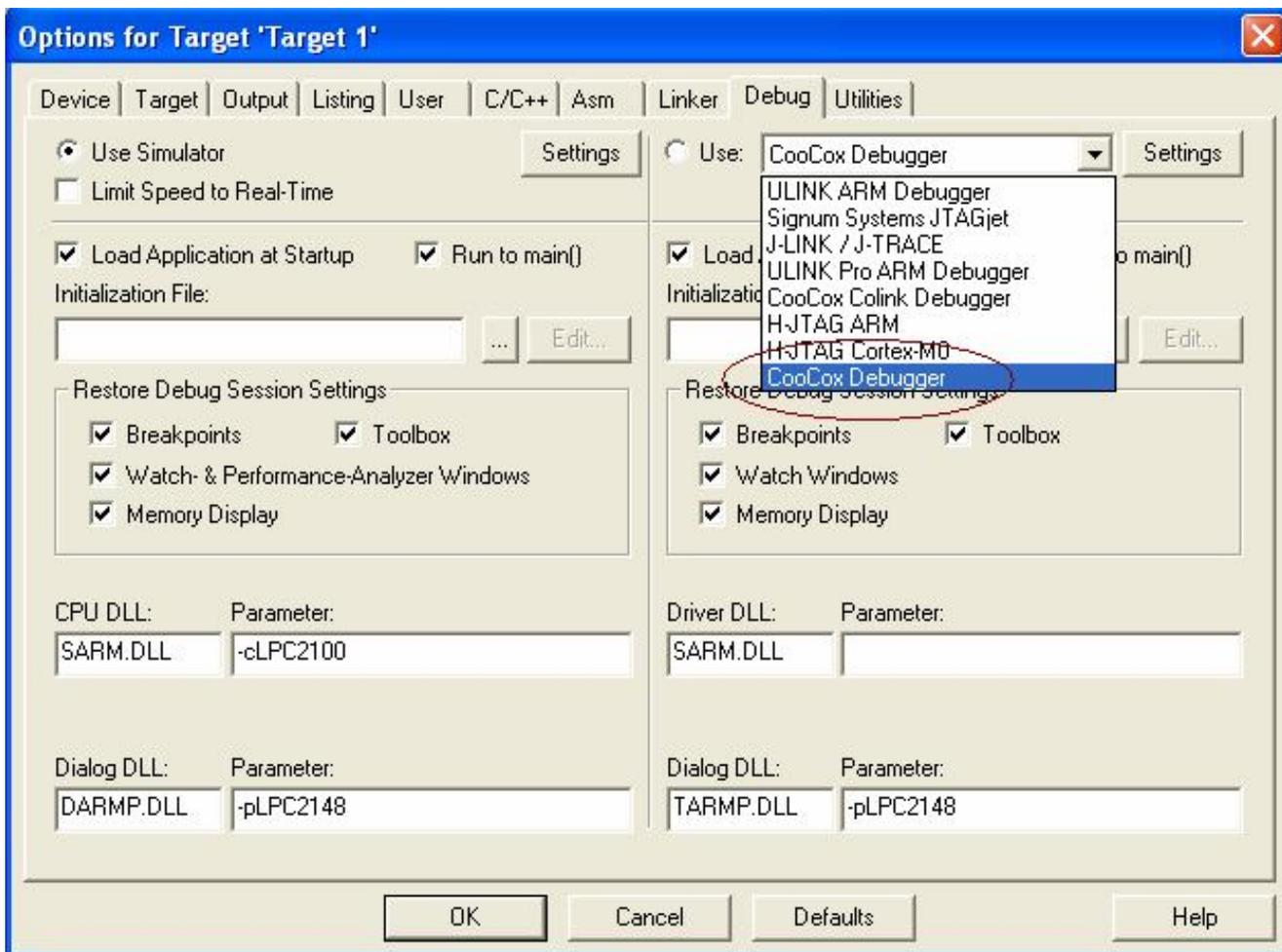


- Click on Finish, this would install the CooCox Colink plug-in successfully.

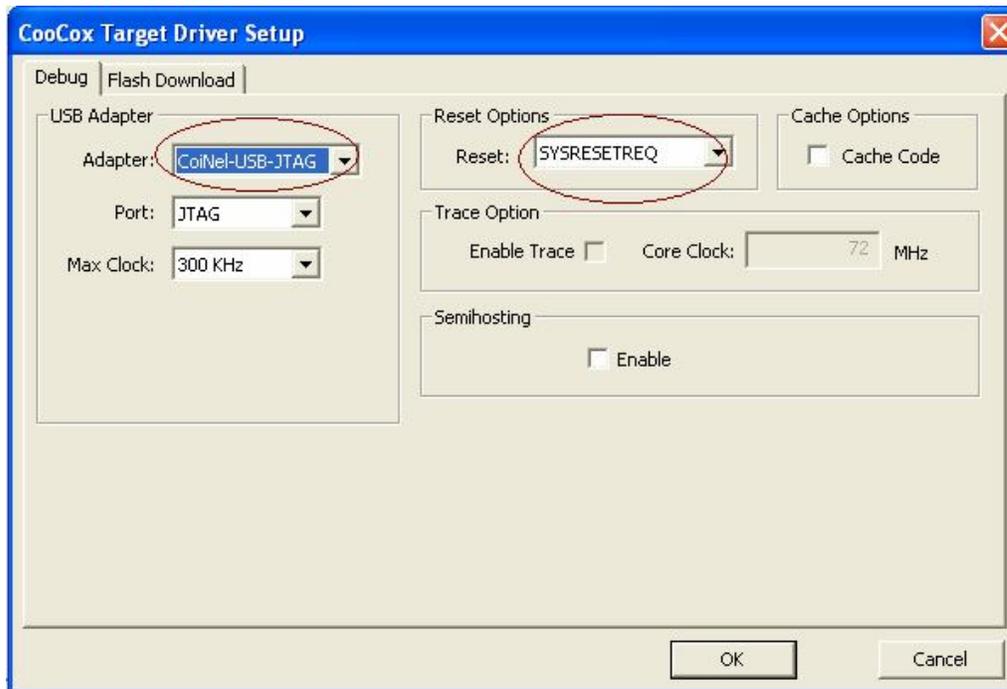
You would now have successfully installed both CoiNel-ARM-USB-JTAG FTDI driver and CooCox Plug in.

Programming/Debugging through Coinel ARM- USB-JTAG using Keil

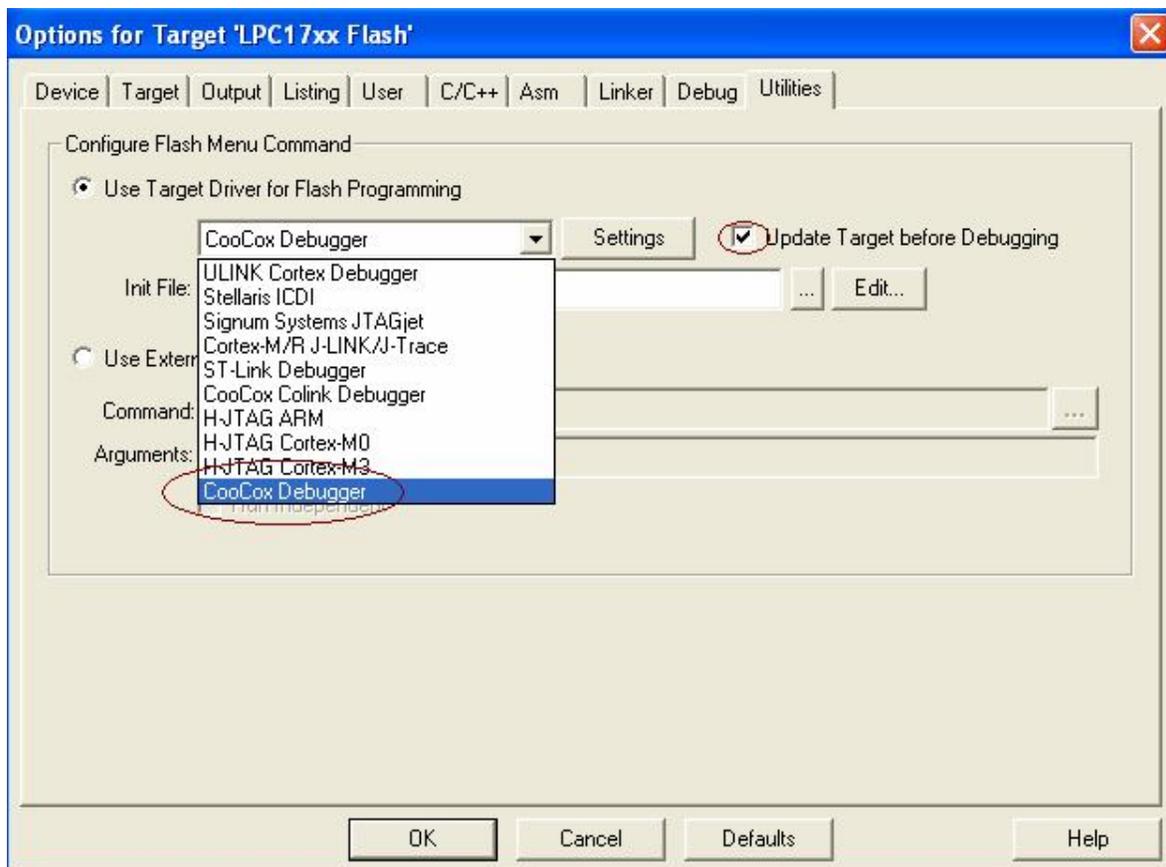
- Open Keil uvision IDE (Make sure you have opened some sample project.) and go to **Flash → Configure Flash Tools → Debug** in drop down menu select CooCox Debugger as shown in fig below.



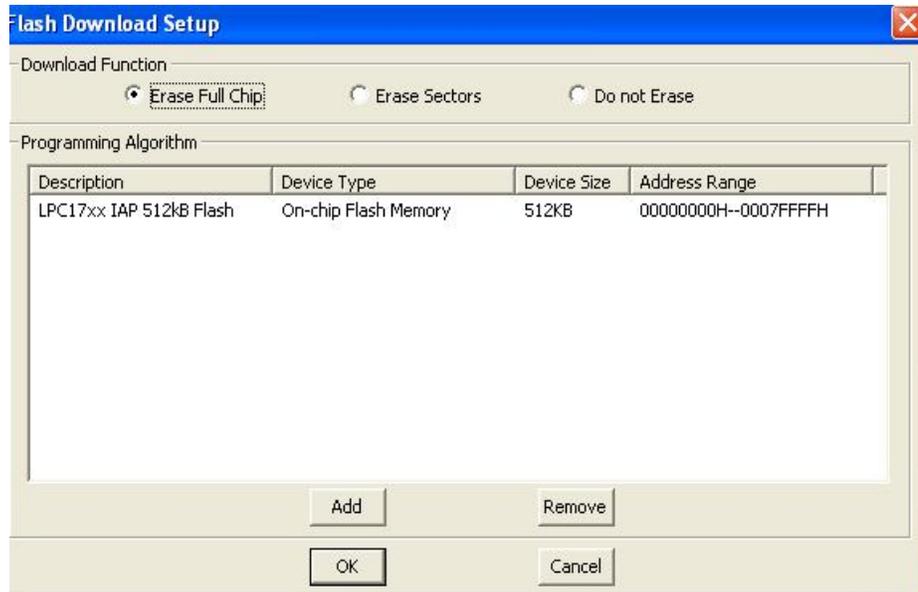
- Then click on Settings option at the right side of CooCox Debugger option selected and the settings should be done as shown in the next figure.



- Go to **Flash** → **configure flash tools** → **Utilities** tab and select CooCox debugger and select the 'Update Target before Debugging' check box as shown below.



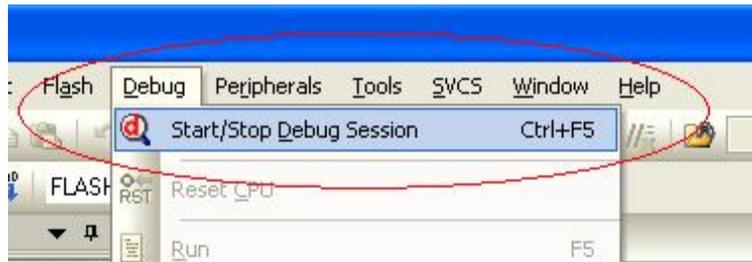
- Then click on settings. You should see the image as shown below indicating LPC17xx being used for programming.
You will get this as default value. Example is for LPC17xx. You might get Device address depending on controller chosen



- Click OK

- Finally open a project and start the debugger by clicking on **Debug** → **Start/Stop Debug Session**.

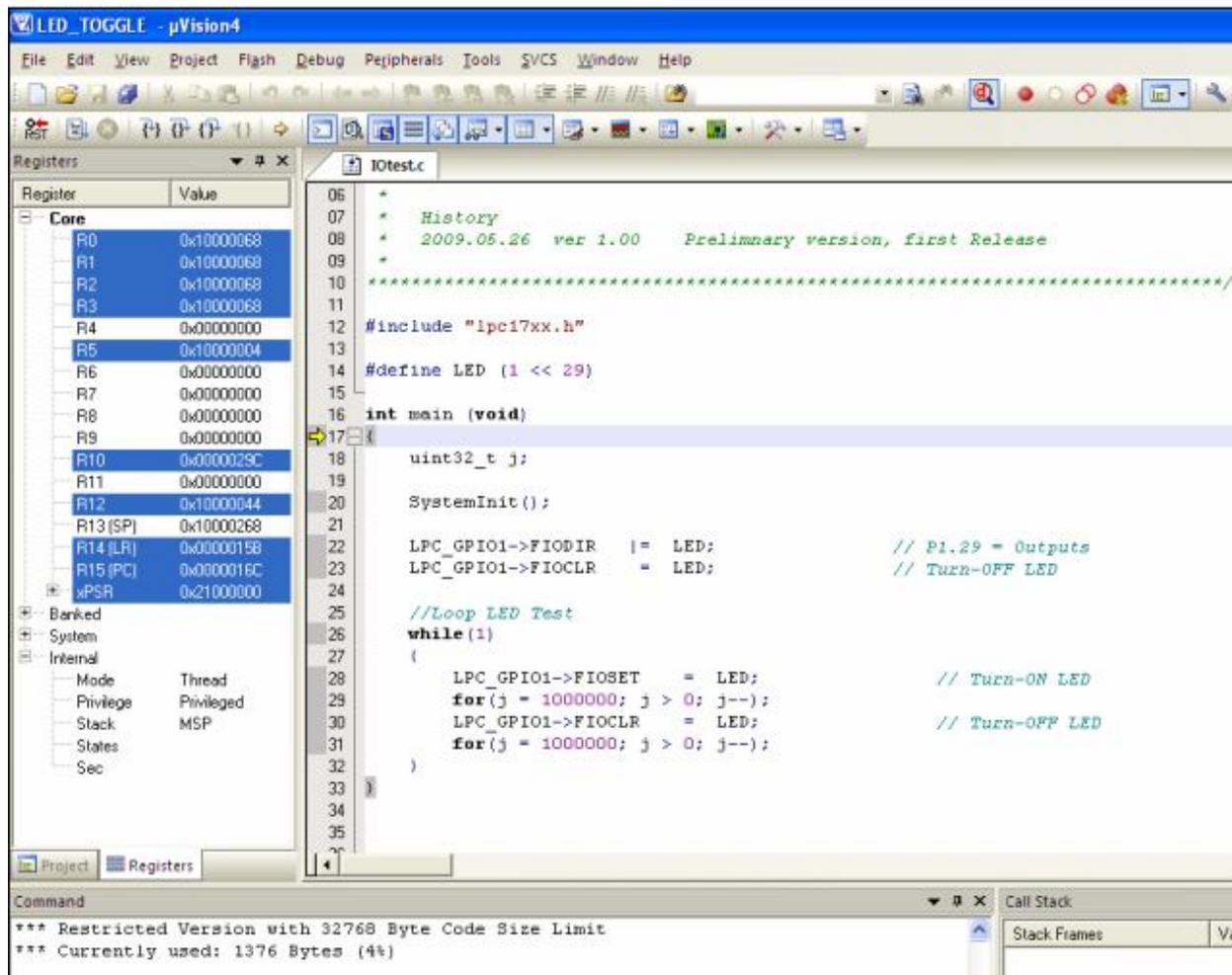
Note: Make sure that your program is compiled properly before starting the debug.



- Click ok. This is shown since the keil used is for limited free version. If you have a full version Keil IDE, this option will not be displayed.



- If the program is successfully downloaded then, you would see the cursor at main as shown below.



You can keep the break points and run the program accordingly and test various registers and outputs and appropriate break points and required.

If you have any clarifications on how to use the Coinel-ARM-USB-JTAG, you can post in your questions at www.coineltech.com/forums