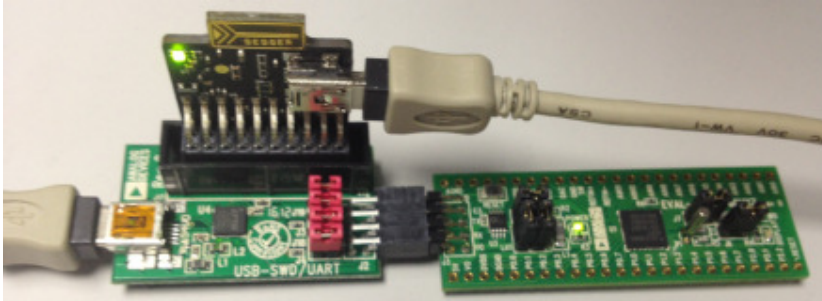


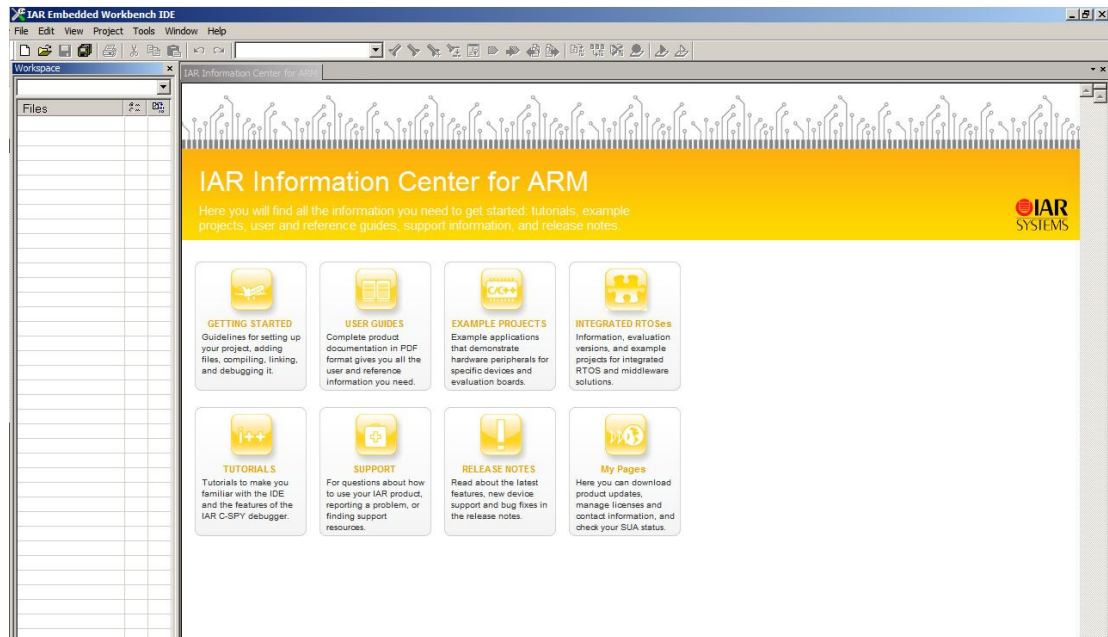
Getting Started with ADuCM360 MiniKit and IAR Embedded Workbench

It is assumed the IAR Embedded Workbench 6.2x for ARM cores is installed and basic knowledge on usage. Also the general Getting Started Guide for the ADuCM360 has been read and the ADuCM360 MiniKit is connected to the USB-SWD/UART-CONVZ with the J-Link-Lite to your PC as shown below.

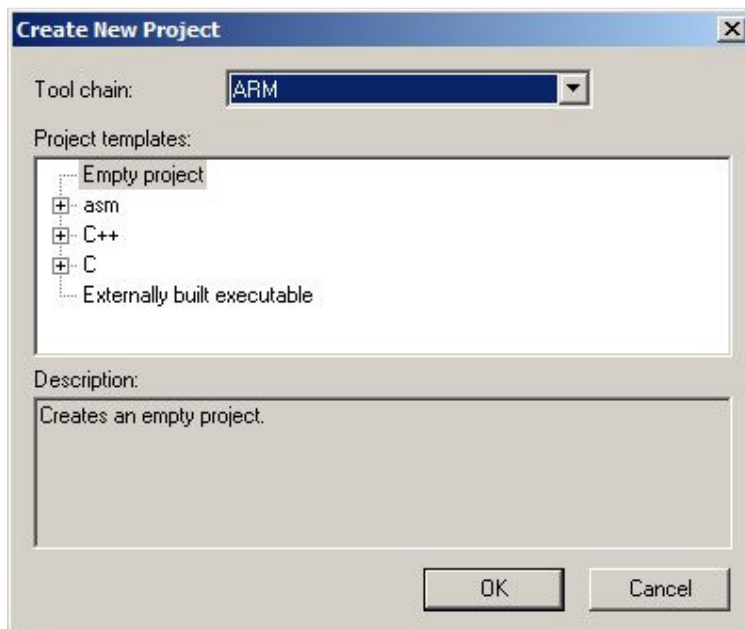
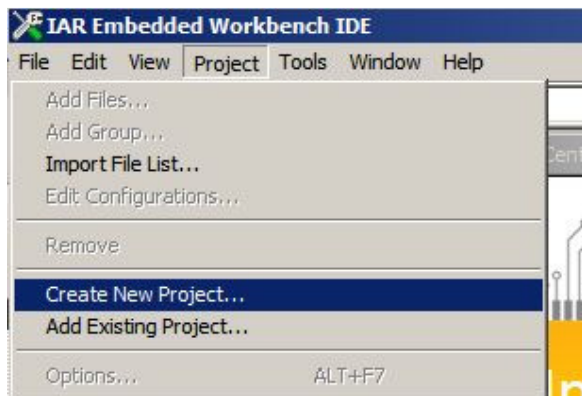


Start a simple 1st Blink Project

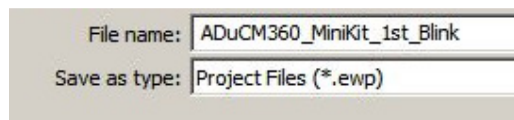
1.) Start IAR Embedded Workbench



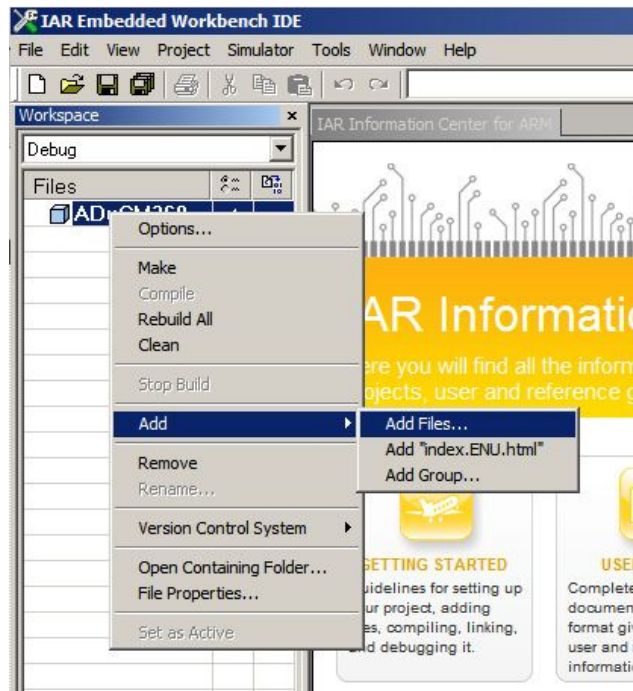
2.) Create a new "Empty Project"

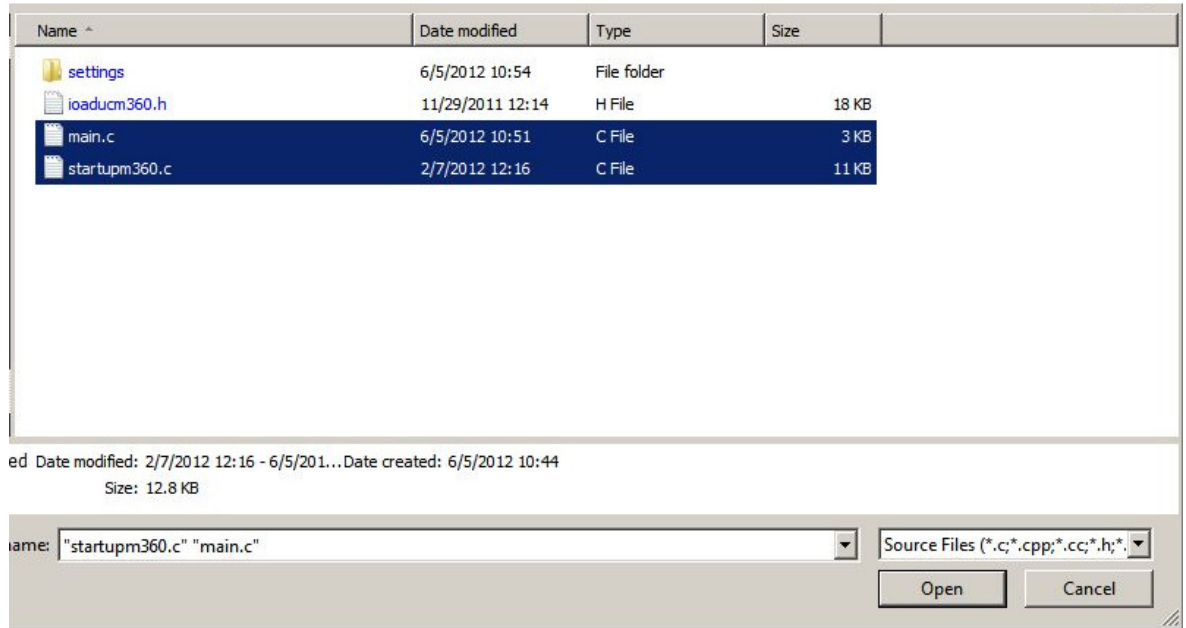


- 3.) In target folder – assumed the simple project files already are present there
- main.c - the simple software project to flash the LED on the ADuCM360 MiniKit
 - ioaducm360.h - the ADuCM360 MMR definitions for IAR C-Compiler
 - startupm360.c - the simplified ADuCM360 C-startup-file
 - ADUCM360.icf - the XLINK config file for ADuCM360
- (attached in separate ZIP-file)

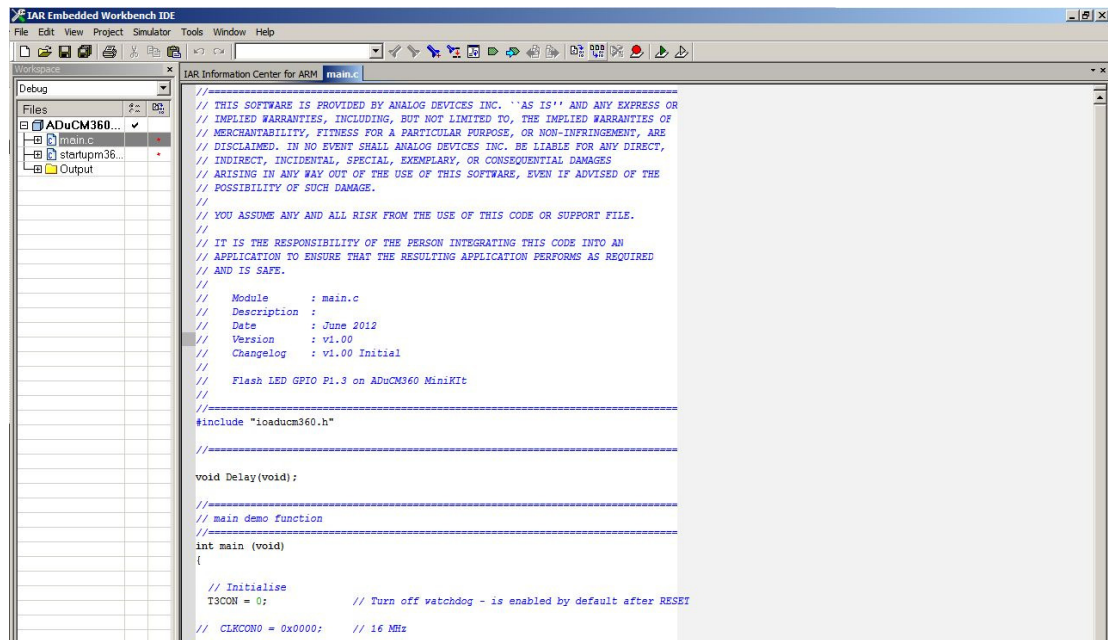


- 4.) Add the two required source-files to your project
- main.c
 - startupm360.c

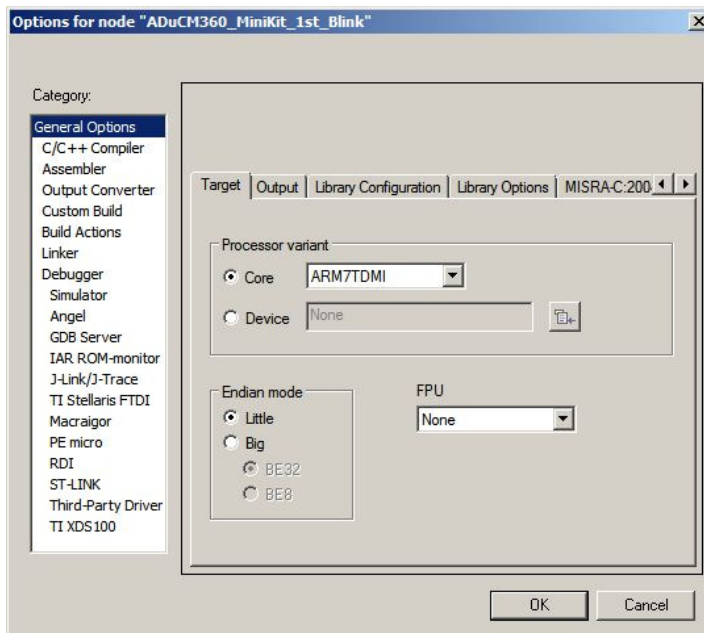
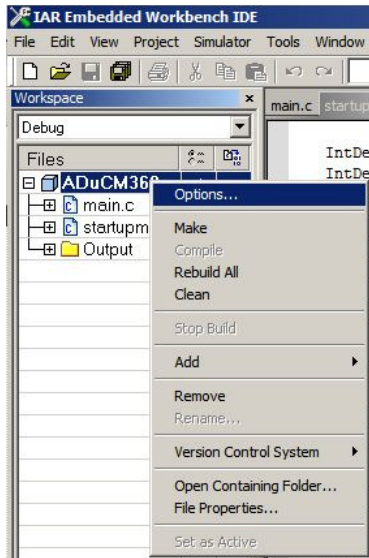




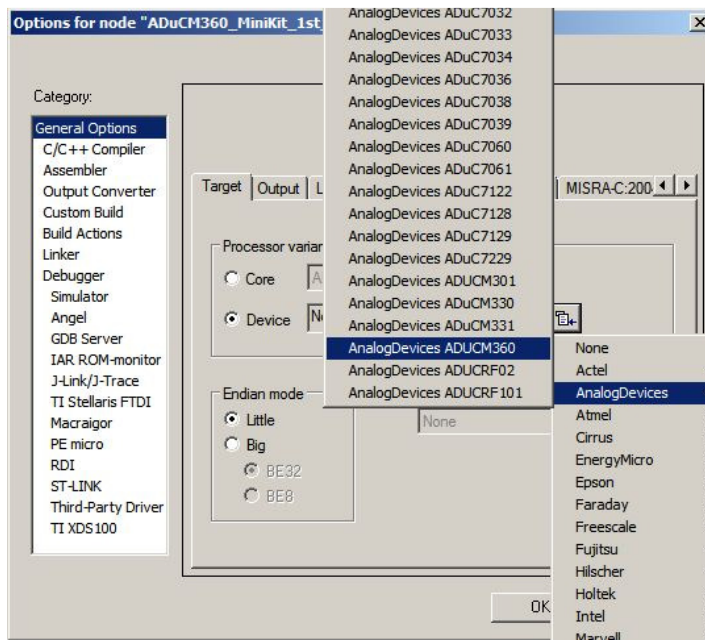
5.) Open main.c in IAR Embedded Workbench – it uses the local header-file – loaducm360.h



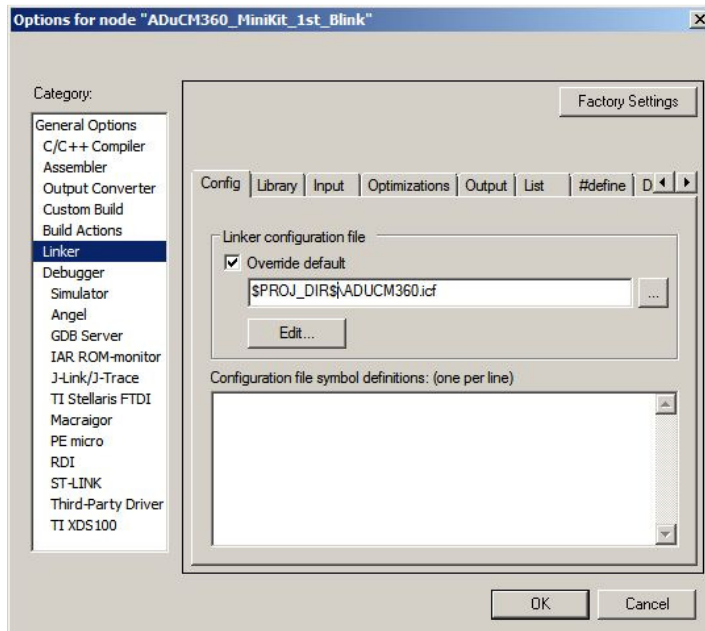
6.) Setting the OPTIONS right – right click on the project name



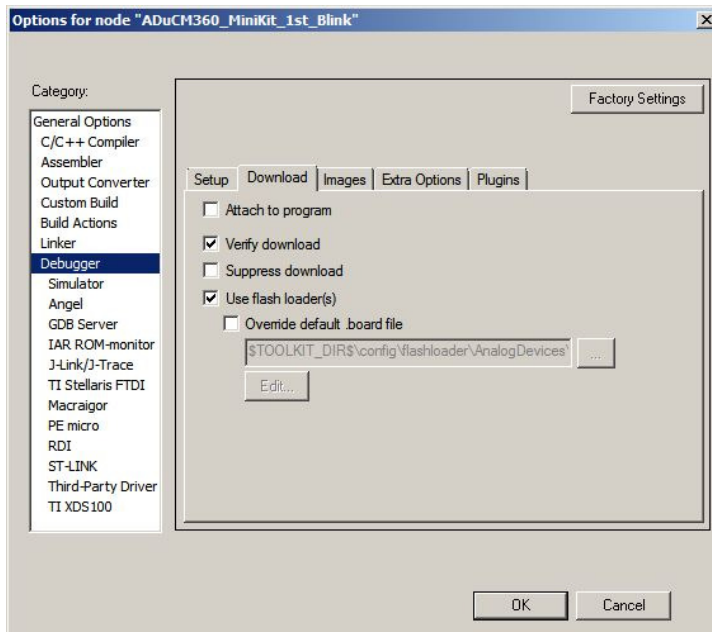
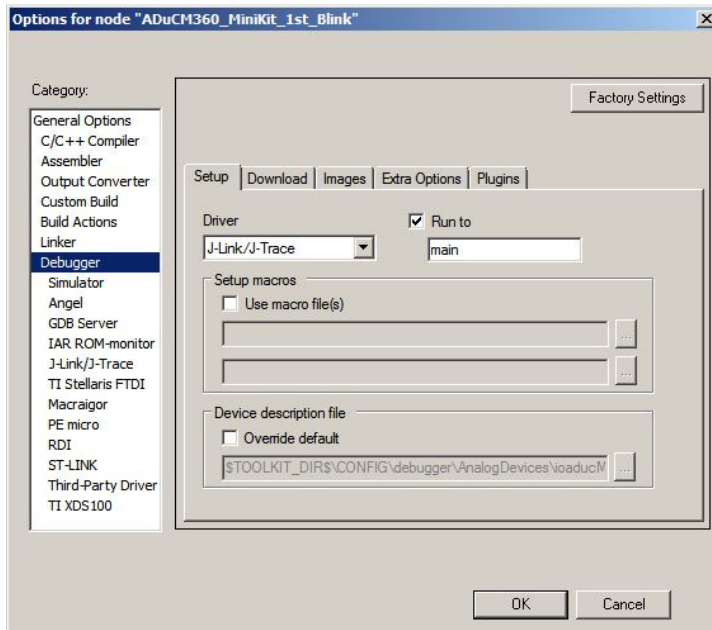
7.) Select the ADuCM360 as Target Device



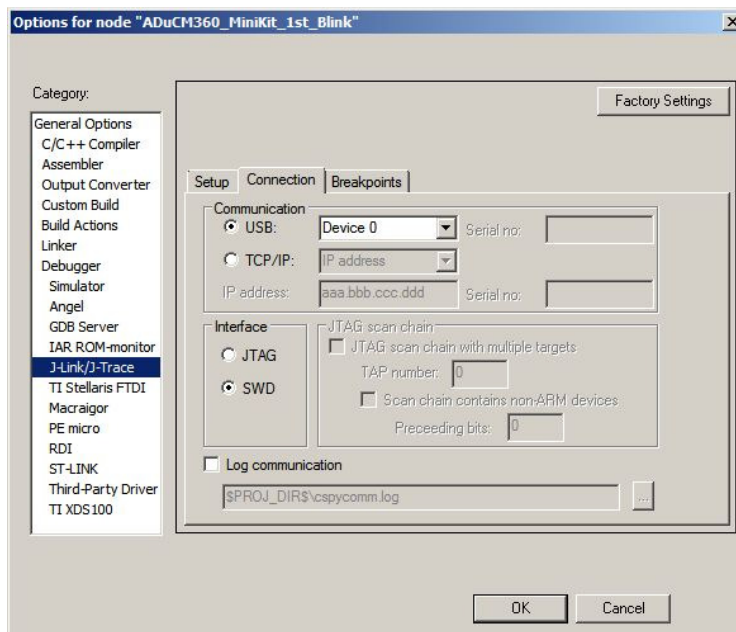
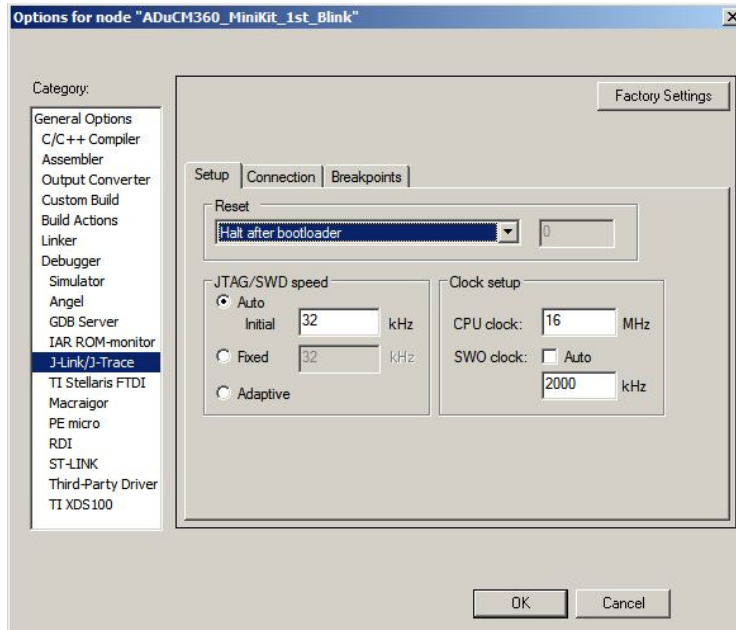
8.) Select the ADuCM360 XLINK config file – ADUCM360.icf



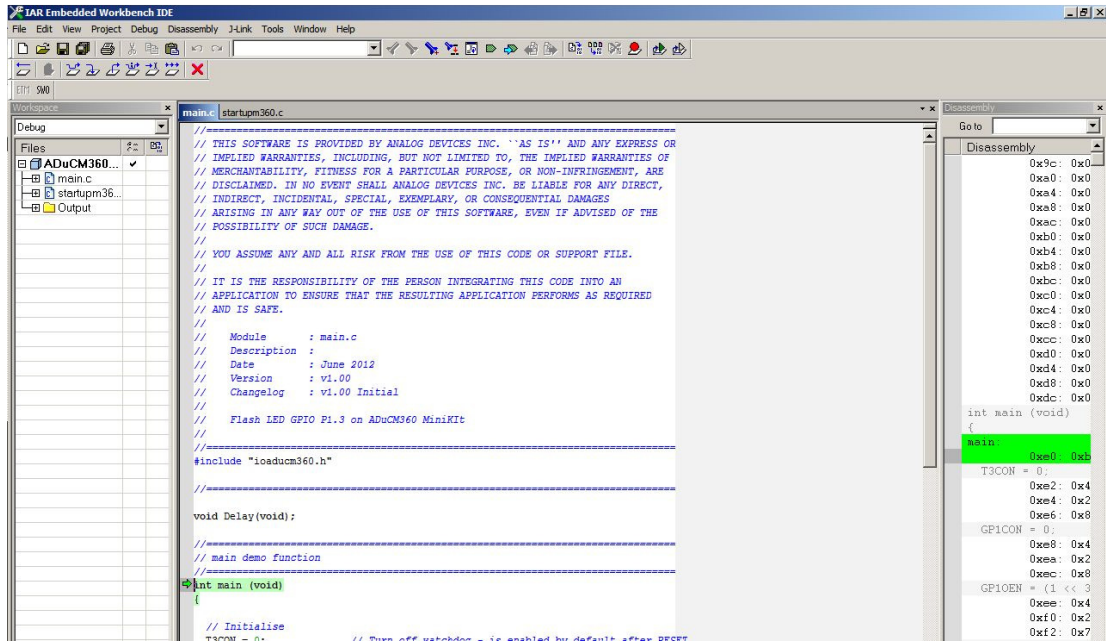
9.) Select J-Link/J-Trace as Debugger & Flash Programming



10.) Set the options for the J-Link/J-Trace



11.) Compile the project and start Debugger



12.) Run the project – the red LED on the MiniKit should flash



- 13.) Further-on you can remove the comment in line 40 of the main.c function
This changes the default 1MHz core clock of the ADuCM360 to 16MHz and you will see after compiling and downloading the project again, the LED is flashing much faster

```
main.c+ startupm360.c
10 // YOU ASSUME ANY AND ALL RISK FROM THE USE OF THIS CODE OR SUPPORT FILE.
11 //
12 // IT IS THE RESPONSIBILITY OF THE PERSON INTEGRATING THIS CODE INTO AN
13 // APPLICATION TO ENSURE THAT THE RESULTING APPLICATION PERFORMS AS REQUIRED
14 // AND IS SAFE.
15 //
16 // Module      : main.c
17 // Description  :
18 // Date        : June 2012
19 // Version     : v1.00
20 // Changelog   : v1.00 Initial
21 //
22 // Flash LED GPIO P1.3 on ADuCM360 MiniKit
23 //
24 //=====
25 #include "ioaducm360.h"
26 //=====
27 //=====
28
29 void Delay(void);
30
31 //=====
32 // main demo function
33 //=====
34 int main (void)
35 {
36
37 // Initialise
38 T3CON = 0;           // Turn off watchdog - is enabled by default after RESET
39
40 // CLKCON0 = 0x0000; // 16 MHz
41
42 GP1CON = 0;         // All Pin GPIO
43 GP1OEN = (1 << 3); // LED on MiniKit on GPIO P1.3 output enabled
44
45 // Main Loop
46 while(1)
47 {
48     GP1TGL = (1 << 3); // toggle LED on GPIO P1.3
49     Delay();
50 }
51 }
52
```