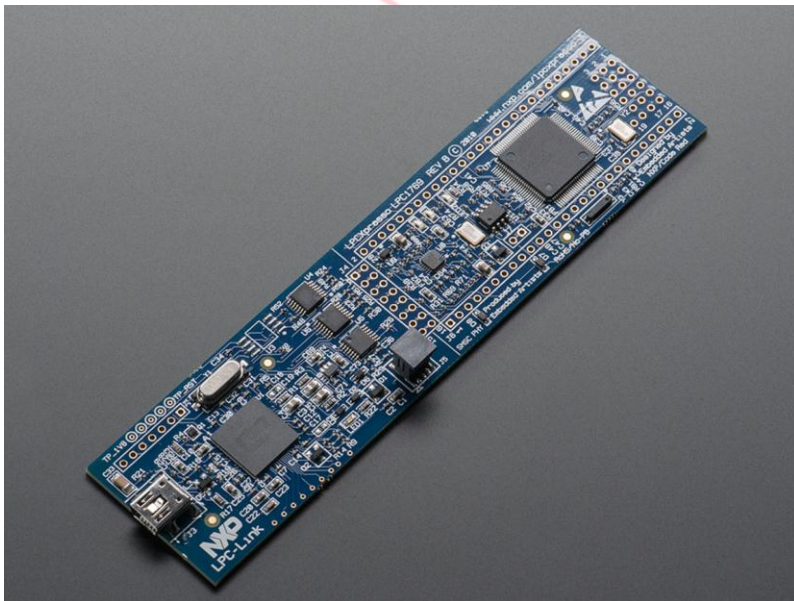


2015



Read Push Button with NXP LPC1769 using LPCXpresso



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Reviewers:

Version: 1.0

Introduction:

LPCXpresso™ is a new, low-cost development platform available from NXP supporting NXP's ARM-based microcontrollers. The platform is comprised of a simplified Eclipse-based IDE and low-cost target boards which include an attached JTAG debugger. LPCXpresso™ is an end-to-end solution enabling engineers to develop their applications from initial evaluation to final production.

Step 1: Open LPCXpresso IDE

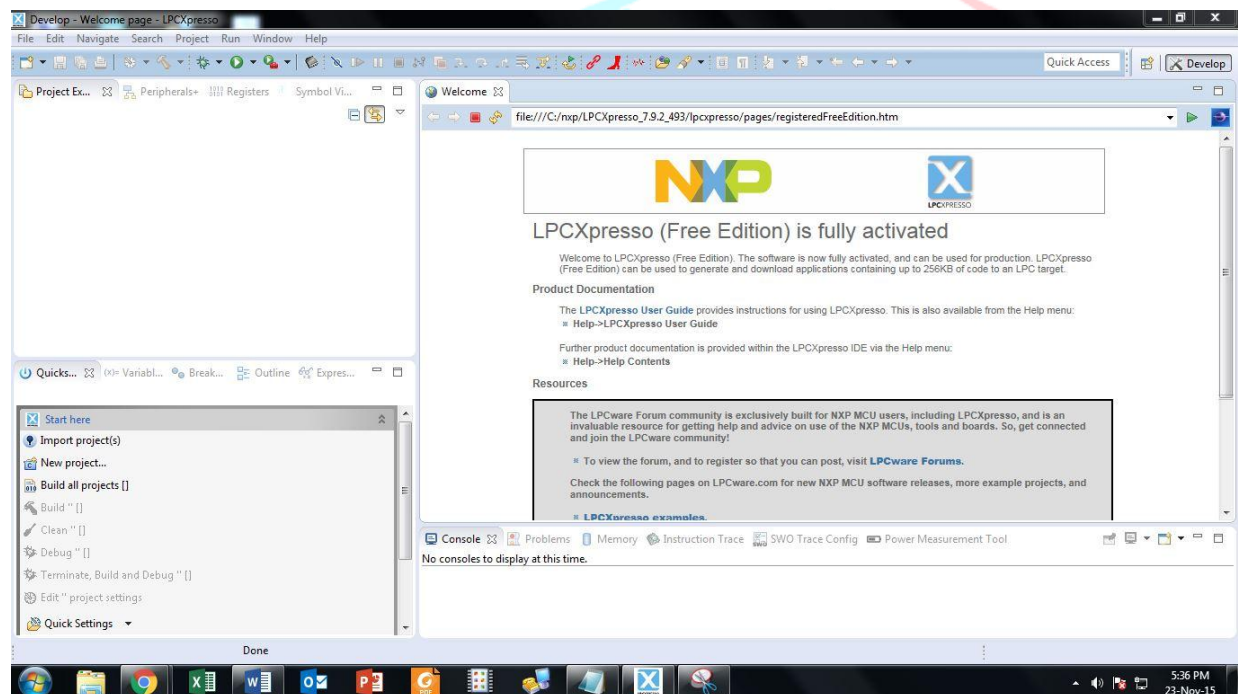


Figure 1

TENET
TECHNETRONICS

Step 2: Before writing a code, we have to Import some Library Files to the Workspace.

Click on **Import projects** on Quickstart Panel on the bottom left of the window.

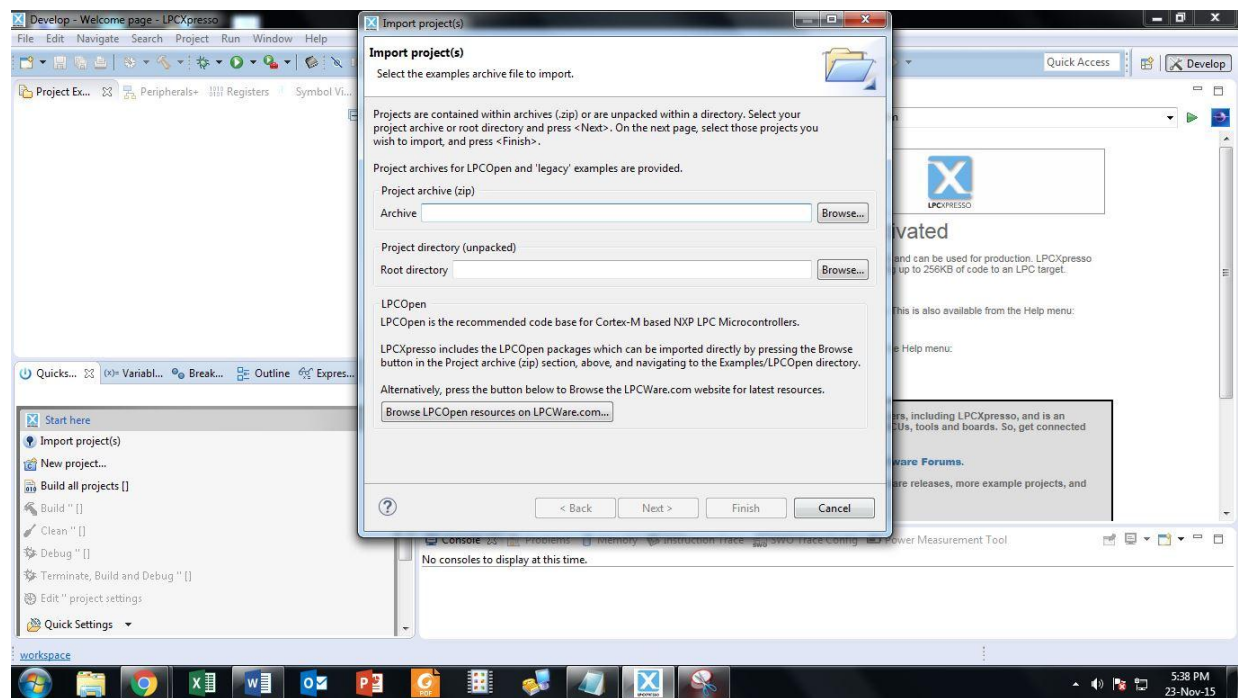


Figure 2

Step 3: Browse file, open the LPC1000 folder.

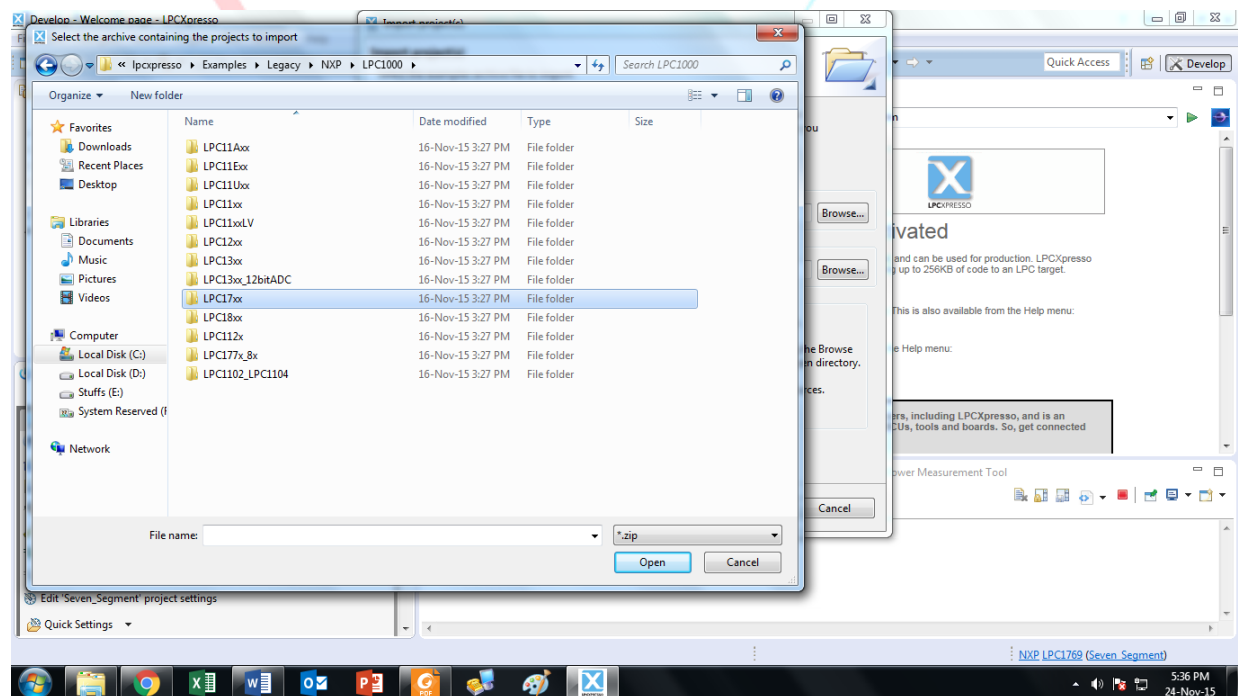


Figure 3

9/3, 2nd floor, SreeLaksmi Complex, opp, to Vivekananda Park, Girinagar, Bangalore - 560085,

Email: info@tenettech.com, Phone: 080 - 26722726

Step 4: Select the appropriate archive file. Let us select LPCXpresso176x_cmsis2. We can select CMSIS CORE library that include LPC17xx.h header file.

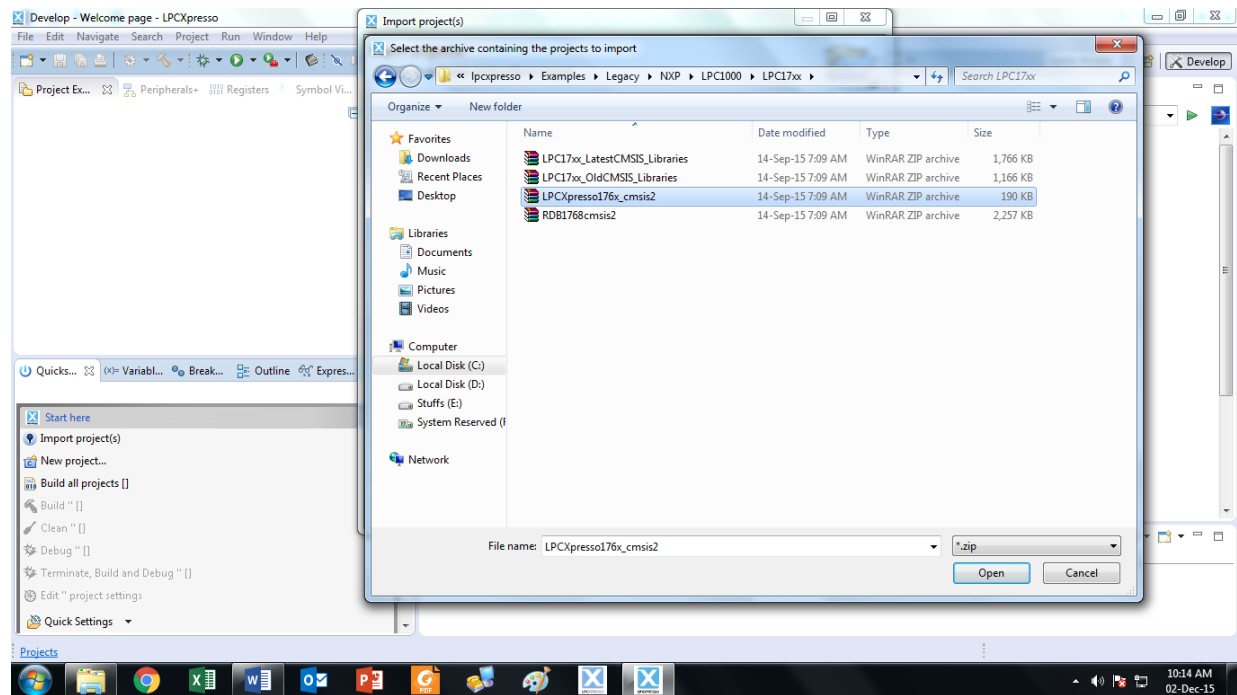


Figure 4

Step 5: After selecting you will be able to see the following libraries files. Let us select specific one.

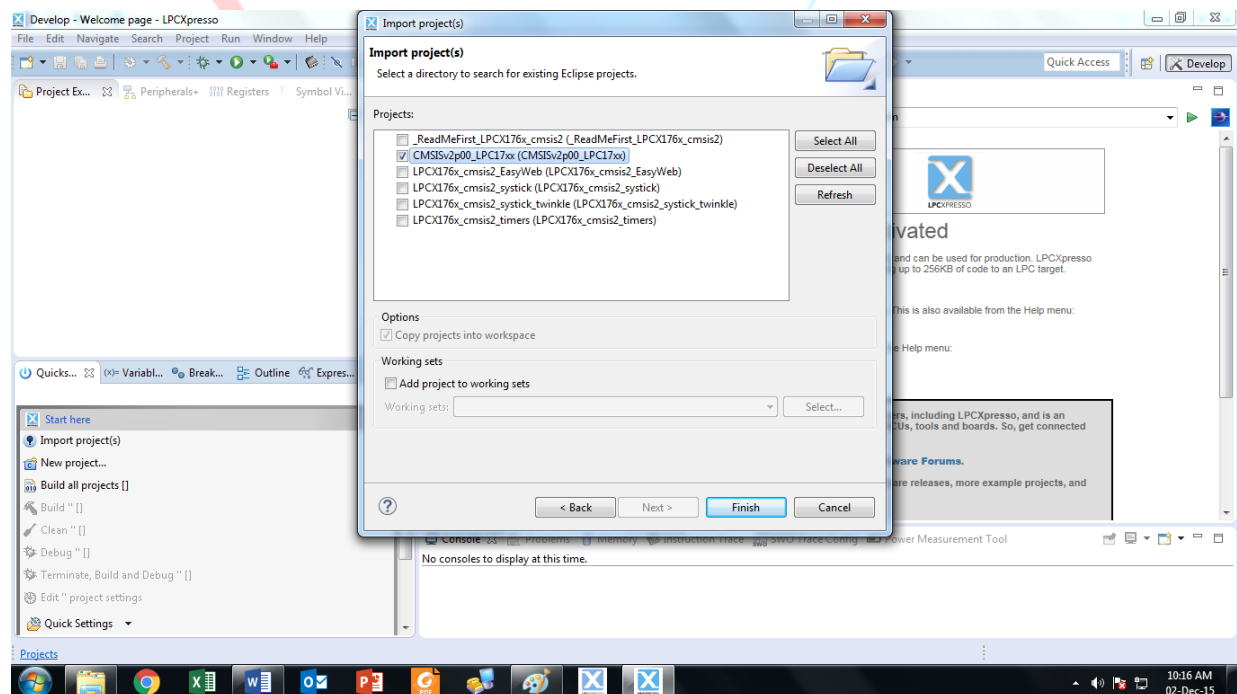


Figure 5

Step 6: Now we will be able to see those libraries in the workspace.

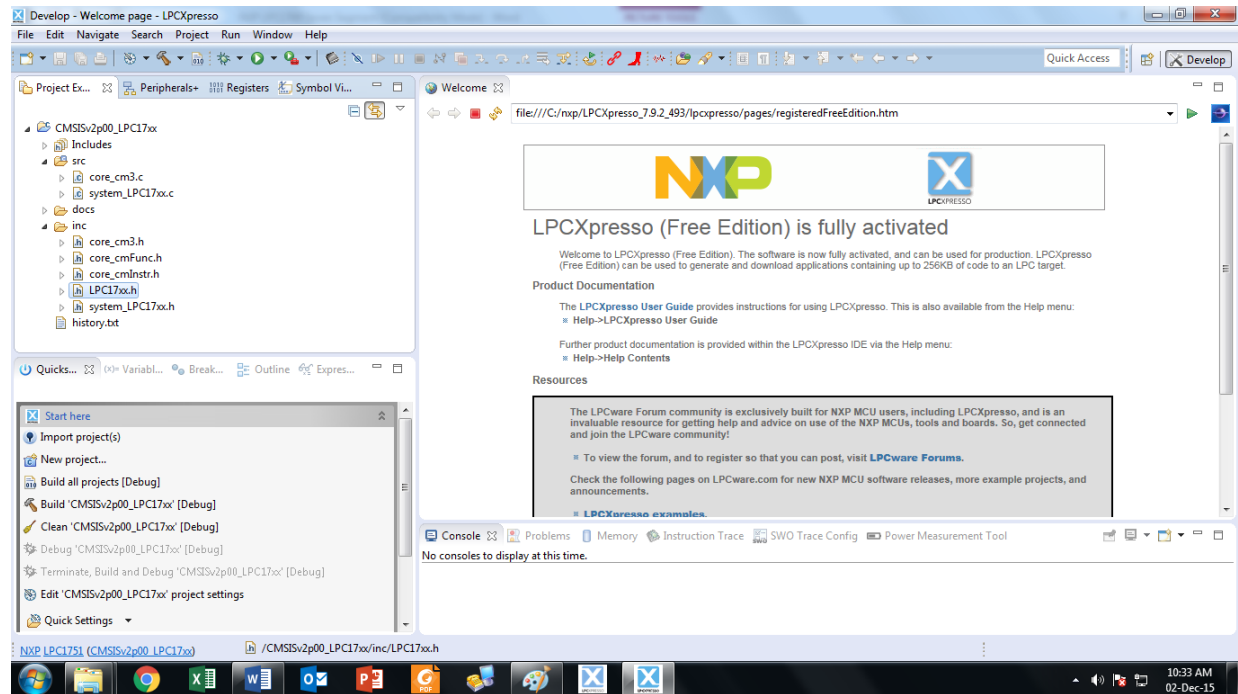


Figure 6

Step 7: Now we can start creating our new project. Goto **File >> New >> Project**. Select **LPCXpresso C project**.

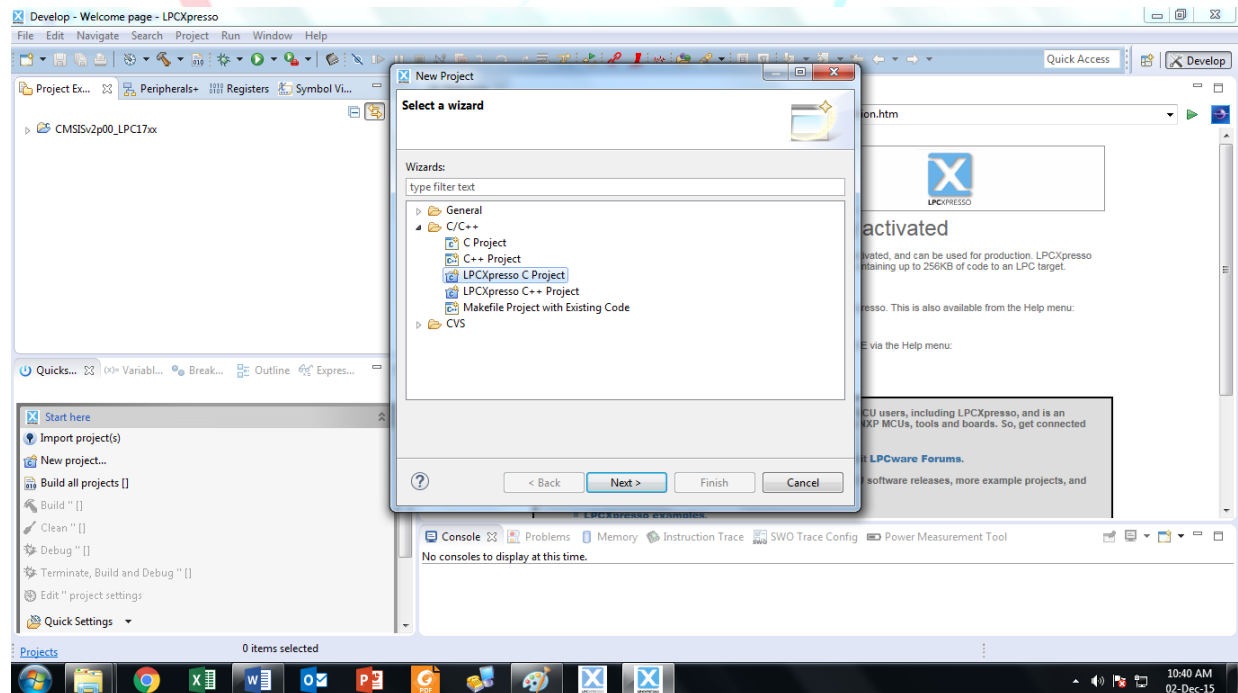


Figure 7

Step 8: Select LPC1769, **C Project** and give name to your project. Select target MCU as LPC1769.

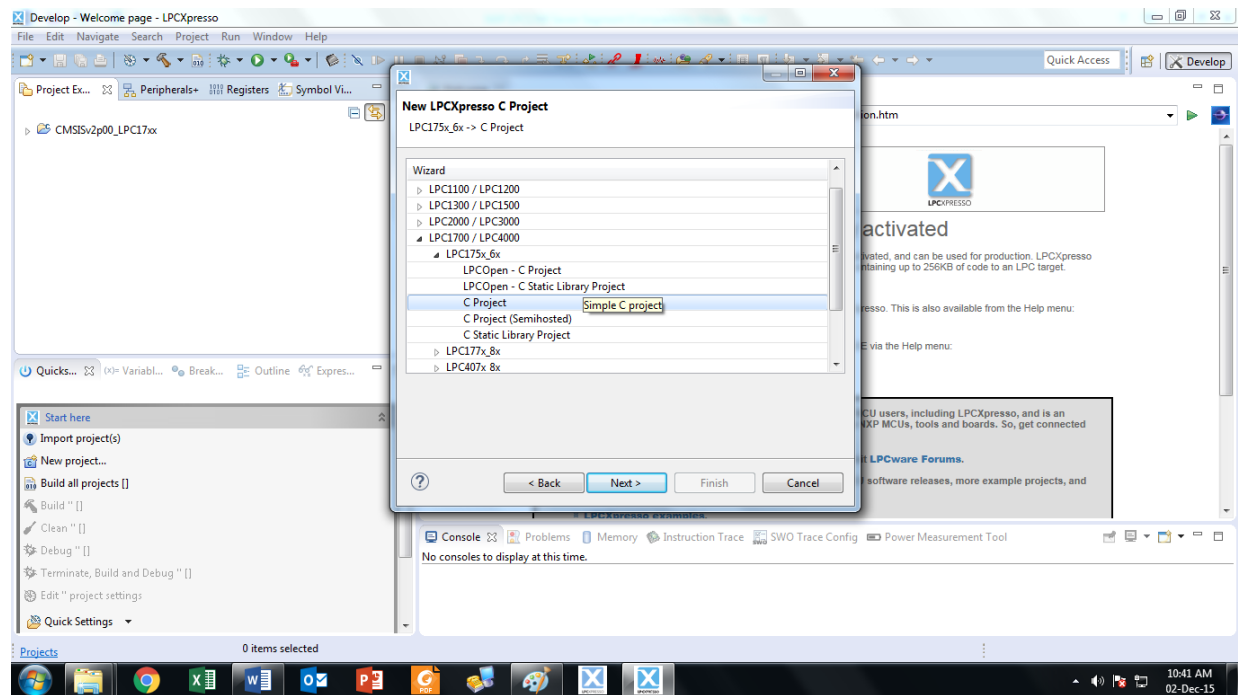


Figure 5

Step 9: Now select CMSIS Core library. Click on Next and keep all the other configurations as default and Finish.

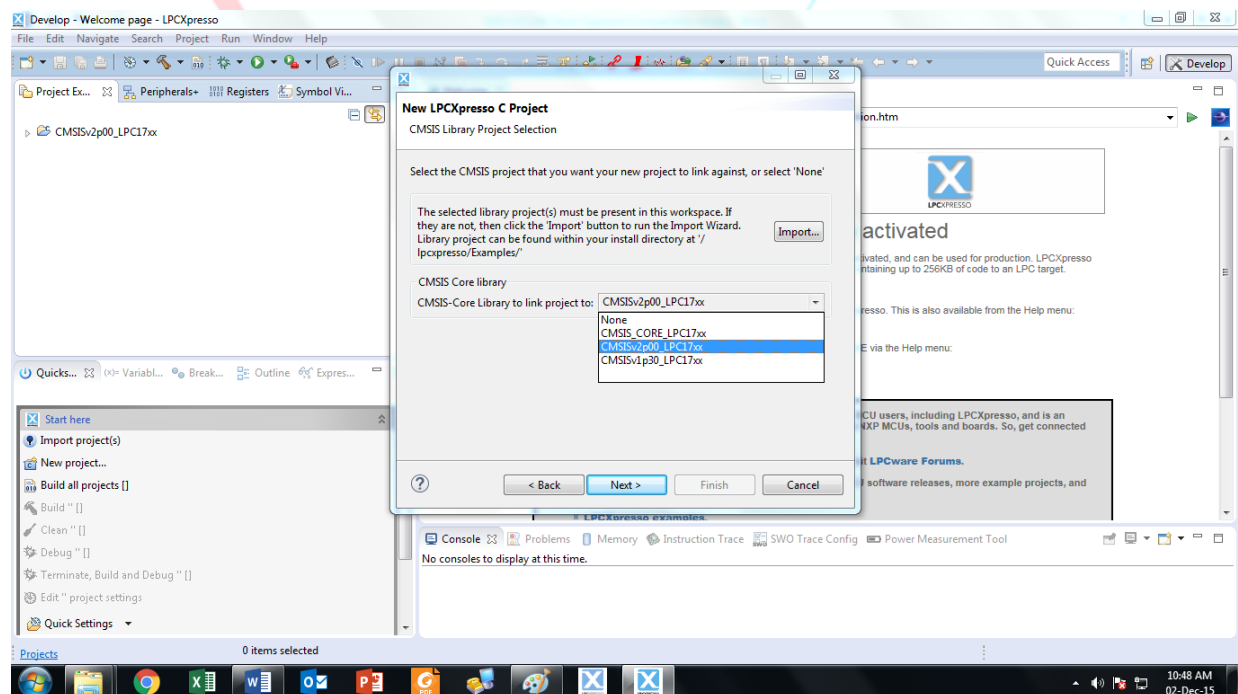


Figure 9

Step 10: Now we can see our project onto the workspace. Now by double clicking on Blink.c file, we can start writing code.

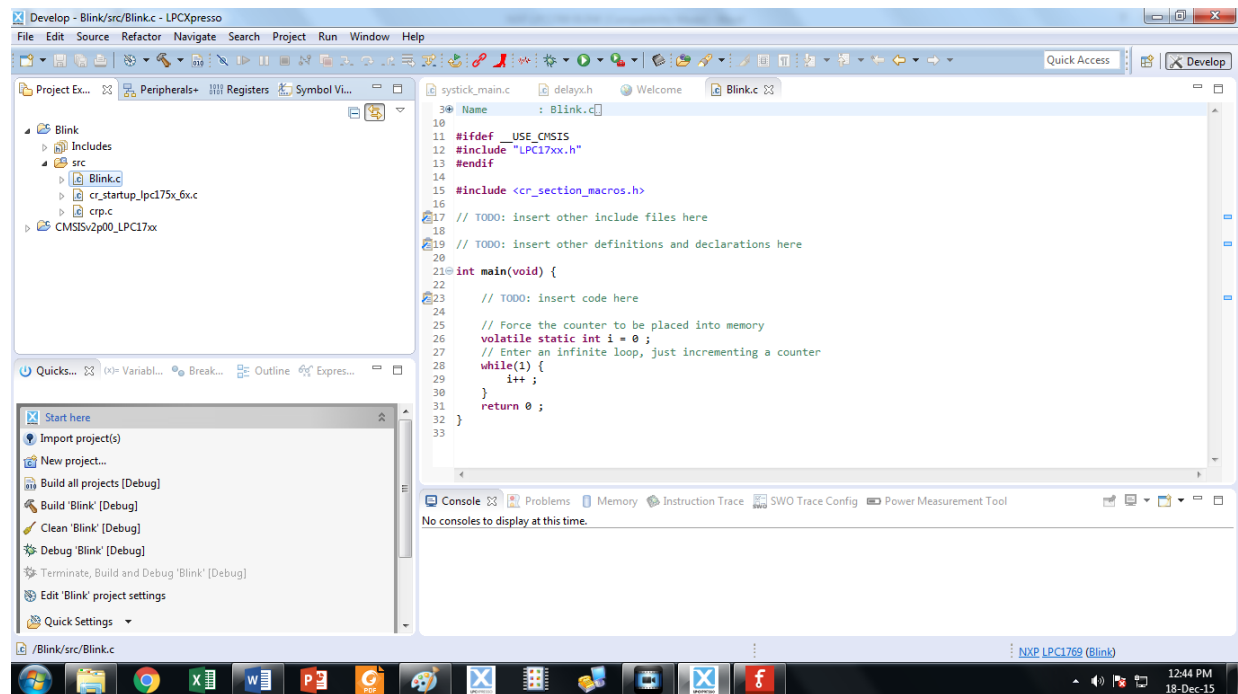


Figure 10

Step 11: Write a code as shown below.

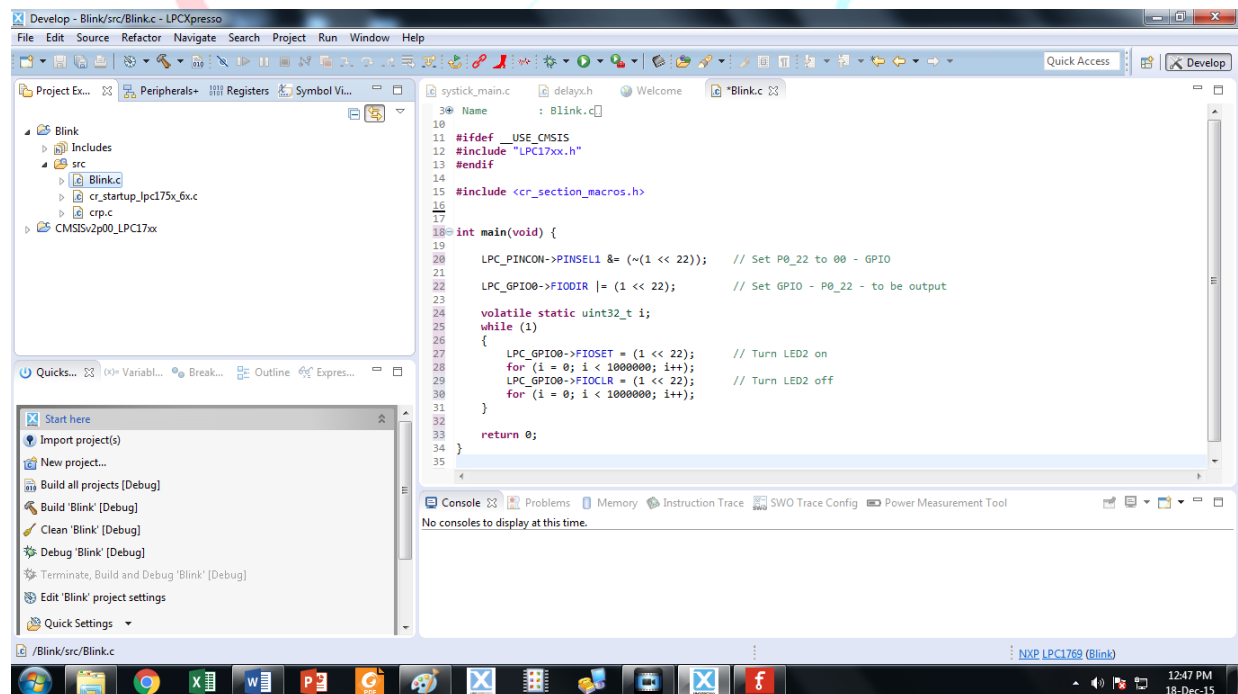


Figure 6

CODE:

```
#ifndef __USE_CMSIS
#include "LPC17xx.h"
#endif

#include <cr_section_macros.h>

int main(void)
{

    LPC_PINCON->PINSEL1 &= (~(1 << 22));    // Set P0_22 to 00 - GPIO
    LPC_GPIO0->FIODIR |= (1 << 22);          // Set GPIO - P0_22 - to be output

    volatile static uint32_t i;
    while (1)
    {
        LPC_GPIO0->FIOSET = (1 << 22);      // Turn LED2 on
        for (i = 0; i < 1000000; i++);
        LPC_GPIO0->FIOCLR = (1 << 22);      // Turn LED2 off
        for (i = 0; i < 1000000; i++);
    }
    return 0;
}
```

Step 12: After writing code, Build the project by clicking on Build Blink on the Quickstart Panel on the bottom left of the window.

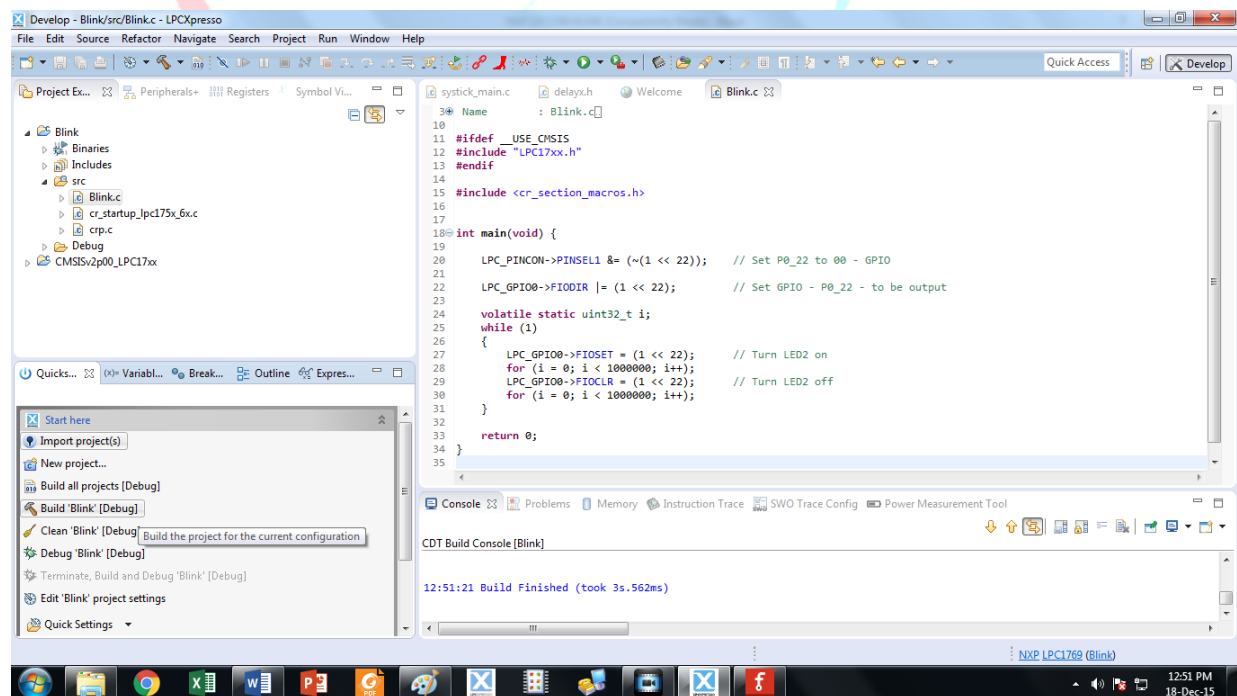


Figure 7

Step 13: Now, if all goes well connect the Micro B cable to LPC1769 and connect it to your computer. To upload the project file, click on the Program flash.

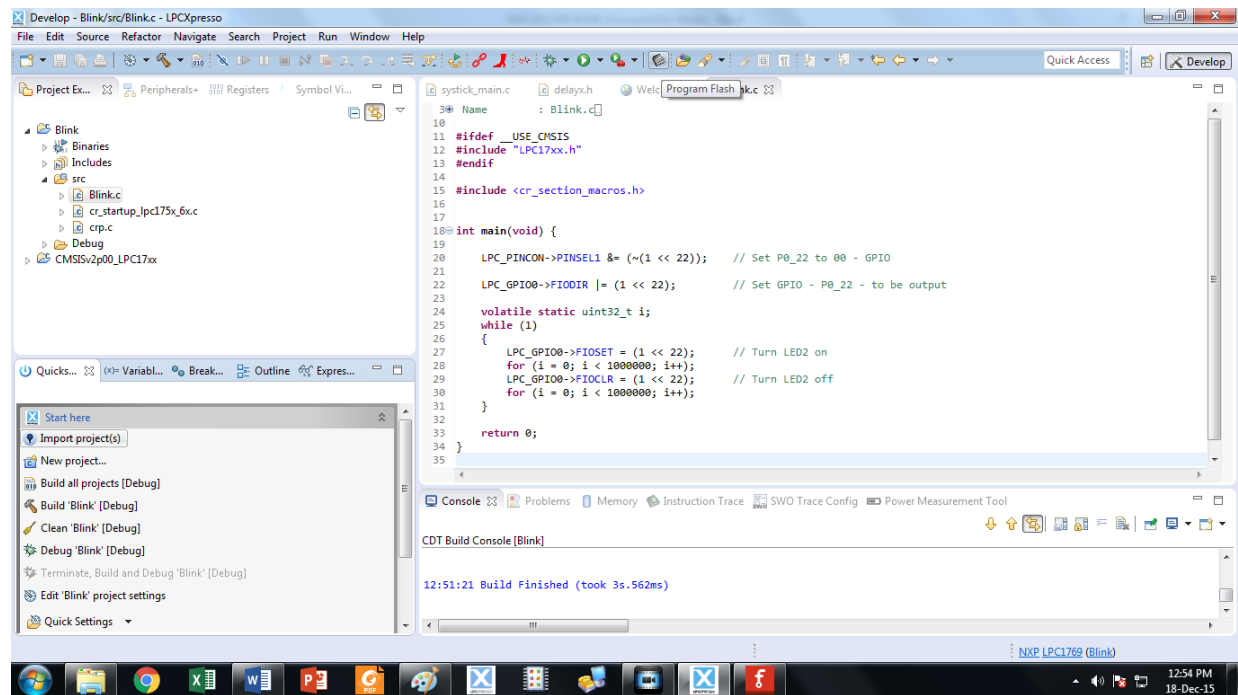


Figure 8

Step 14: Now select the Project file Blink.axf. We can find it in our project folder.

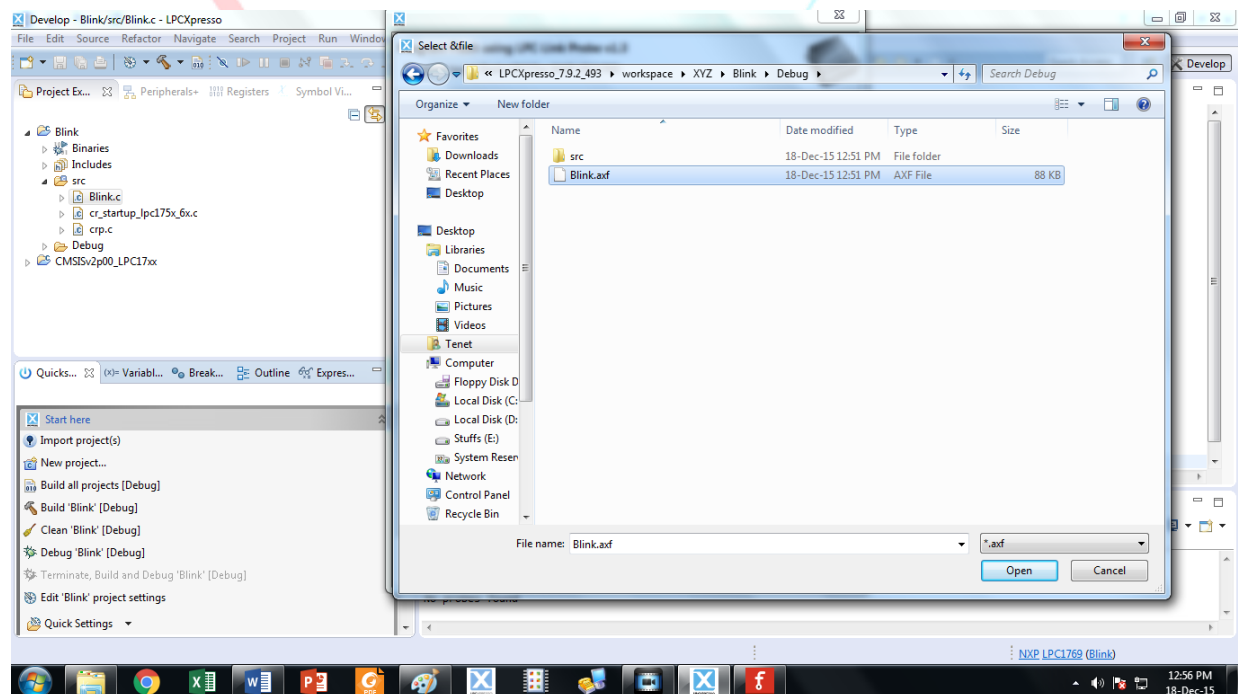


Figure 14

Step 15: Now this window shows we have finally dumped our project onto LPC1769.

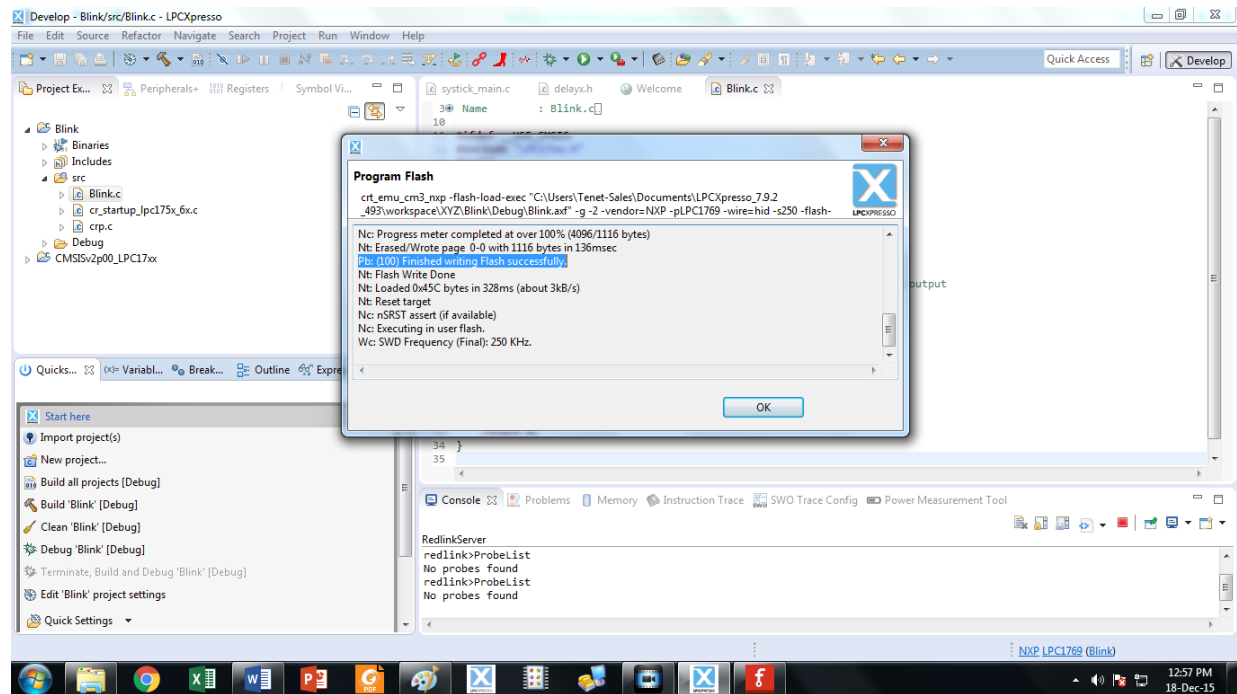


Figure 15

CONNECTION DIAGRAM:

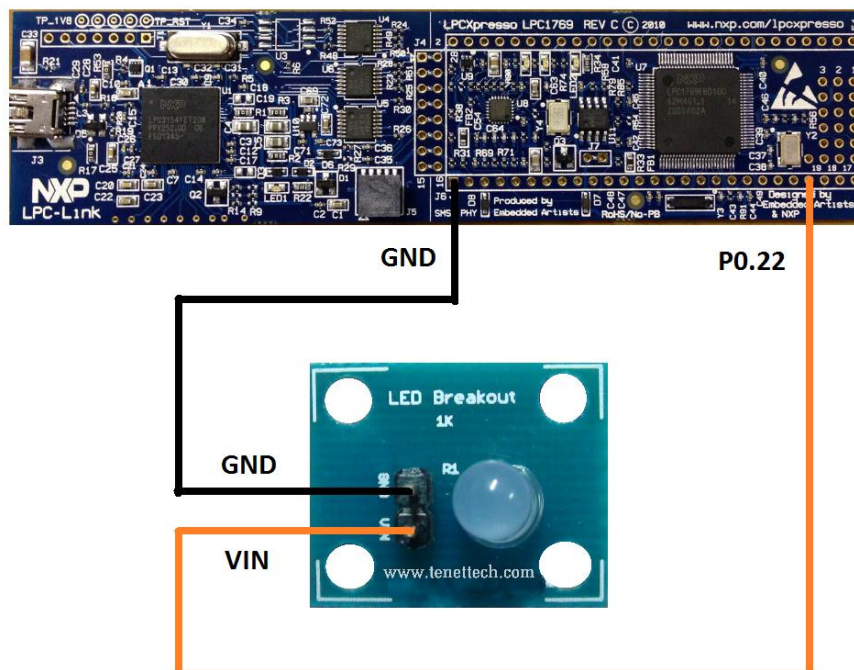


Figure 16

OUTPUT:

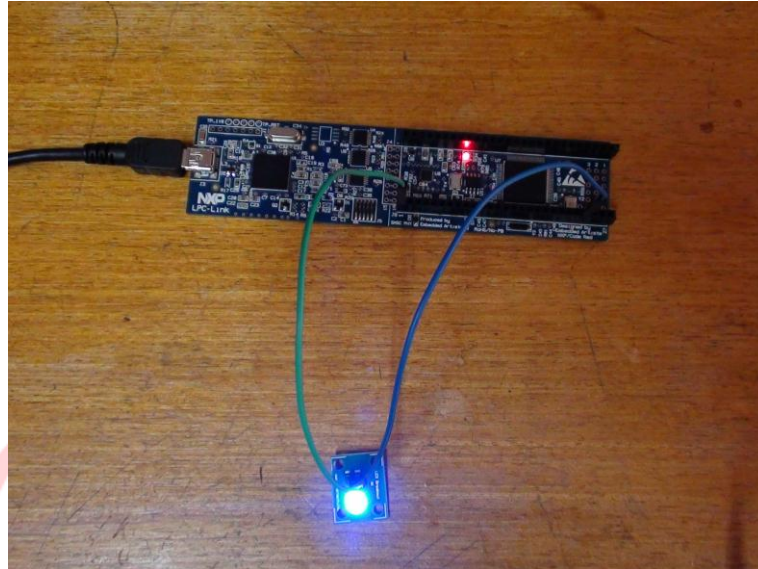


Figure 17

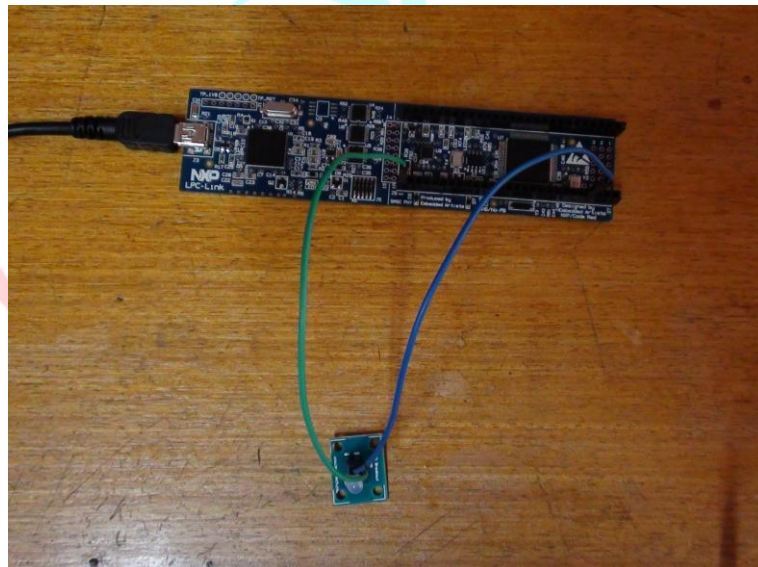


Figure 18

For product link:

1. <http://www.tenettech.com/product/1548/lpc1769-lpcxpresso-board>
2. <http://tenettech.com/product/6655/universal-gpio-board>

For more information please visit: www.tenettech.com

For technical query please send an e-mail: info@tenettech.com

