

# **USB Development Board**

## **Set-Up**

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## 1.0 Flip 2.4.2 Installation with USB Patch

A new version of the Atmel download program has just been released with an addition of a number of new devices. The updated program will allow an improved and easier download for the compiled programs to your target board or IC.

To set-up the Atmel FLIP program, follow the steps as below.

1. Firstly check the Atmel site for the latest version of Flip, the instruction below is for version 2.4.2 . The address for the Flip program is [http://www.atmel.com/dyn/products/tools\\_card.asp?tool\\_id=2767](http://www.atmel.com/dyn/products/tools_card.asp?tool_id=2767)  
Also download the necessary update which is available on the same page.
2. Now install Flip, making sure the USB Development Board is not connected to the computer.
3. Now install the patch, by copying the file `usb_dfu_inf` which is contained in the zip file on the Atmel website or in the CD with the board. This file needs to be placed in the `C:\Program Files\ATMEL\FLIP 2.4.2\usb` directory. A short message will appear, asking if you want to replace this file, click "Yes"
4. Connect power to the USB Development Board and connect the USB Cable between the computer and the USB Development board.
5. Next, put the USB Development Board in Download/Monitor Mode. This is done as follows,
  - a) Switch the USB ON/OFF Switch on the USB Development Board to the USB OFF Position
  - b) Press the PSEN and RESET pushbutton, on the USB Development Board simultaneously.
  - c) Firstly, release the RESET button
  - d) Then release the PSEN button
  - e) Switch the USB ON/OFF Switch to the USB ON Position
6. Now the 'Found New Hardware' Wizard will appear on your computer.

7. Now click on the radio button for 'Yes, this time only' as in the picture below,



Fig. 1: Found New Hardware Wizard

8. The 'Found New Hardware Wizard' will now display the following message, with what do you want the wizard to do. Click on the 'Install from a list or specific location (Advanced)' radio button.

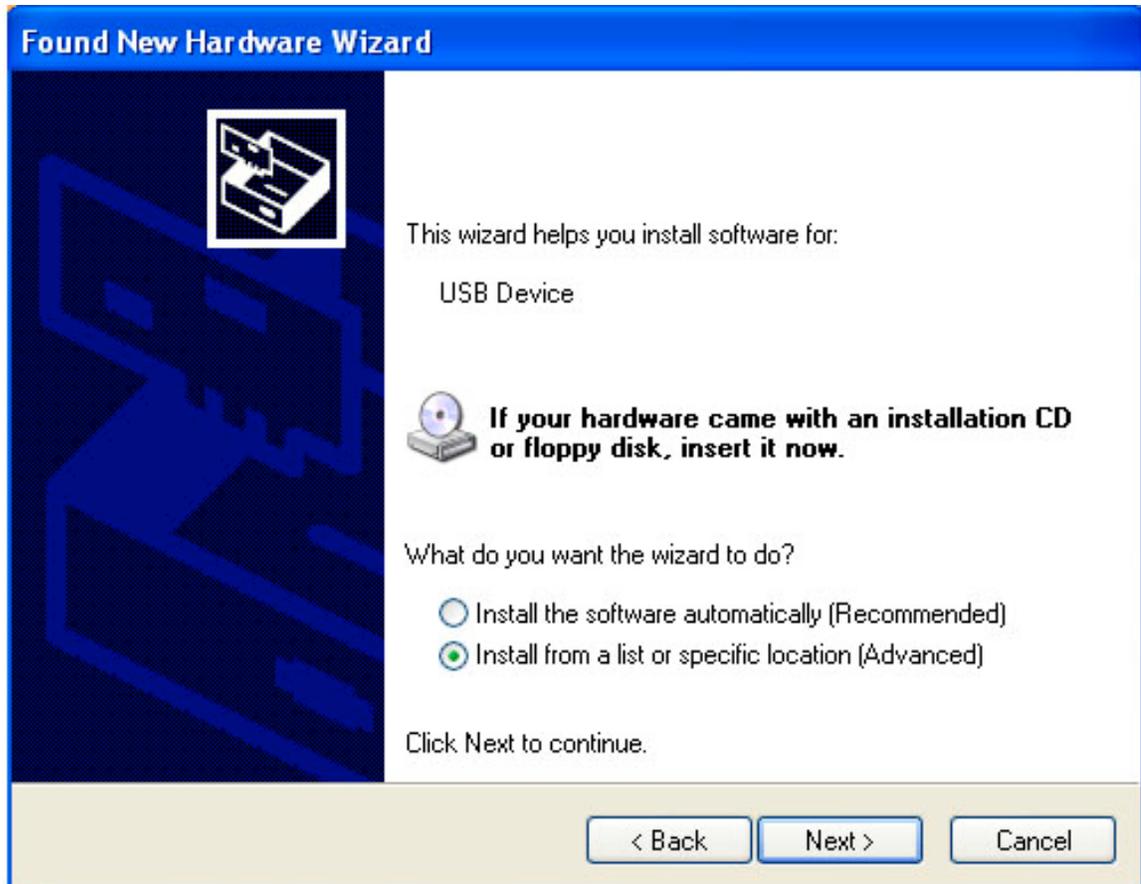


Fig. 2: Installing software from a specific location

- The following wizard will now appear.  
Check the 'Include this location in the search:' box and enter the following address 'C:\Program Files\ATMEL\FLIP 2.4.2\usb'  
Then click 'Next'.

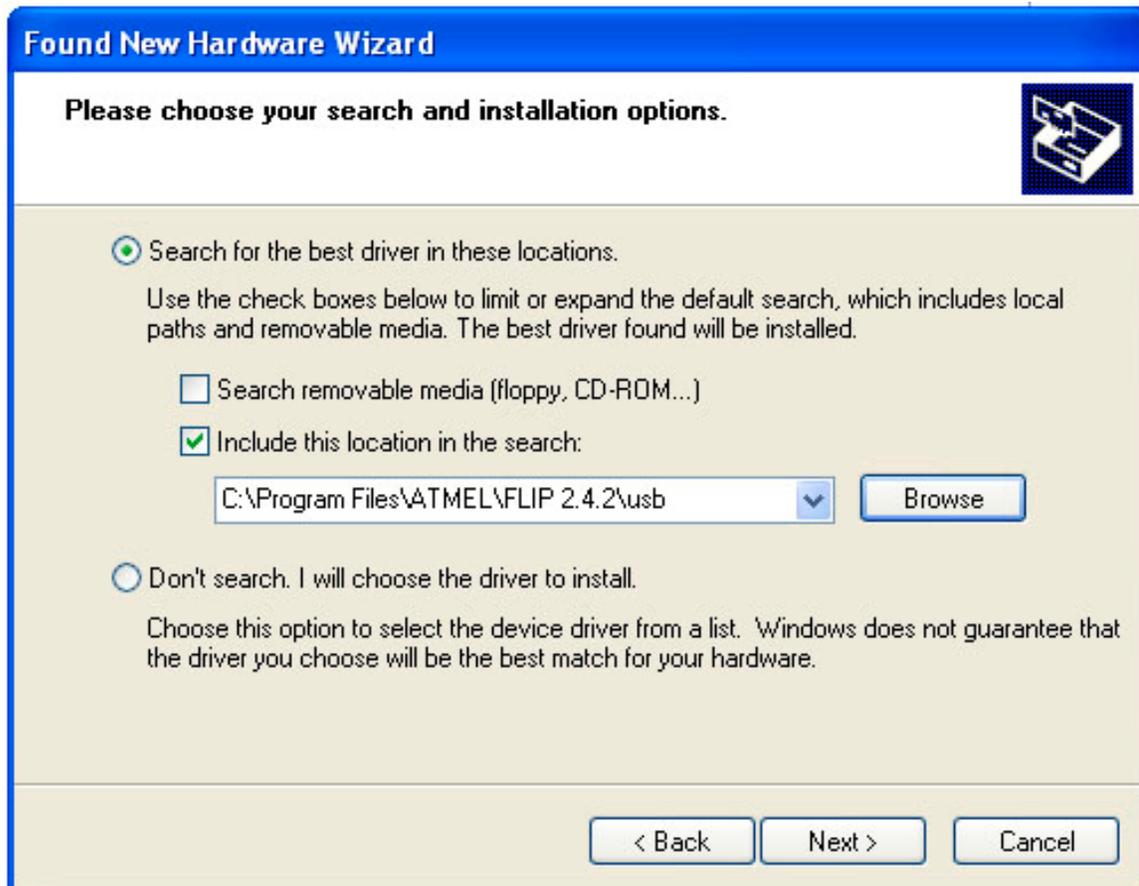


Fig. 3: Entering the address for driver installation

- Follow the steps through until complete.
- Then open the Flip program and test this by download a sample compiled program.

## 2.0 How to use the Flip program

The Atmel Flip program is quite easy to use and is suitable for many devices in the Atmel 8051 product range.

To program the USB Development Board, follow these steps,

1. Ensure power is connected to the USB Development Board
2. Switch the USB ON/OFF Switch to the USB Off position
3. Open the Atmel Flip 2.4.2 program



4. Connect the USB Cable between the computer and the USB Development board
5. Place the USB Board in the download or monitor mode by the following method,
  - a) Switch the USB ON/OFF Switch on the USB Development Board to the USB OFF Position
  - b) Press the PSEN and RESET pushbutton, on the USB Development Board simultaneously.
  - c) Firstly, release the RESET button
  - d) Then release the PSEN button
  - e) Switch the USB ON/OFF Switch to the USB ON Position

6. Go to the Flip Program and select the Device menu and click OK. The following box will appear and select the correct device, i.e. 'AT89C5131'

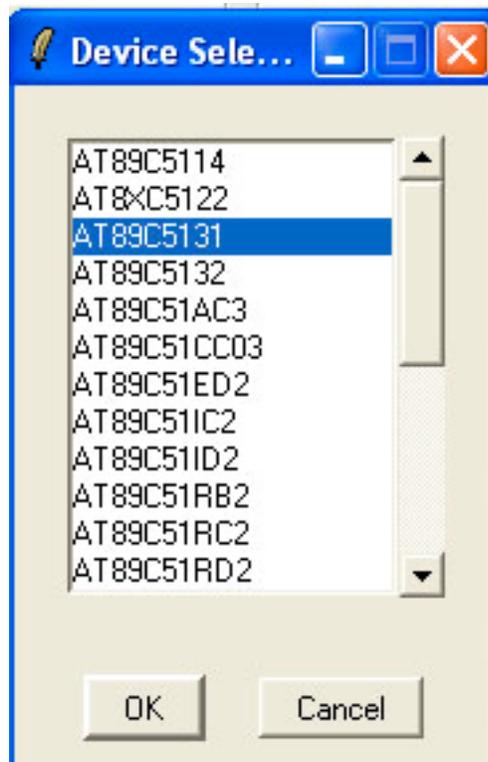


Fig. 4: Device Selection

7. Go to the settings menu and click 'Communication' and then click 'USB'. The following box will appear and click 'Open' to open the communication with the USB Development board.



Fig. 5: Opening the USB Port

8. Go to Load Hex on the File Menu and choose the program file “usb\_kbd.hex” from the sample programs on the enclosed CD-ROM. This is located in the folder - “\Source Examples\HID Keyboard demonstration software\c5131-usb-kbd-stand-alone-1\_0\_2”

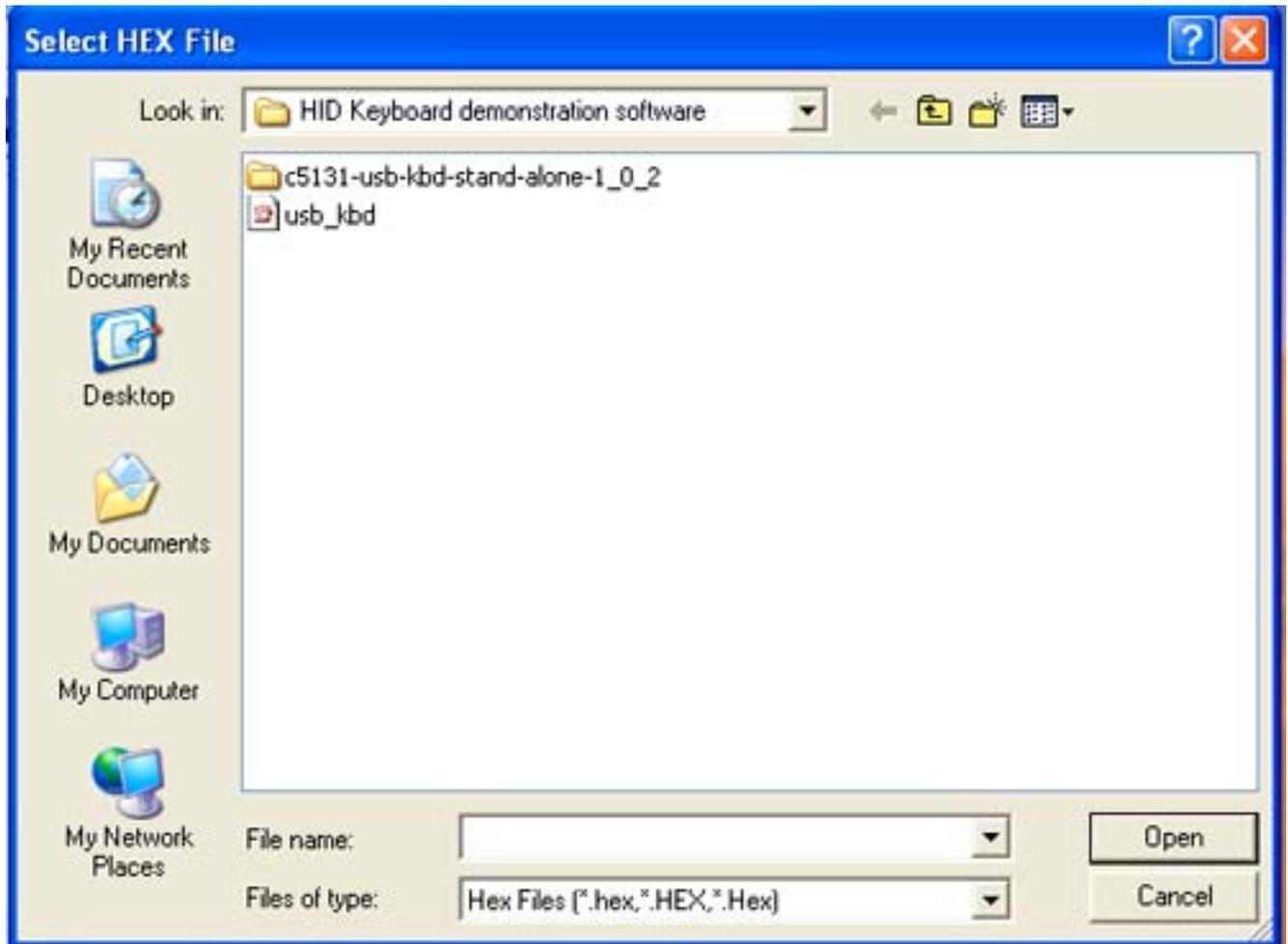


Fig 6: Opening the Hex File

9. Check the following boxes in the Operations Flow Section,

- Erase
- Blank Check
- Program
- Verify

10. Do Not check on the BLJB box

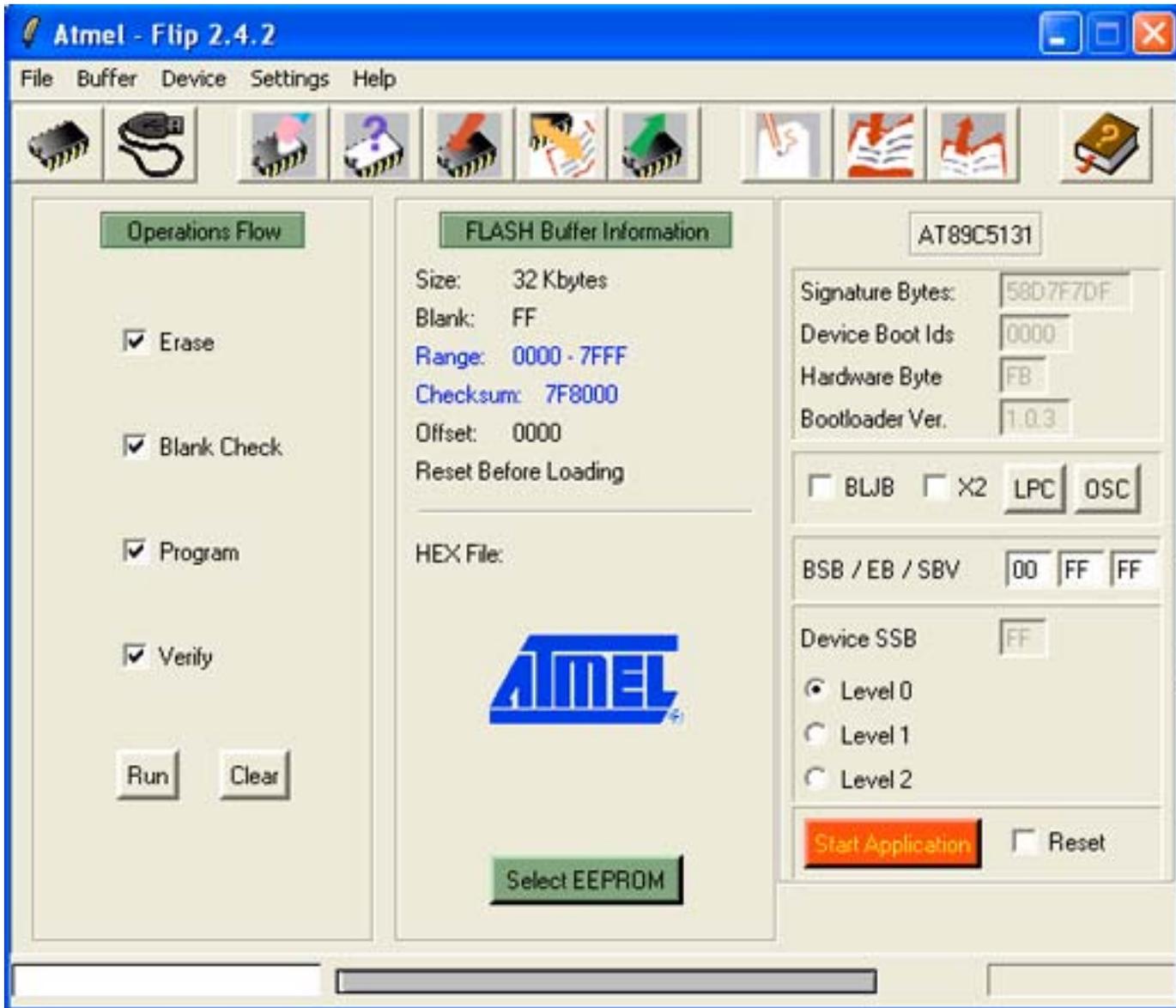


Fig 7: Check the following boxes

11. Then Click 'Run' to download the program

12. When this is complete a message will appear and you can then click on 'Start Application' to commence running the program.



### 3.0 Resolving Problems

If it is not possible to connect to the board and the message shows that “USB Device Not Recognized” on the computer screen.

Check that the USB ON/OFF switch is in the USB OFF position before attempting to connect to the USB Development Board.