USB
AVR and AT89Sxx
ISP Programmer

1. About USB AVR and AT89Sxx ISP Programmer

USB AVR and AT89Sxx ISP Programmer is low cost USB based programmer. This programmer will work with a wide variety of Atmel AVR and AT89Sxx microcontroller. They quite compact, but the design is really elegant. The USB interface is achieved by using an atmega8 processor and the rest is done in firmware.

2. Features

- Allows you to read or write the microcontroller flash, EEPROM, fuse bit and lock bits.
- Support for Windows, Mac OS X and Linux.
- SCK option to support targets with low clock speed (<1.5MHz).
- 5KB/sec Maximum write speed.
- There is 5V supply option for target so no need of any external supply.
- 6 pin polarized ISP interface.

3. Supported Software

- AVRdude - Version 5.2 or later. AVRdude is available for many platforms.[1]
- Khazama AVR Programmer - Windows XP/Vista GUI application for USBasp and avrdude.[1]
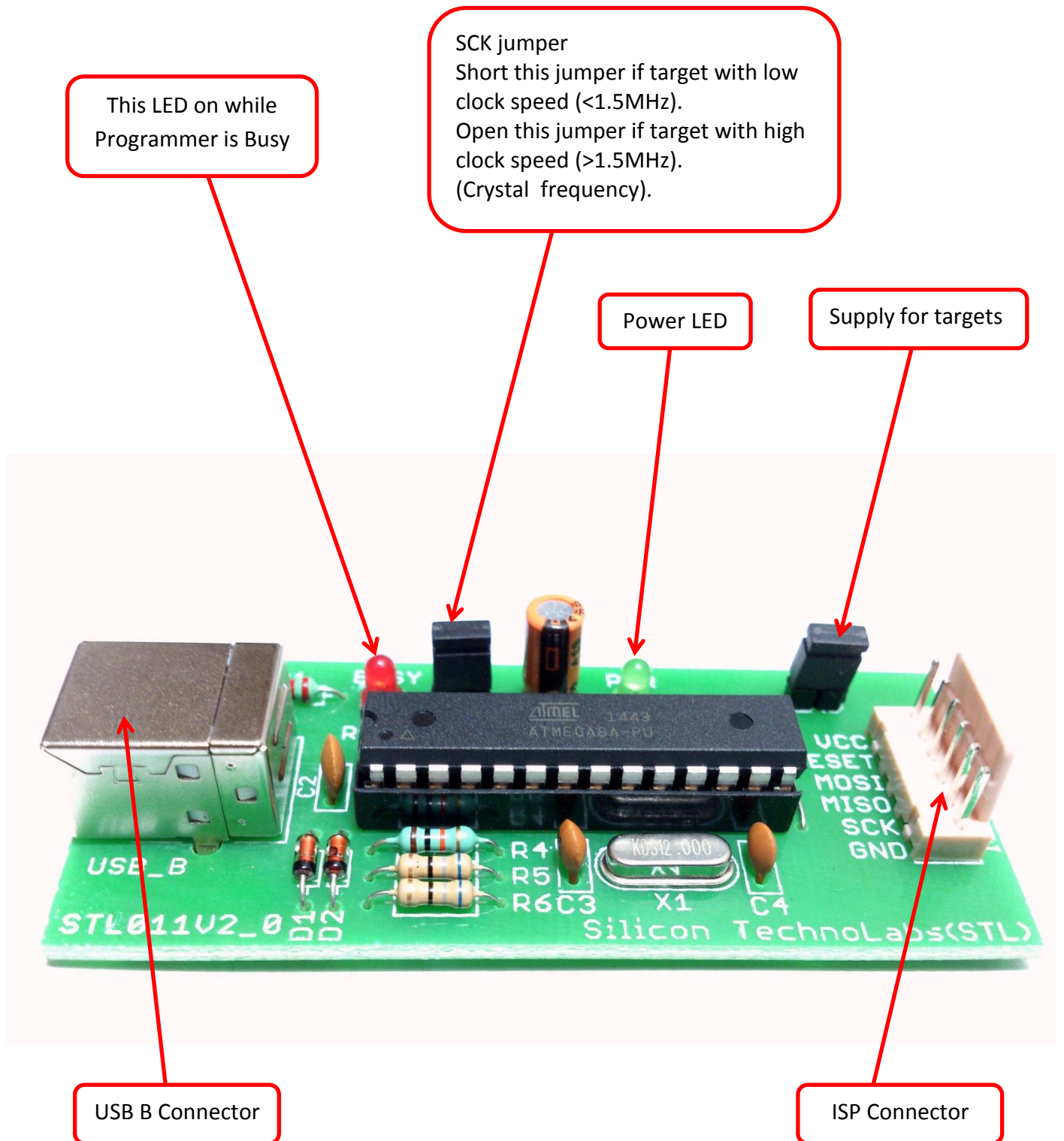- Progisp - Windows GUI application for AVR and AT89Sxx.[2]

Note:

1. **Khazama AVR Programmer And AVRdude does not support AT89SXX.**
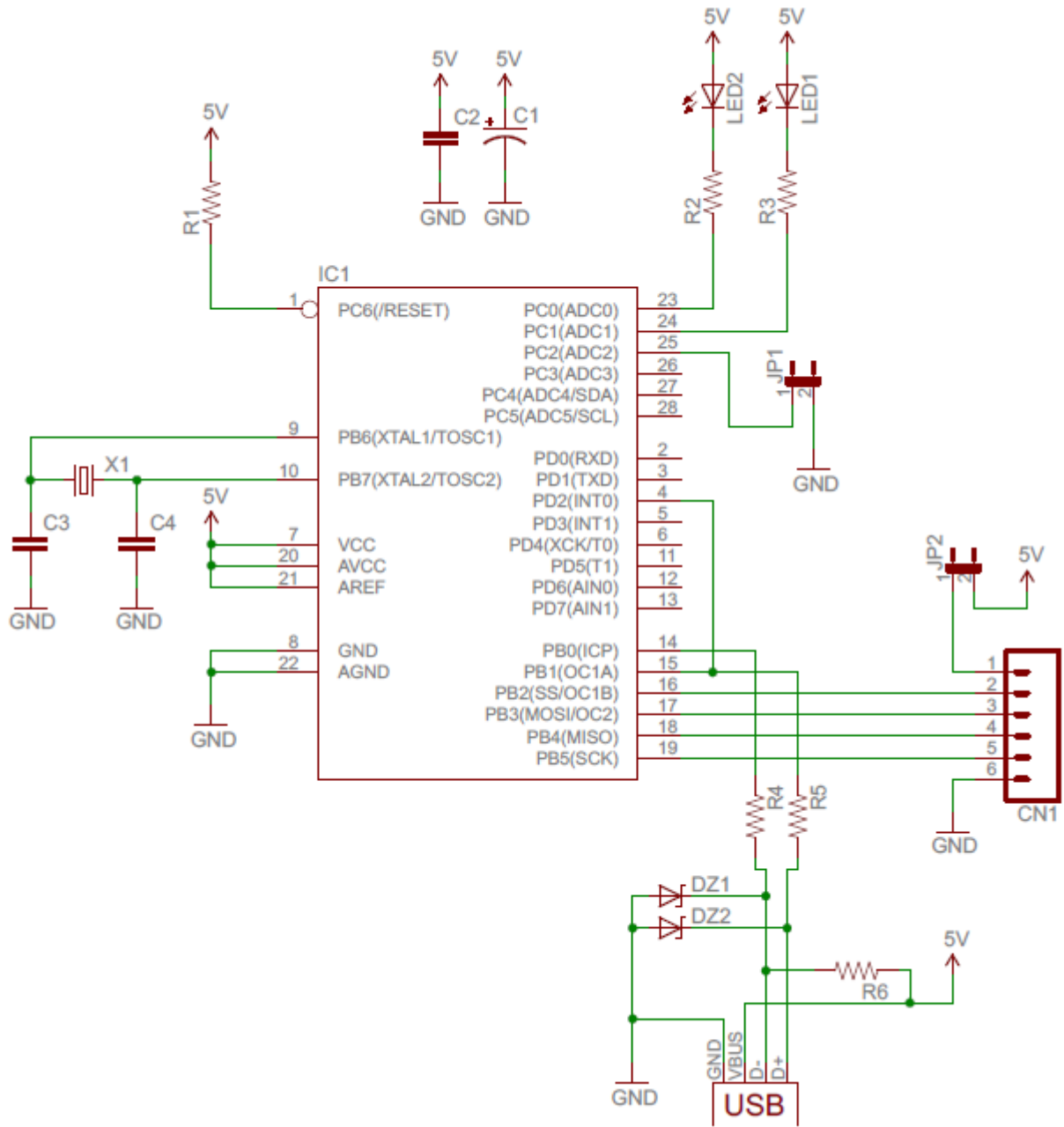2. **Progisp support both AVR and AT89SXX controller.**

4. Specifications

- Size: 74 x 37 x 12mm
- Supported Microcontroller:
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ATmega Series				
ATmega8	ATmega8A	ATmega48	ATmega48A	ATmega48P
ATmega48PA	ATmega88	ATmega88A	ATmega88P	ATmega88PA
ATmega168	ATmega168A	ATmega168P	ATmega168PA	ATmega328
ATmega328P	ATmega103	ATmega128	ATmega128P	ATmega1280
ATmega1281	ATmega16	ATmega16A	ATmega161	ATmega162
ATmega163	ATmega164	ATmega164A	ATmega164P	ATmega164PA
ATmega169	ATmega169A	ATmega169P	ATmega169PA	ATmega2560
ATmega2561	ATmega32	ATmega32A	ATmega324	ATmega324A
ATmega324P	ATmega324PA	ATmega329	ATmega329A	ATmega329P
ATmega329PA	ATmega3290	ATmega3290A	ATmega3290P	ATmega64
ATmega64A	ATmega640	ATmega644	ATmega644A	ATmega644P
ATmega644PA	ATmega649	ATmega649A	ATmega649P	ATmega6490
ATmega6490A	ATmega6490P	ATmega8515	ATmega8535	
Tiny Series				
ATtiny12	ATtiny13	ATtiny13A	ATtiny15	ATtiny25
ATtiny26	ATtiny45	ATtiny85	ATtiny2313	ATtiny2313A
Classic Series				
AT90S1200	AT90S2313	AT90S2333	AT90S2343	AT90S4414
AT90S4433	AT90S4434	AT90S8515		
AT90S8535				
CAN Series				
AT90CAN128				
PWM Series				
AT90PWM2	AT90PWM3			
AT89Sxx Series				
AT89S51	AT89S52	AT89S53		

5. Hardware Details

This LED on while Programmer is Busy

SCK jumper
Short this jumper if target with low clock speed (<1.5MHz).
Open this jumper if target with high clock speed (>1.5MHz).
(Crystal frequency).

Power LED

Supply for targets

USB B Connector

ISP Connector

6. Schematics

7. Installation

In order to complete the installation, you need to follow several steps:

The first step is to connect the AVR & AT89Sxx ISP programmer to the USB port of your PC through USB-A to B cable. The AVR & AT89Sxx ISP programmer will work on a wide variety of operating systems, this procedure will only focus on Window 7.

Required items

    A.   AVR & AT89Sxx ISP programmer.
    B.   USBasp drivers can be downloaded from <u>here.</u>

**Procedure to install the AVR & AT89Sxx ISP programmer**

    A.   Connect programmer to available USB port in your PC through USB cable.
    B.   Go into the device manager and find the entry for the USBasp and it should be displayed with a yellow alert icon on it. Then right click on the device and select "**Update Driver Software**".
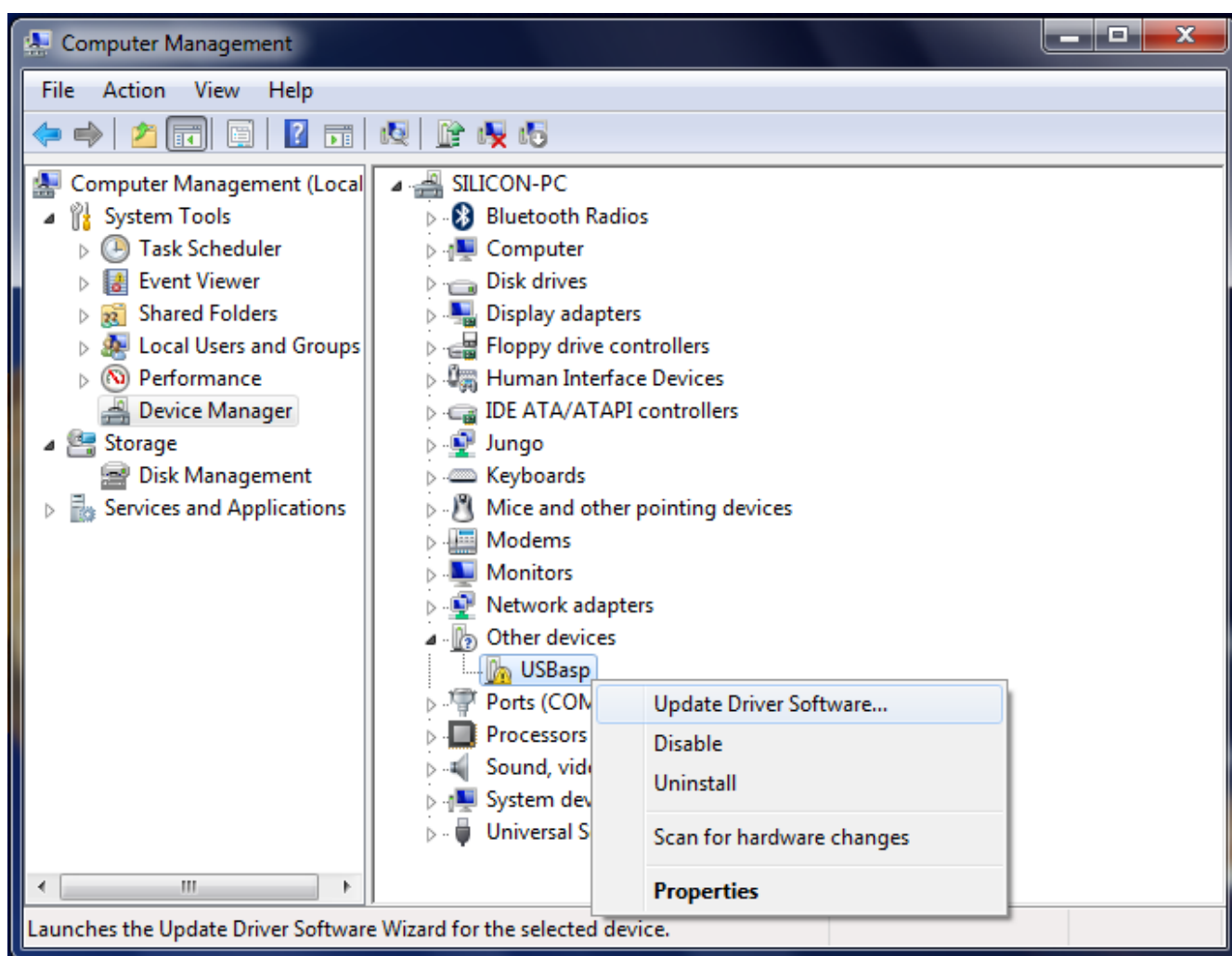
C. After you left click the "**Update Driver Software**", it will come out with "How **do you want to search for driver software?**" Then choose the second one which is "**Browse my computer for driver software**" and click into it.
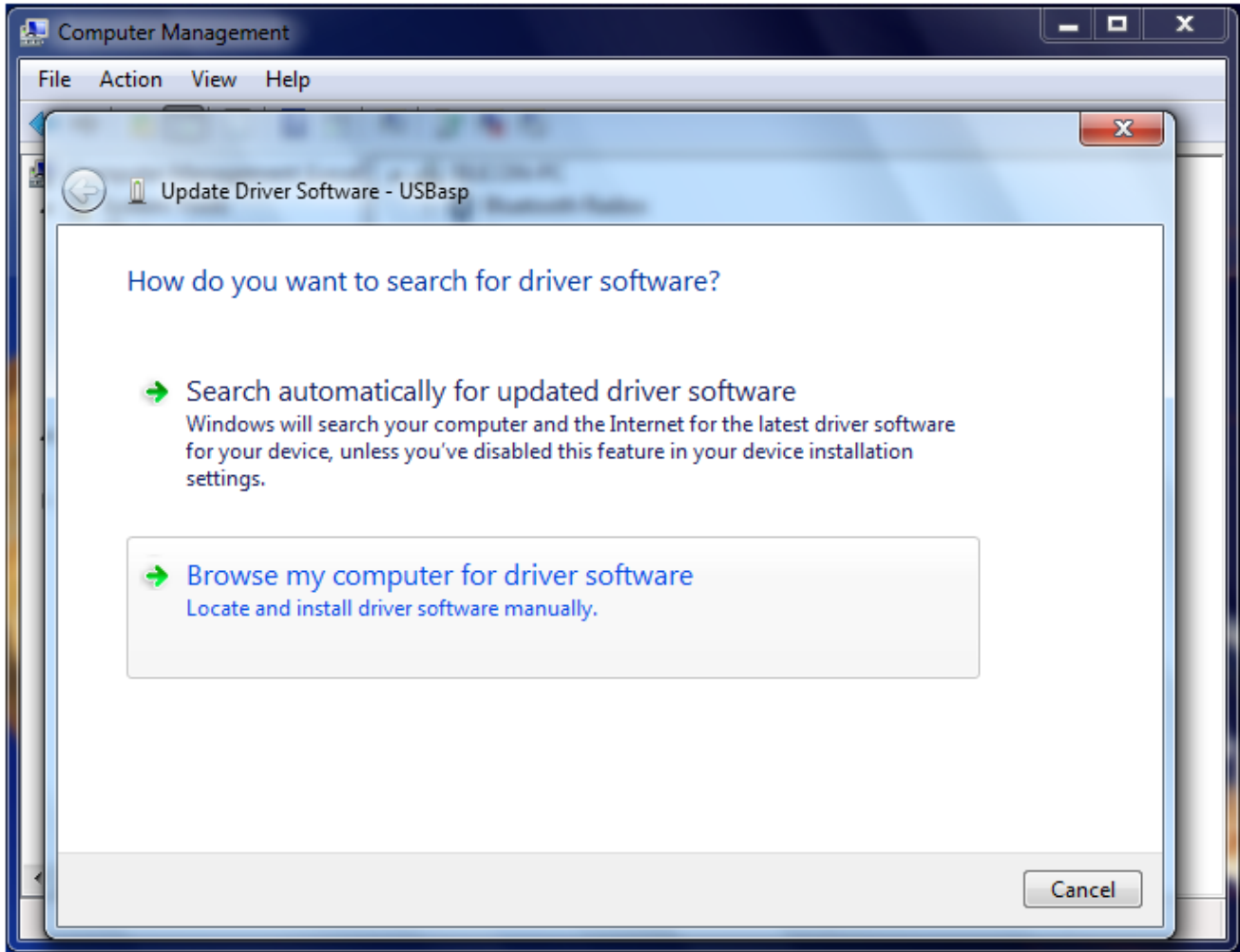
D. After that, you will see the screen which will prompt out "**Browse for driver software on your computer**". In this step, you need to select the folder where you unzipped the driver files then click "**Next**".
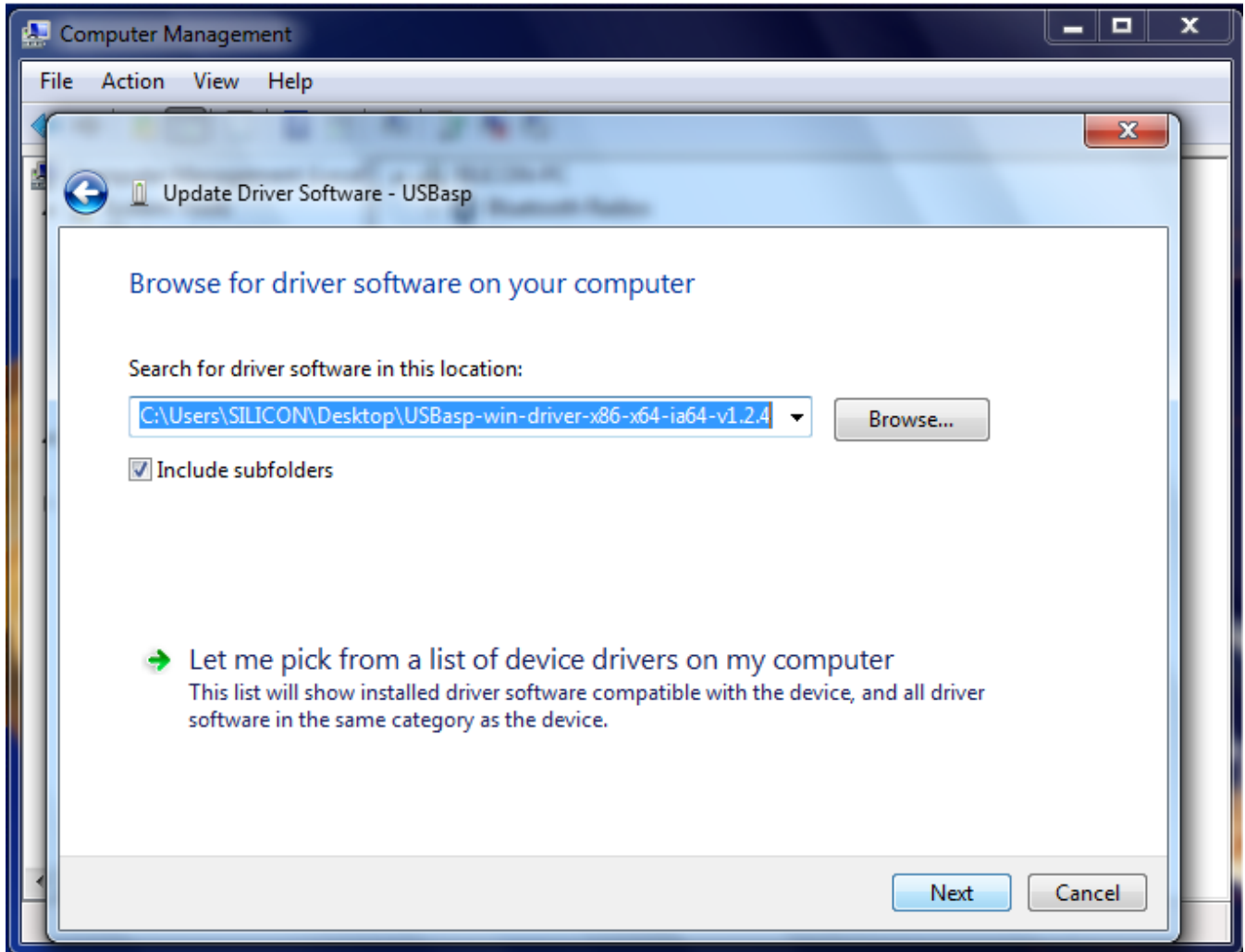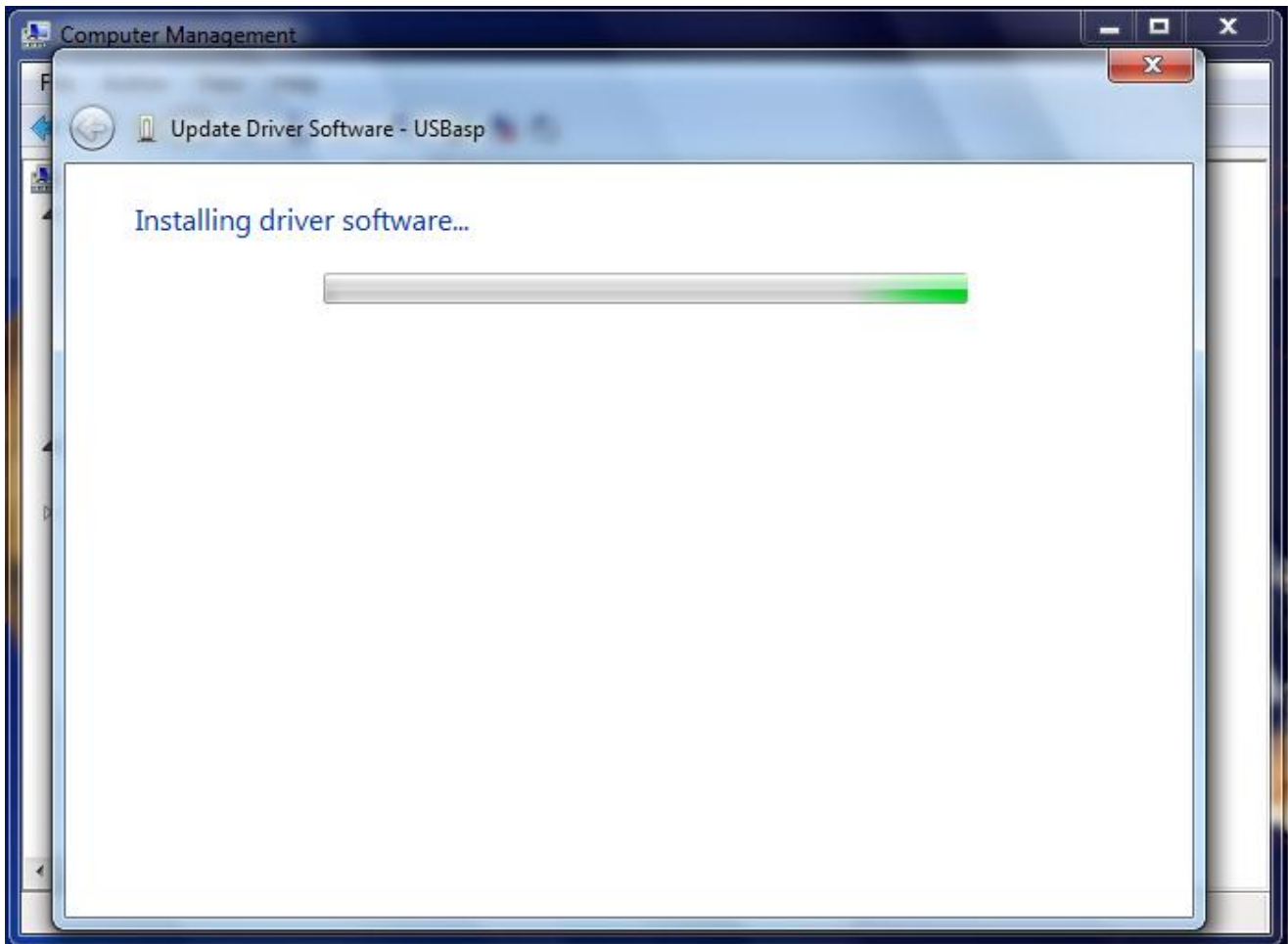
E. Next, the windows will prompt out a "**Windows Security**" with a red warning dialog. Do not worry about it, and just click "**Install this driver software anyway**" and the driver will install.
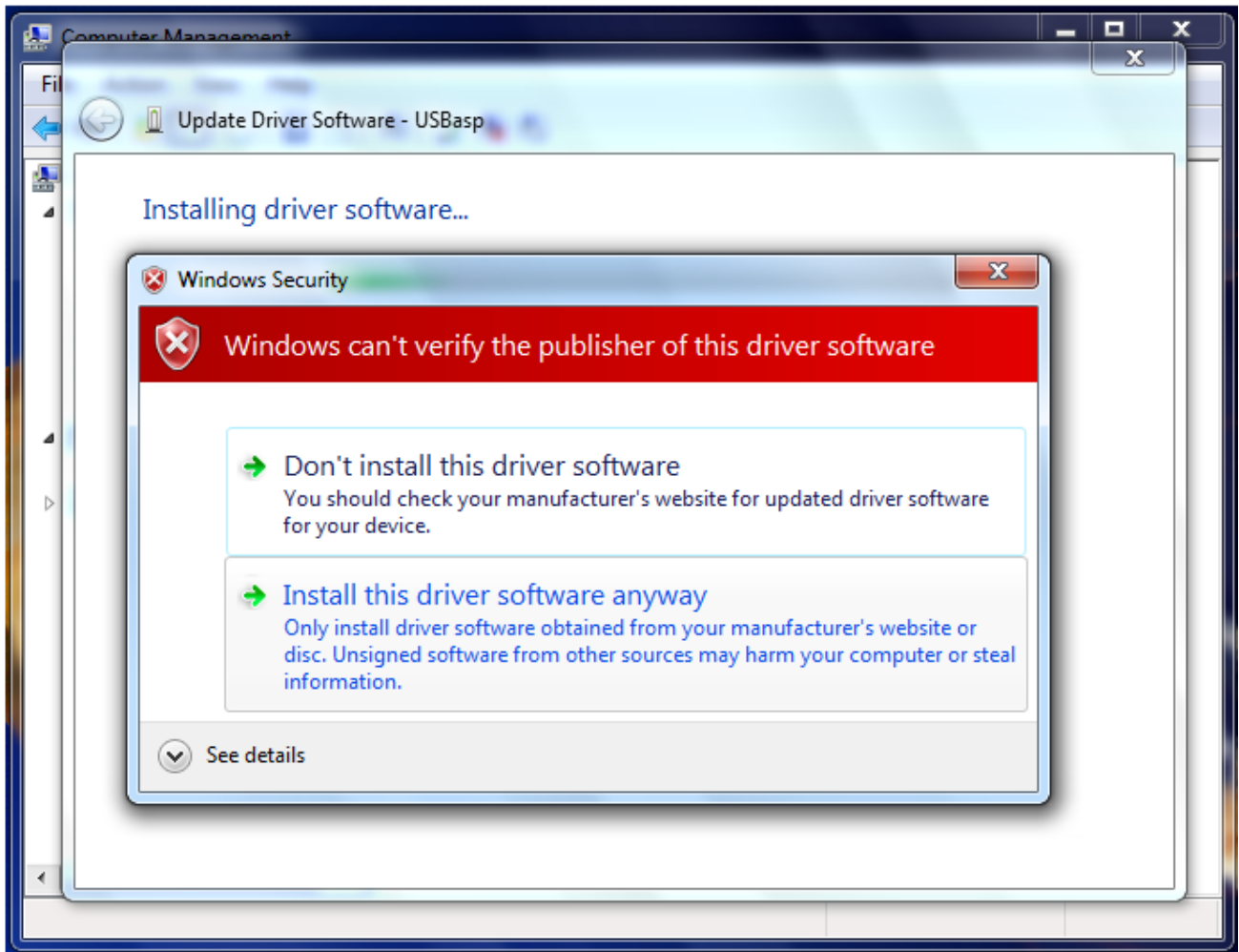
F. After click it, the next step is to wait a few seconds to let your computer to process the installation of driver software.

G. Now, you can use the Programmer to do the programming for the microcontroller.