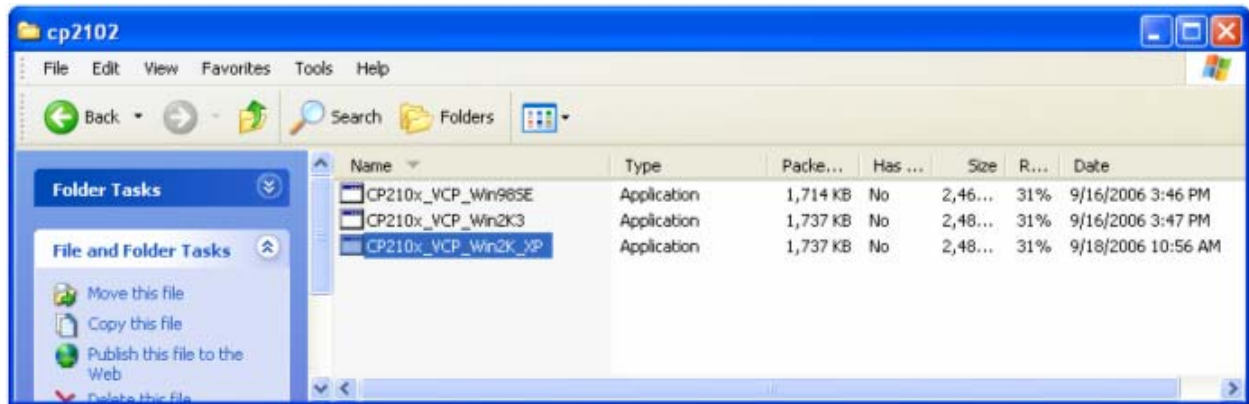
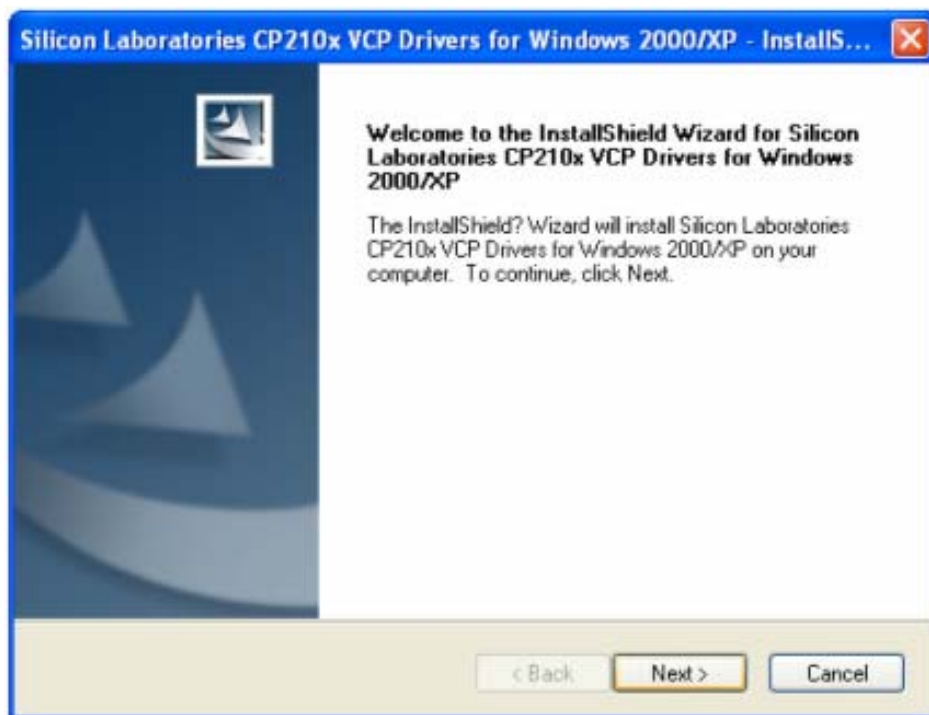


# iOptron SmartStar® Firmware Upgrade For Controllers #8401 and #8402A Step-By-Step Instruction

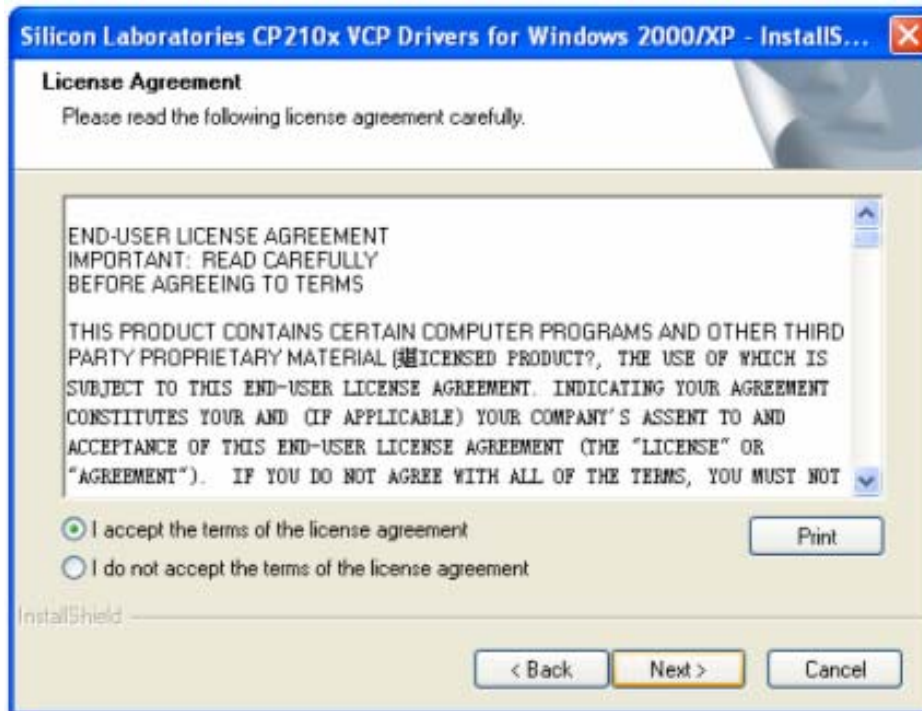
## 1. Install cp2101(usb2com) driver



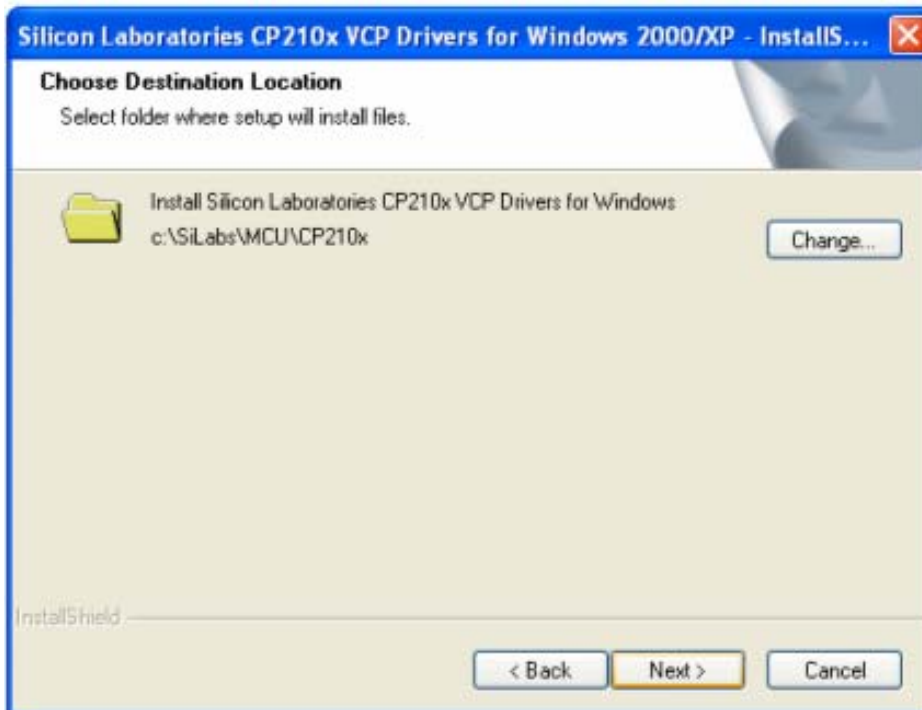
Choose the appropriate driver for your OS (ex. Windows XP operation system) (For Windows Vista select CP210x\_VCP\_Win2K\_XP—the same as XP). Double click on it, and you will see:



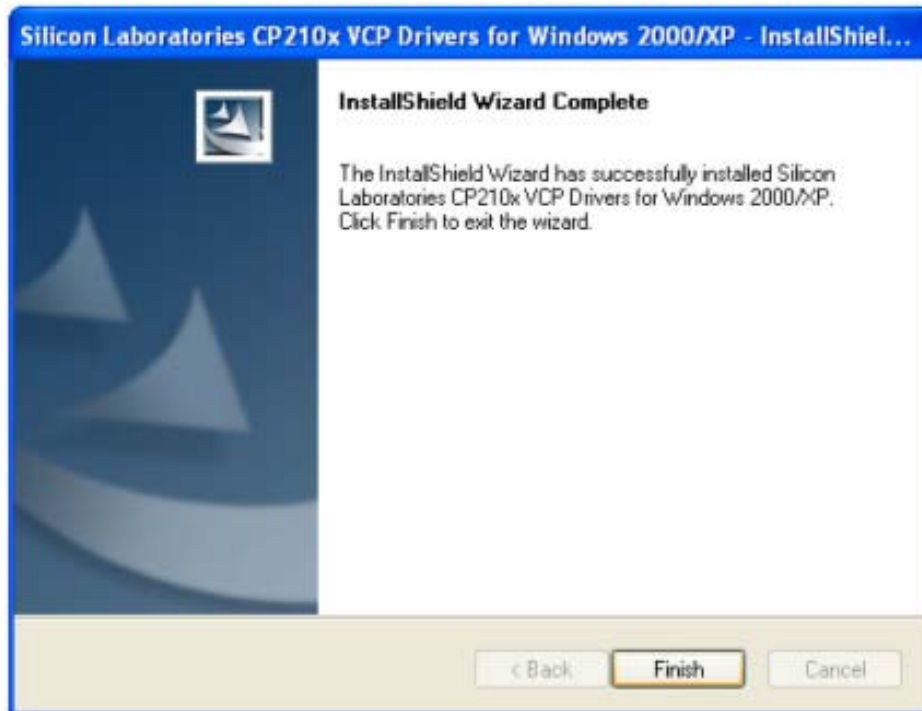
Click "Next".



Select "I accept the terms of license agreement", and click "Next"



Use the default installation path c:\SiLabs\MCU\CP210x or specify your own path by clicking "Change". Click "Next". Then click "Install".



When installation is finished click "Finish"

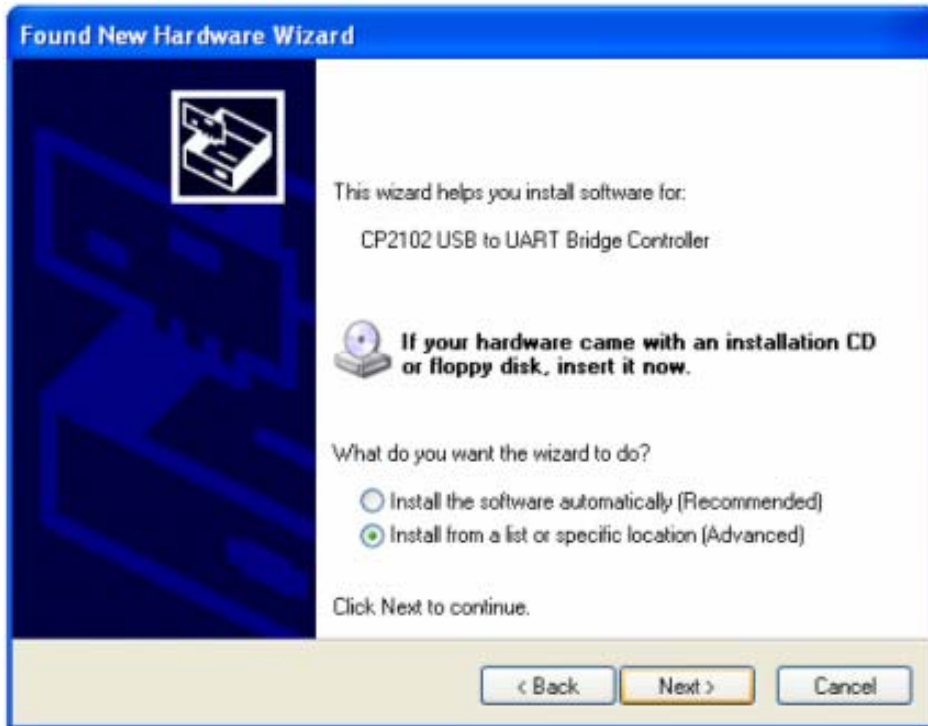
**2. Plug the USB cable to the USB port on your PC, plug the other end of the USB cable to hand controller. Turn on the power on the mount.**

**3. Install the Hardware**

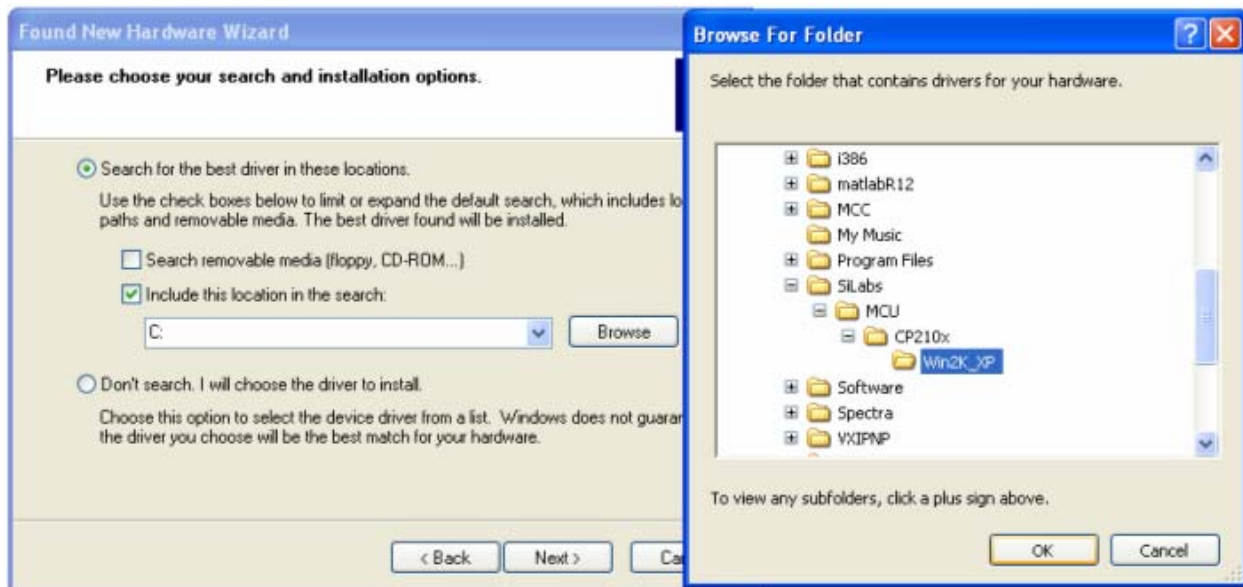
The computer will find a new hardware and show the following screen



Select "No, not this time" and click "Next".

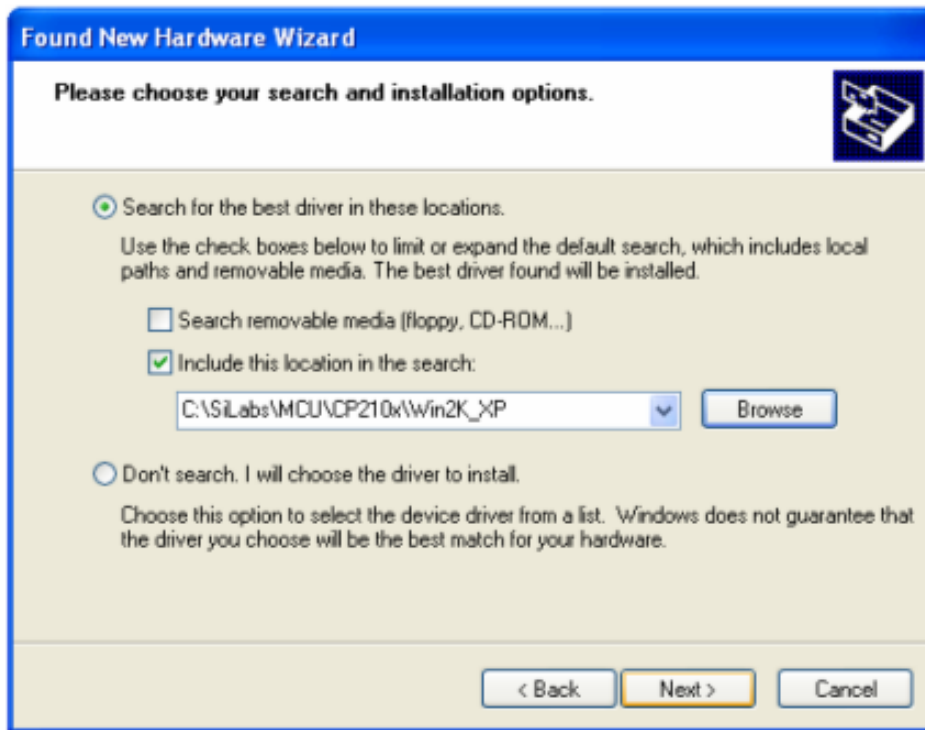


Select "Install from a list or specific location" and click "Next".



Select "Search for the best driver in these locations," and check "Include this location in the search."

Click on "Browse" and select the cp210x driver from directory c:\SiLabs\MCU\CP210x\Win2K\_XP. Click OK.



Click "Next". The computer will start to install the driver for the USB2COM. When the installation is done, click "Finish".

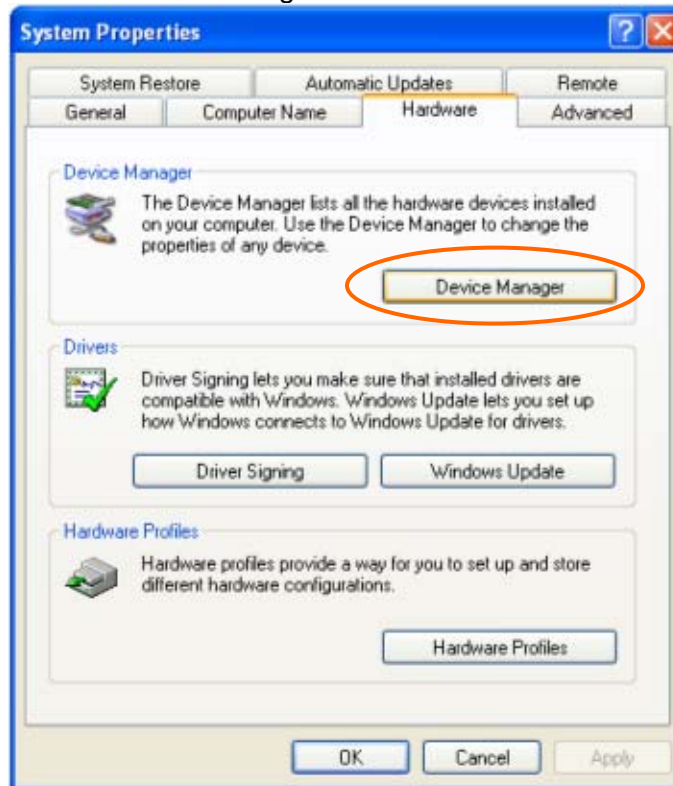


Now your computer should be ready for firmware upgrades, or computer communication with the mount via ASCOM platform and planetarium software applications. However, you need to

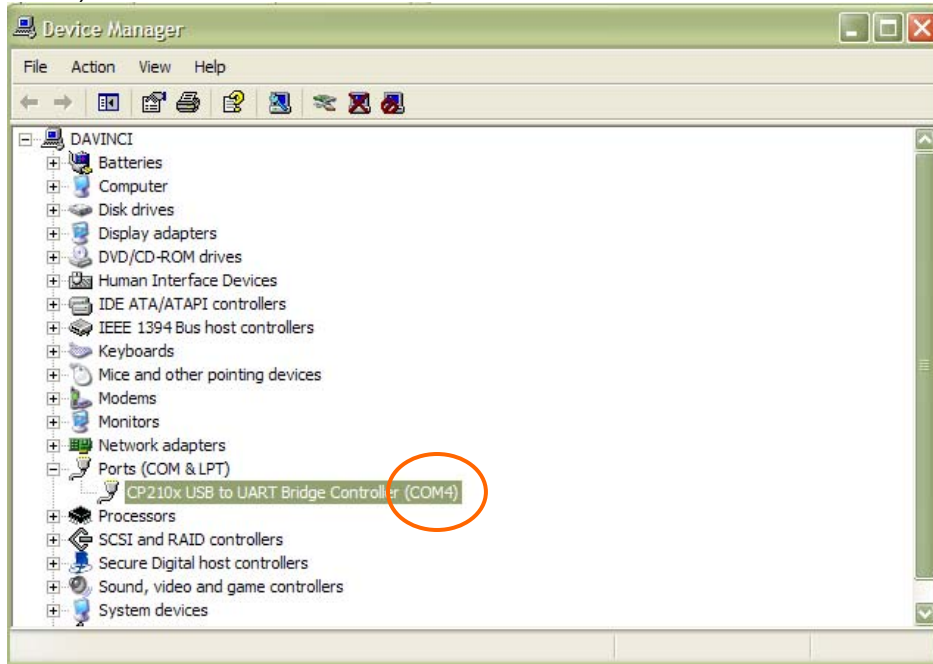
find the assigned COM port number for the USB connection. To do so, right click “My Computer” and click “Properties”



Click “Hardware”. Then click “Device Manager”

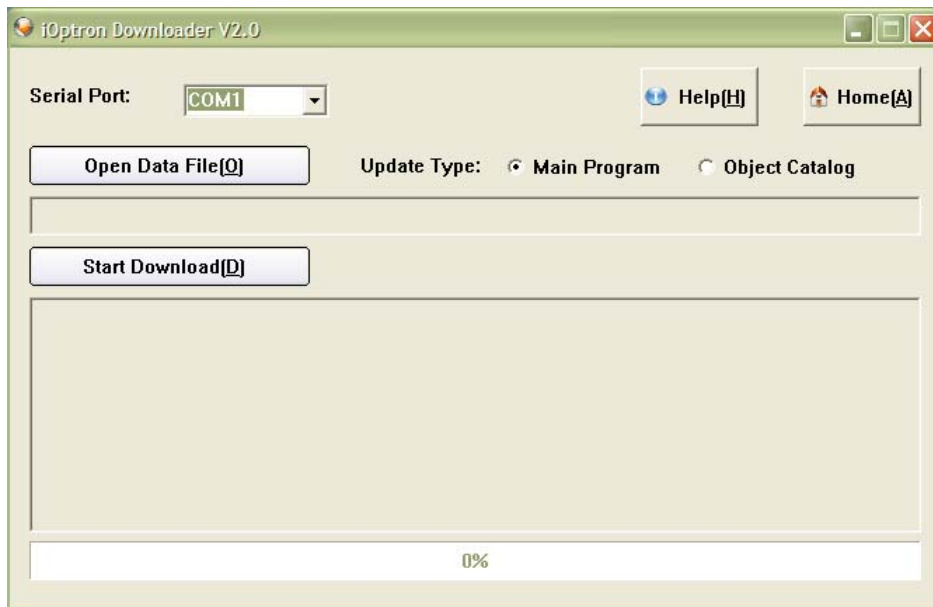


Double click “Ports(COM & LPT)”, find out the COM number and write it down (in the following figure, it is COM4)

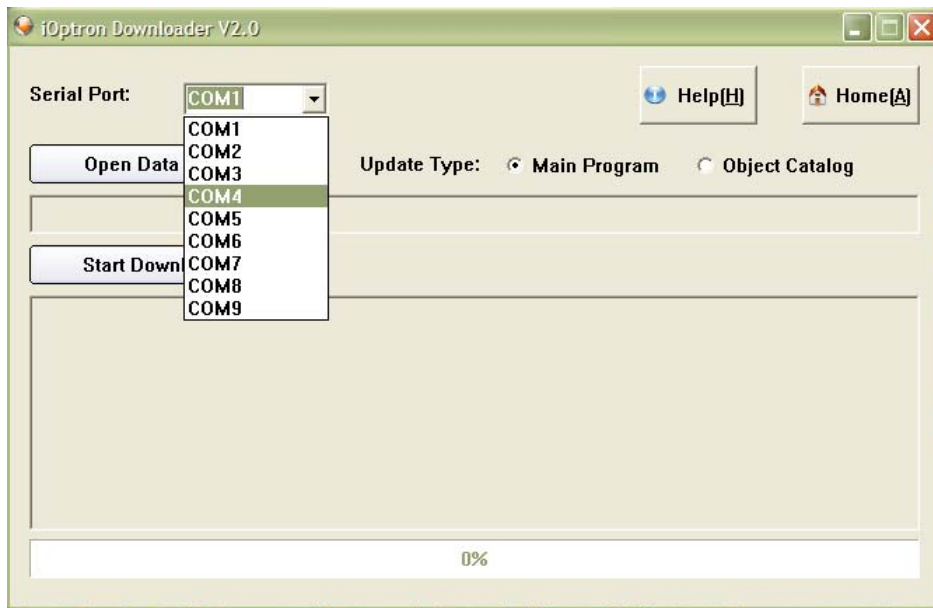


#### 4. Upgrade the Firmware

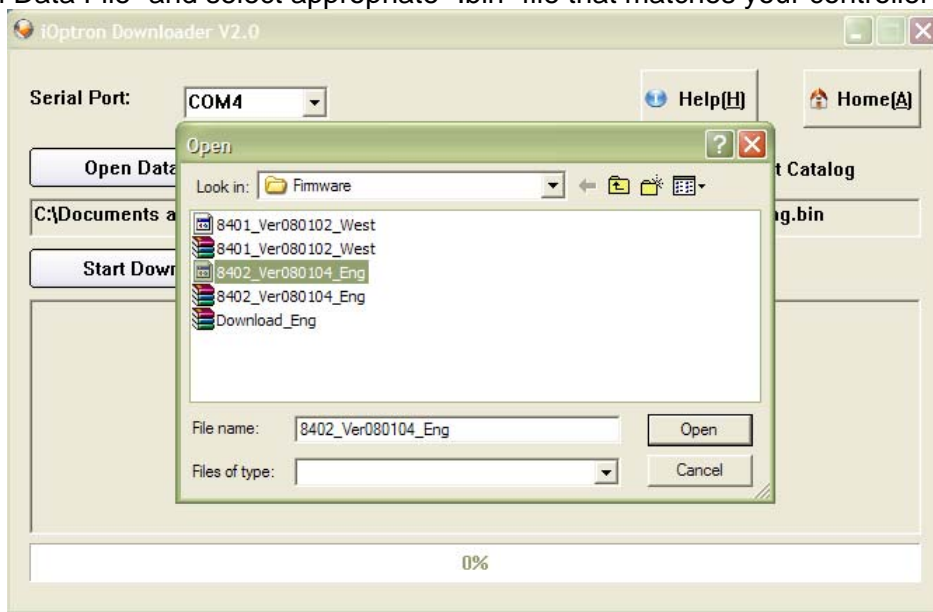
Double click and open “iOptron Downloader”



On the interface, select appropriate port using pull-down menu (in this case, COM4):

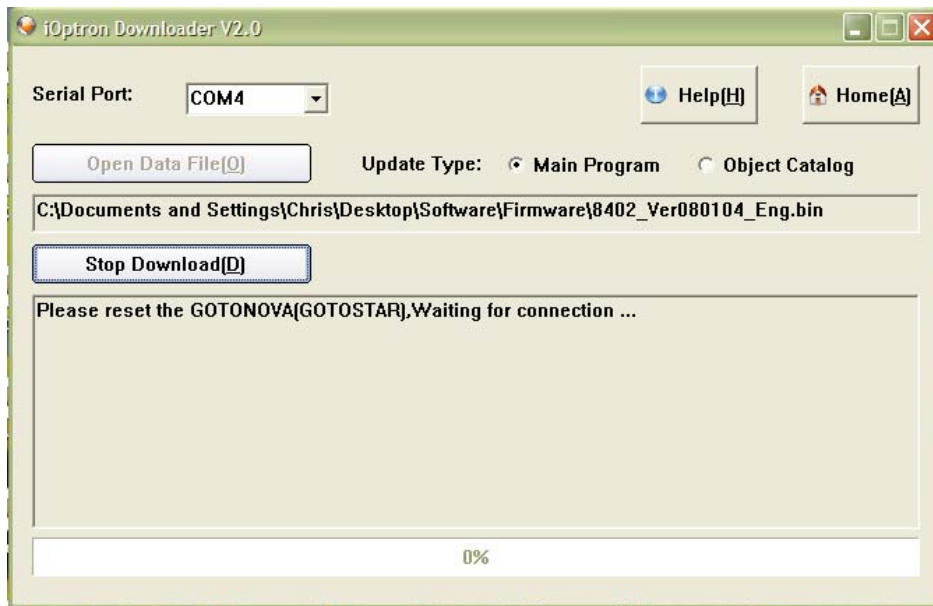


Click "Open Data File" and select appropriate ".bin" file that matches your controller



and click "Open".

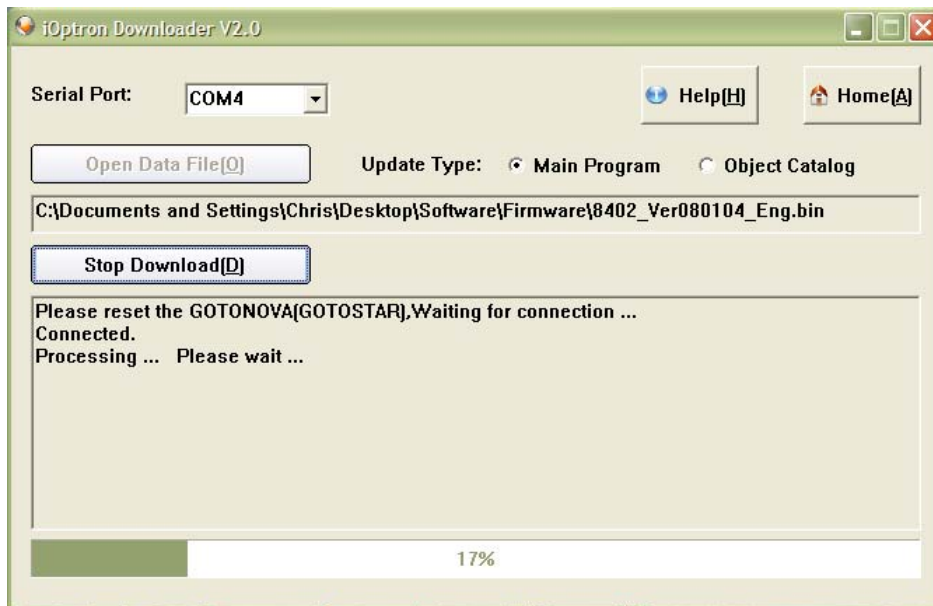


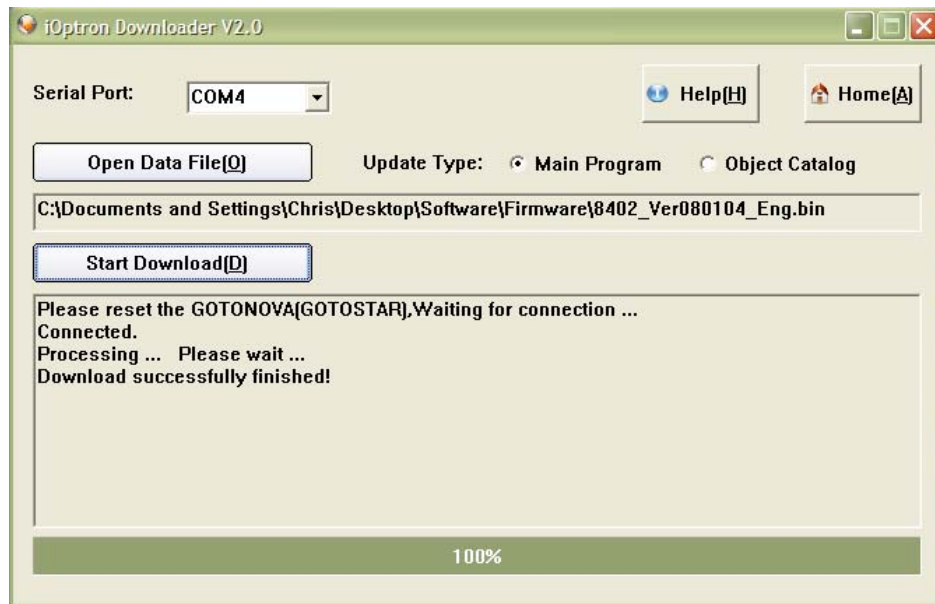


Click “Start Download”

It shows “Please reset GOTONOVA[GOTOSTAR], waiting for connection...”

On the hand controller push “MENU” and select “Set Up Controller”. Push “ENTER” then select “Upgrade firmware”. Push “ENTER” and the upgrade starts.





Now the upgrade is finished.

#### Typical Errors:

1. **Nothing happens when trying to download.** Invalid Port Number: in Device Manager. Make sure you have the correct COM port number for CP210x. Check that you installed the correct driver. Also make sure the driver is “pointed” to the correct directory (not merely “installed”).
2. **Tried to upgrade and screen is now blank.** Wrong “.bin” file: make sure you have the correct “.bin” file for firmware upgrade. (see FAQ section at [www.ioptron.com](http://www.ioptron.com) to solve this).
3. Used the wrong downloader. You should use iOptron Downloader instead of the Flash Downloader.
4. The newest version from SiLab may not work properly for iOptron’s controllers. Instead use the Cp210x driver provided by iOptron.

Last updated January 9, 2009.