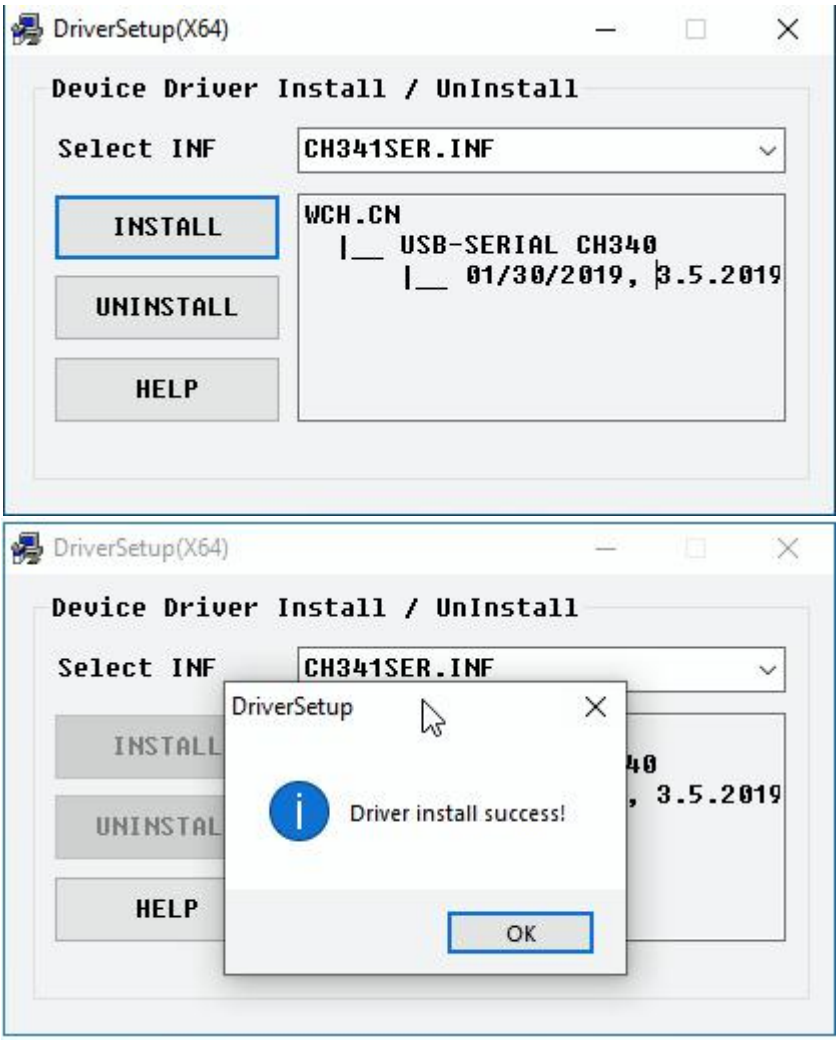
Lesson 2 Program Download

1. Install Serial Port Driver

Before proceeding to the next step, please make sure that Keil software has been installed. If the serial port driver of CH340/CH341 chip has been installed, you can skip this step.

Step 1: Double-click to open ch341ser.exe in folder “Keil software installation pack and mcuisp dowload tool/ serial port driver program”

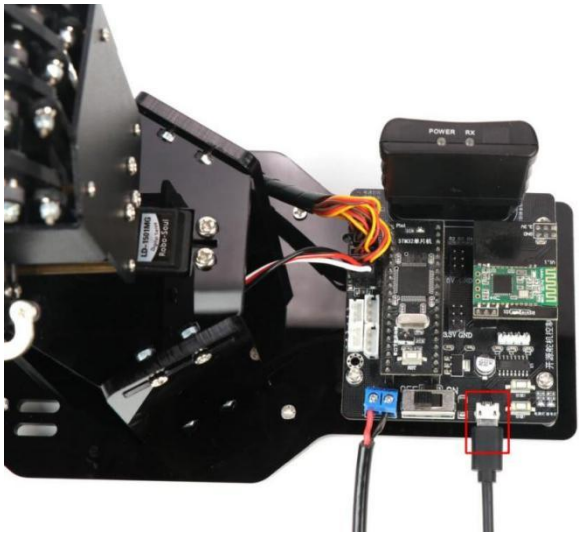
Step 2: Click “Install” , and then “Install” and “Uninstall” button turns gray. Wait for a while, “Driver Installation Successful” will be prompted.



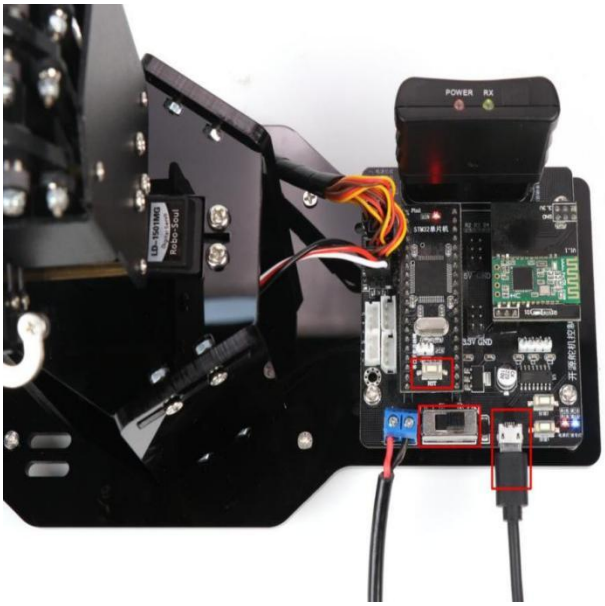
2. Program Download Method

Before installing the program, please confirm that the serial port driver has been installed.

Step 1: Connect USB serial port on controller to USB port on computer with micro-USB cable.

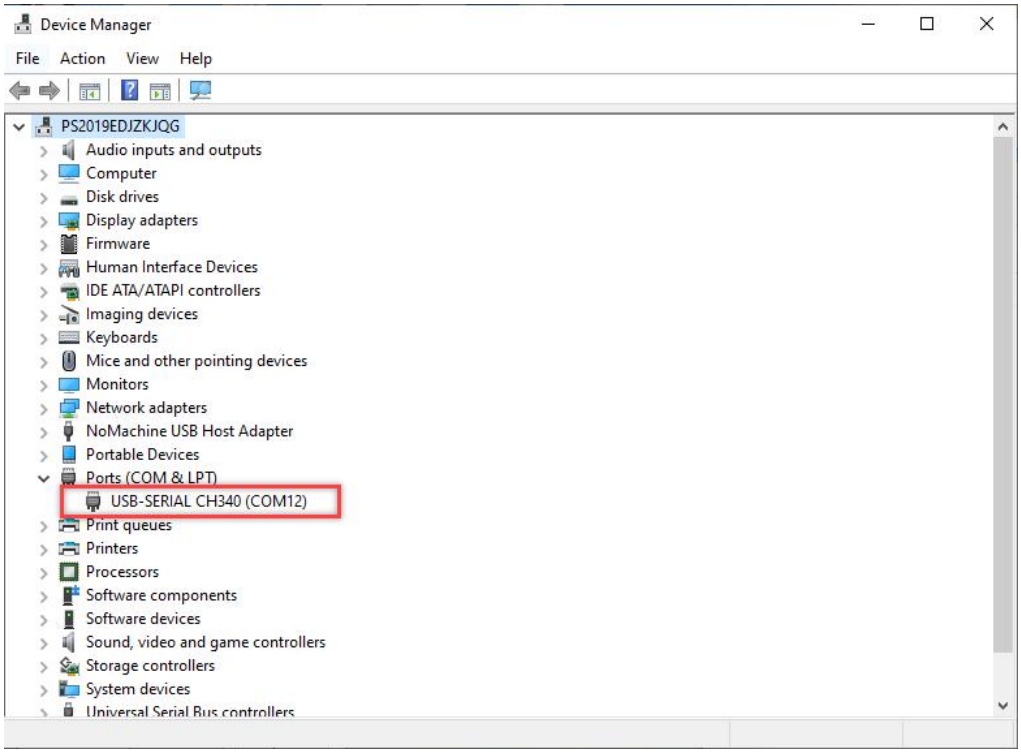


Step 2: Please refer to the red box shown in the figure below. Remove the jumper cap on the STM32 microcontroller, and turn on the power switch to enter the burn-in mode.



Step 3: Before confirming that the serial port driver is installed correctly and the USB port is connected, open “This computer” on computer desktop. Then click “properties->Device management” in turns to check the serial port number corresponding to the controller.

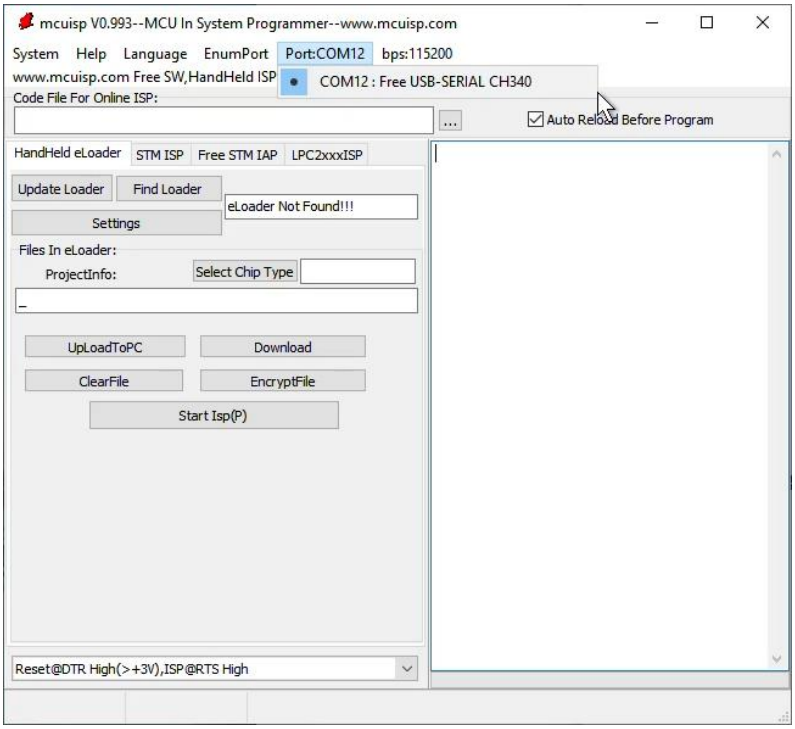
If turn on the switch on the controller first and then remove the jumper cap, you need to press “RST” button to enter the burn-in mode.



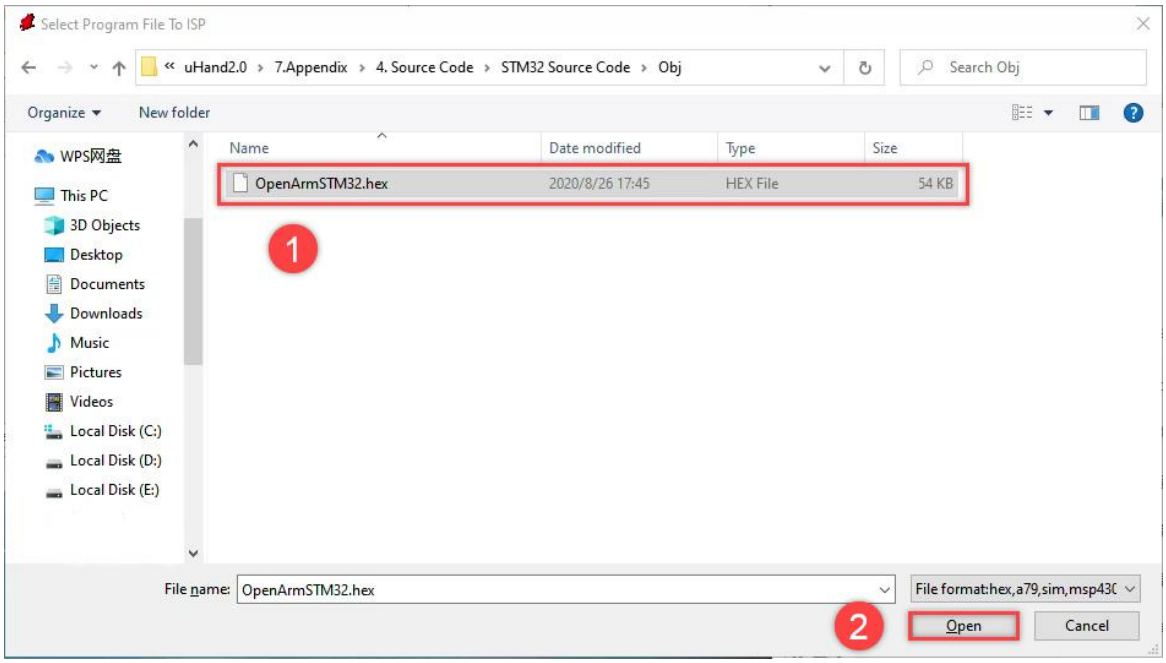
Step 4: Go to folder “4. Set Development Environment ->stm32 ->Keil installation pack and mcuisp download tool”, and then double-click 

to use mcuisp download tool to download program.

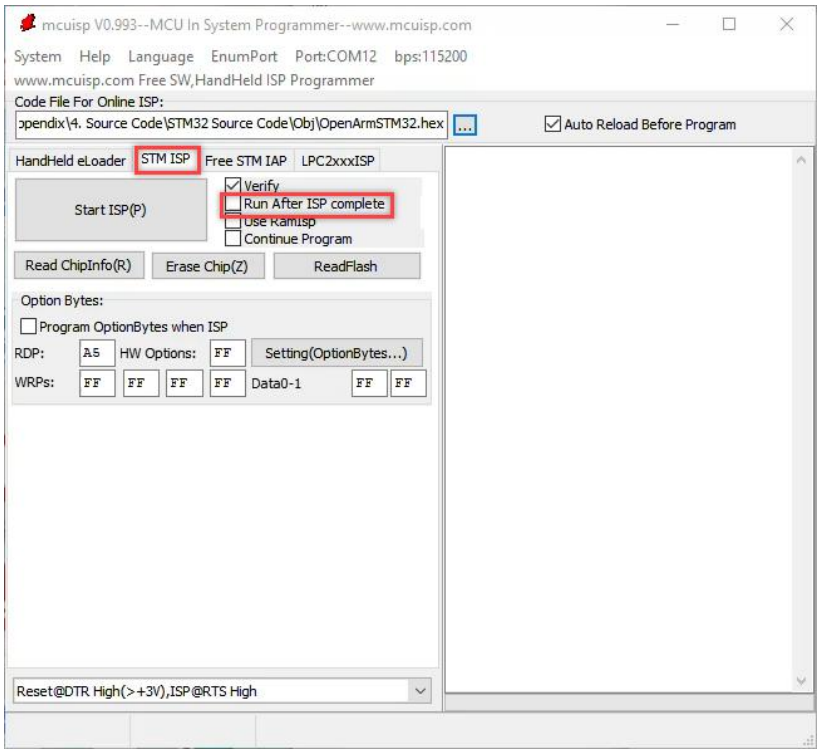
Step 5: Select the corresponding serial port and baud rate in the interface. (Take COM11 as an example. The serial port may be different for each computer, so just choose it according to your computer. If COM1 appears, it is usually the system communication port, not the actual port of the development board. The baud rate is 115200, please do not change it.)



Step 6: Click  in the interface and select the path where the .hex file is located. Then click “Open” as the figure shown below.

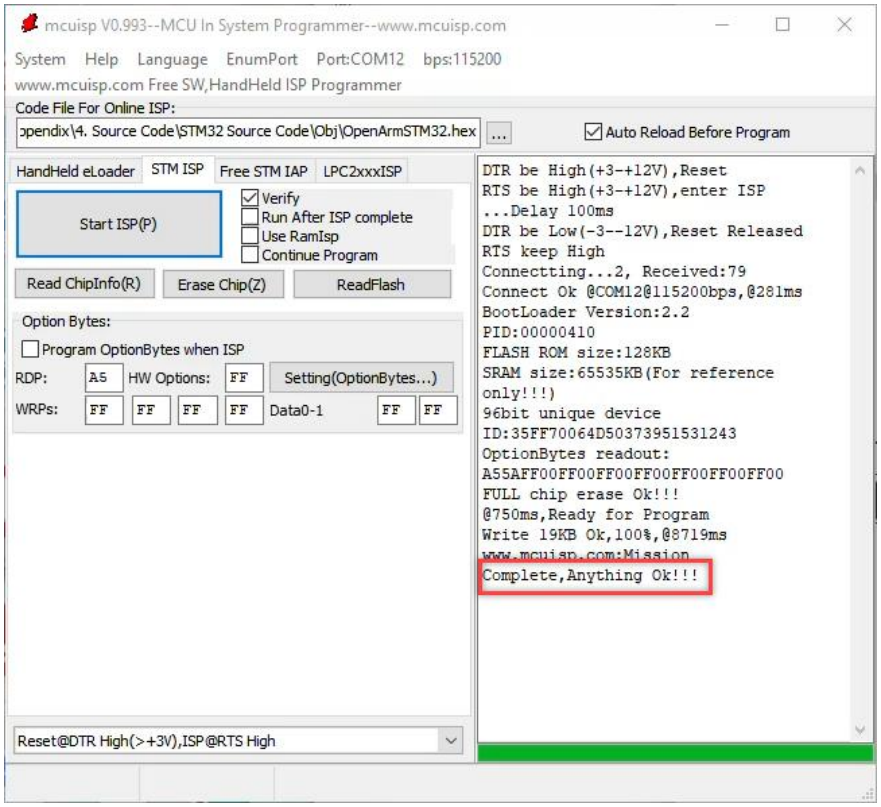


Step 7: Next, set “STMISP” option. Uncheck “Execute after ISP complete” and keep the remaining options unchanged.



The function of “Execute after ISP complete”: The program is executed after it is written into the microcontroller. Therefore, it is recommended to uncheck the option. If checked, please note that keep your body away from the robot’s movement range to avoid injury.

Step 8: After the settings is complete, click “start programming” button to burn the program into the development board. When the information “Everything is normal” is prompted on the right side of the window, it means the installation is finished.



If “chip timeout no respond” is prompted, it means that it has not been switched to burn-in mode. Then check whether the jumper cap is removed and press “RST” key. Finally, download the program again according to the steps above.

Step 9: Disconnect the USB cable and reinsert the jumper cap on STM32 microcontroller. Then press “RST” button to switch to “running mode”.