

1. Update the firmware of the expansion board

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1.1. Update firmware statement

The MCU integrated in the Rosmaster expansion board has already programmed the firmware when it leaves the factory. If it is not necessary, please do not update the firmware.

1.2. Download burning software and firmware

Download burning software

This time burning Rosmaster expansion board microcontroller firmware requires mcuisp (or flymcu) burning software, please go to <http://www.mcuisp.com> website to download mcuisp (or flymcu) burning software; you can also use the data provided directly mcuisp software.

The mcuisp software is a green version software, which does not need to be installed. Double-click to open it to use.

Download expansion board MCU firmware

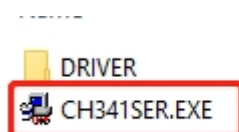
In this course material, the latest firmware file of the Rosmaster expansion board with the latest version is provided. The name is Rosmaster_XXX.hex, where XXX is the version number.

Also available for download at: [Yahboom Rosmaster](#)

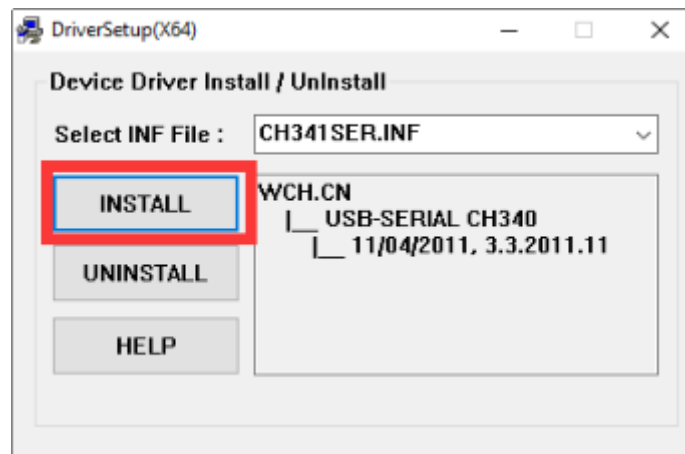
1.3. Install the CH340 driver

Since the USB communication of the Rosmaster expansion board uses the CH340 chip, the driver of the CH340 chip needs to be installed. If the computer has already installed the CH340 driver, there is no need to install it again.

Unzip the [Uart drive (CH340).zip] in the course materials, double-click to open the CH341SER.EXE program



Click Install. After the installation is complete, you will be prompted that the installation was successful.

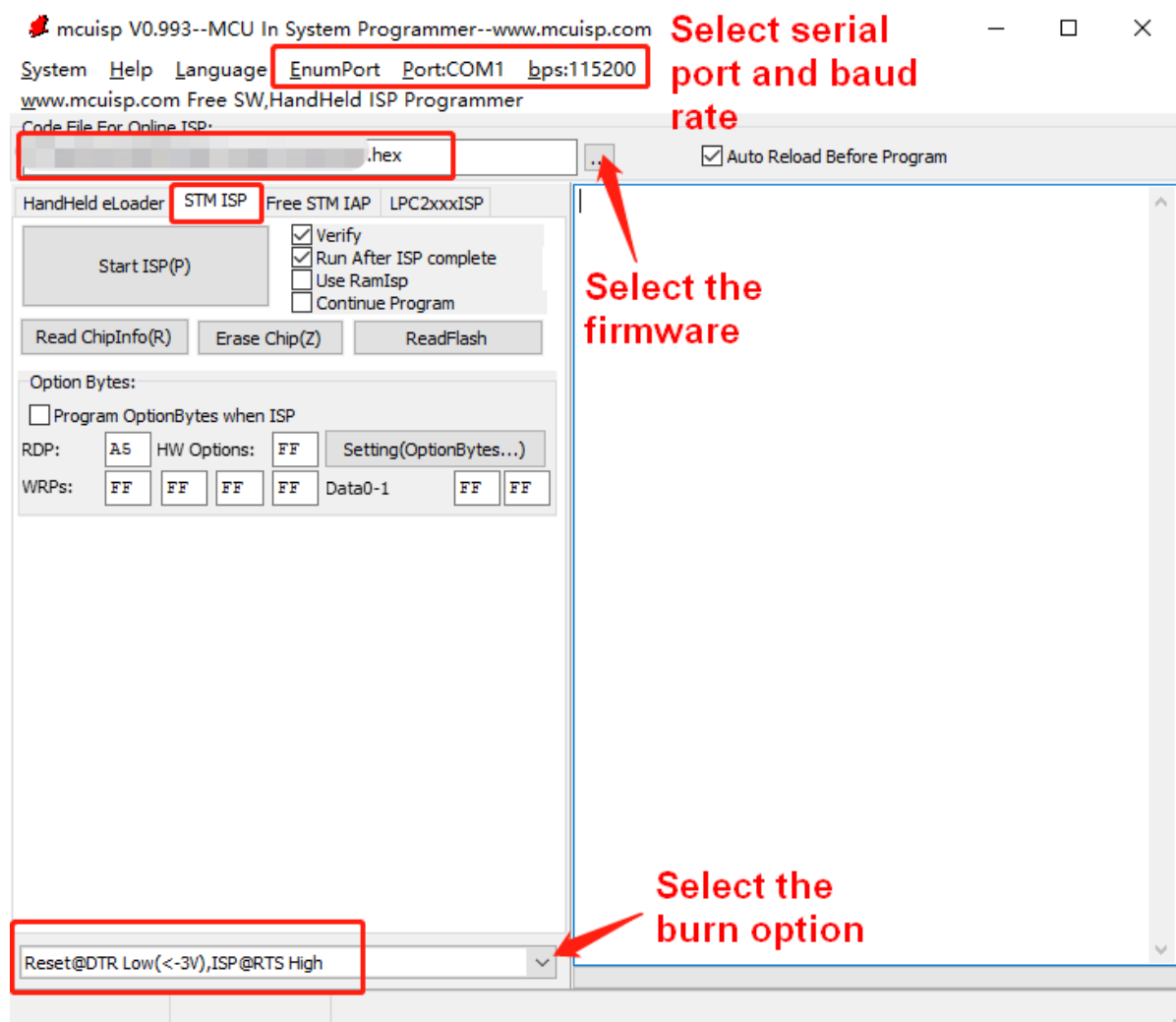


1.4. Computer connection to Rosmaster

Note: Before connecting the Rosmaster to the computer, please unplug the Micro USB data cable and power cable connecting the expansion board to the Jetson Nano.

Insert one end of the USB data cable into the USB port of the computer, and the other end into the Micro USB port of the Rosmaster expansion board.

1.5. configure the burning software



When searching for a serial port, if there are multiple serial port numbers, it is not confirmed which one is the Rosmaster. Solution 1: Unplug other USB ports and search again; Solution 2: First unplug the Rosmaster USB data cable, click Search Serial Port, write down the searched serial port number, insert the Rosmaster USB data cable, search the serial port again, and compare before

and after Twice, the newly added serial port number is the serial port number of the Rosmaster.

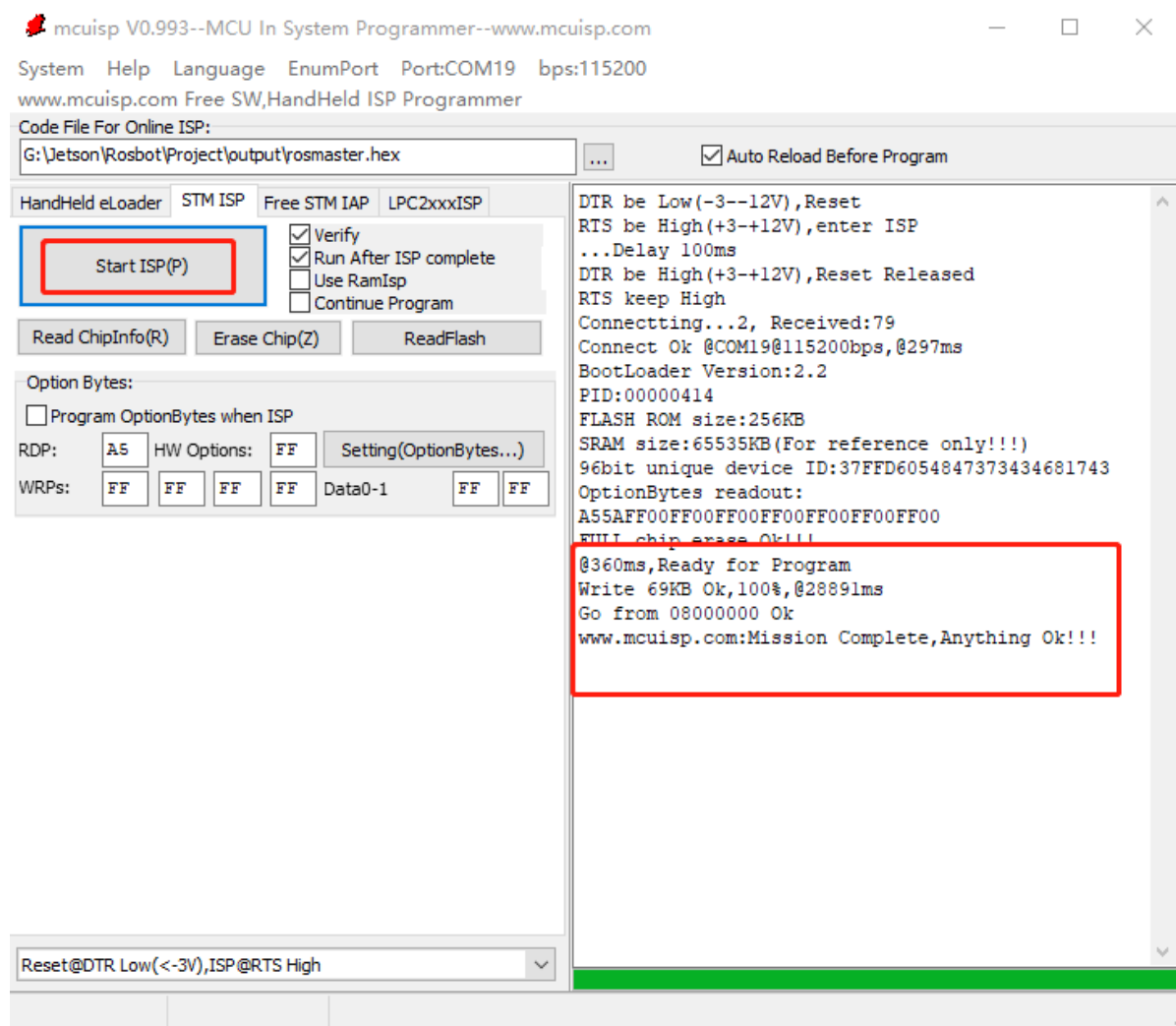
When choosing the firmware, you need to select the firmware path downloaded in the first step. It is best not to have Chinese or special symbols in the path. As an example, the above picture is to put the downloaded Rosmaster_V3.1.hex on the desktop.

The last is the configuration selection at the bottom. Be sure to select the option of [DTR low-level reset, RTS high-level into BootLoader] option, otherwise the download may fail.

1.6. Start burning firmware

Please put the microcontroller on the expansion board into the programming mode first:

First press and hold the BOOT0 key on the expansion board, then press the RESET key, and finally release the BOOT0 key.



Click [Start Programming], and the mcuisp burning software will burn the firmware we selected in the previous step to the microcontroller on the Rosmaster expansion board. When the prompt appears on the right side [successfully run www.mcuisp.com to report to you, the command is executed, everything is normal], it means that the download is successful.

Notice:

①Before starting programming, please confirm that the serial port number of the Rosmaster is accessible, that is, there is no serial port assistant occupying it.

②Rosmaster enters the burning mode operation, first press and hold the BOOT0 key on the expansion board, then press the RESET key, and finally release the BOOT0 key.

