Re-Flashing firmware on a Printrbot

To begin, we need to save the current settings of the printer, because re-flashing the firmware will erase any settings that have been changed on the machine and revert it back to the defaults.

First you will need to have PronterFace enabled, To do this click on File → Preferences and under "printing window type" make sure this is PronterFace.
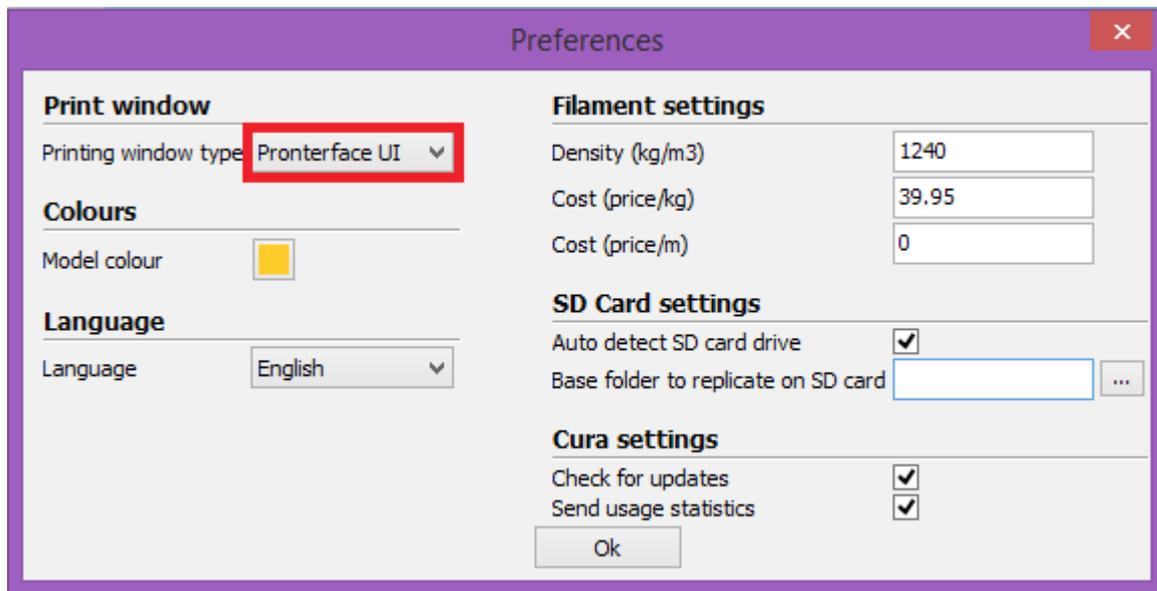

To save these settings of your printer – Open up Cura and connect the printer to the computer, start PronterFace by pressing the print button and type in the code "M501" in the text box in the lower right of the PronterFace window.

This will bring up a list of settings for you – copy and paste the settings into a notepad and save it.
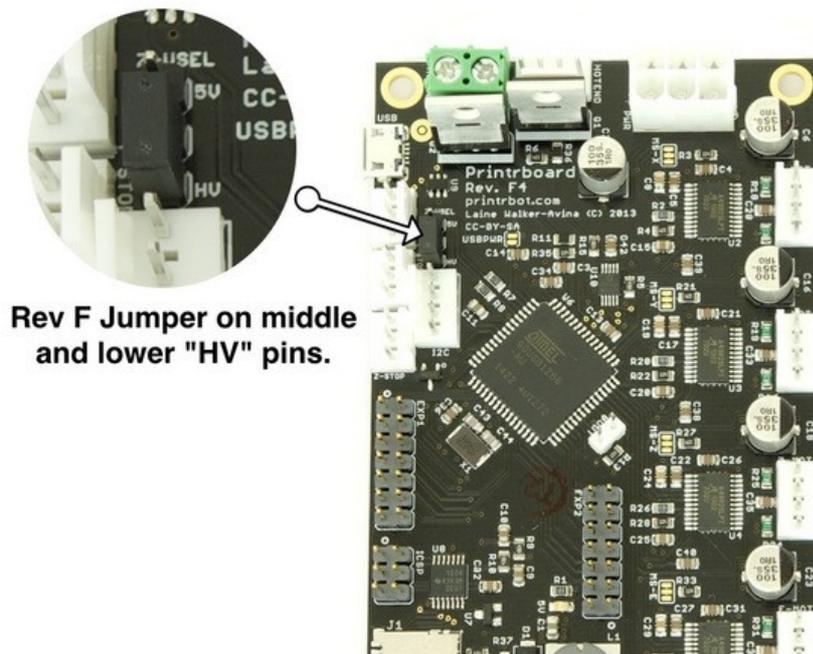
Download ATMEL FLIP from the following link: http://www.atmel.com/tools/flip.aspx and install on your computer

Next you will need to determine the Printrboard Revision on the machine – they will be either:

Rev D, Rev F4 or Rev F5
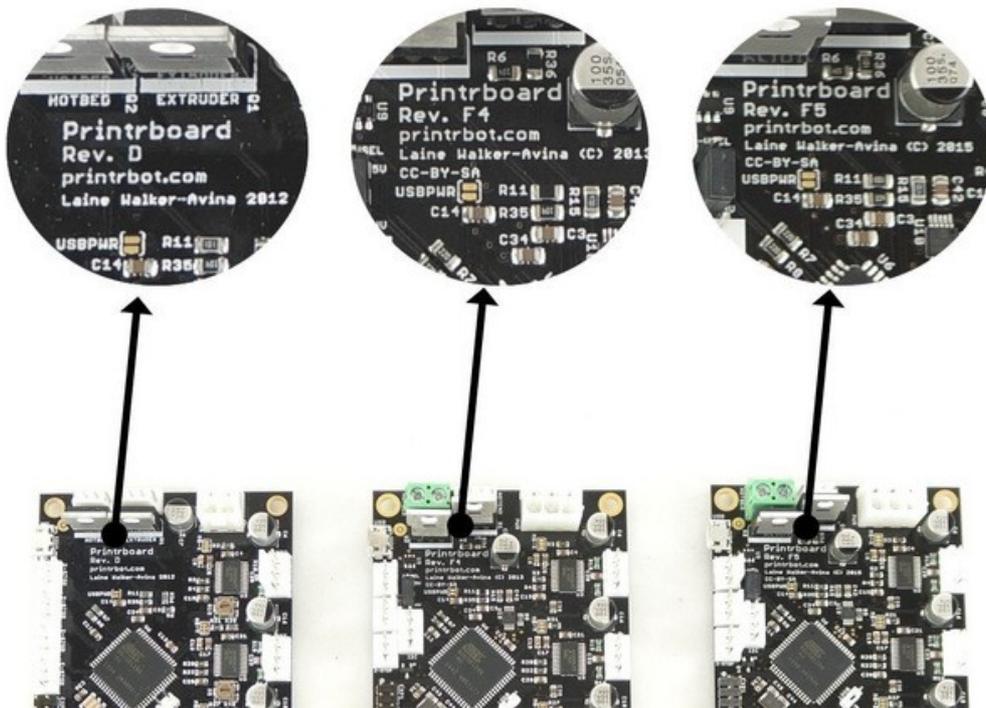
The Rev F4 and F5 boards come with a jumper on the middle and lower HV pins.

Rev F Jumper on middle and lower "HV" pins.

For Rev D you will need to install a jumper

Once you have determined your Printrboard's Revision, you will now need to download the appropriate firmware for the machine. Use the following link to find the correct firmware for your machine. Save this in a location you will remember as you will need it later.

For Rev F users: https://github.com/Printrbot/Marlin/releases

** download the .hex file suitable for your printer

For Rev D users: https://github.com/Printrbot/Marlin/releases/download/metal-simple_bedlevel_v1/Marlin_Metal_Simple_bedlevel-pb.hex

The pins marked "BOOT" will need to be shorted out for the flashing process. If you have the Rev F board you can use the jumper identified earlier to short these pins.
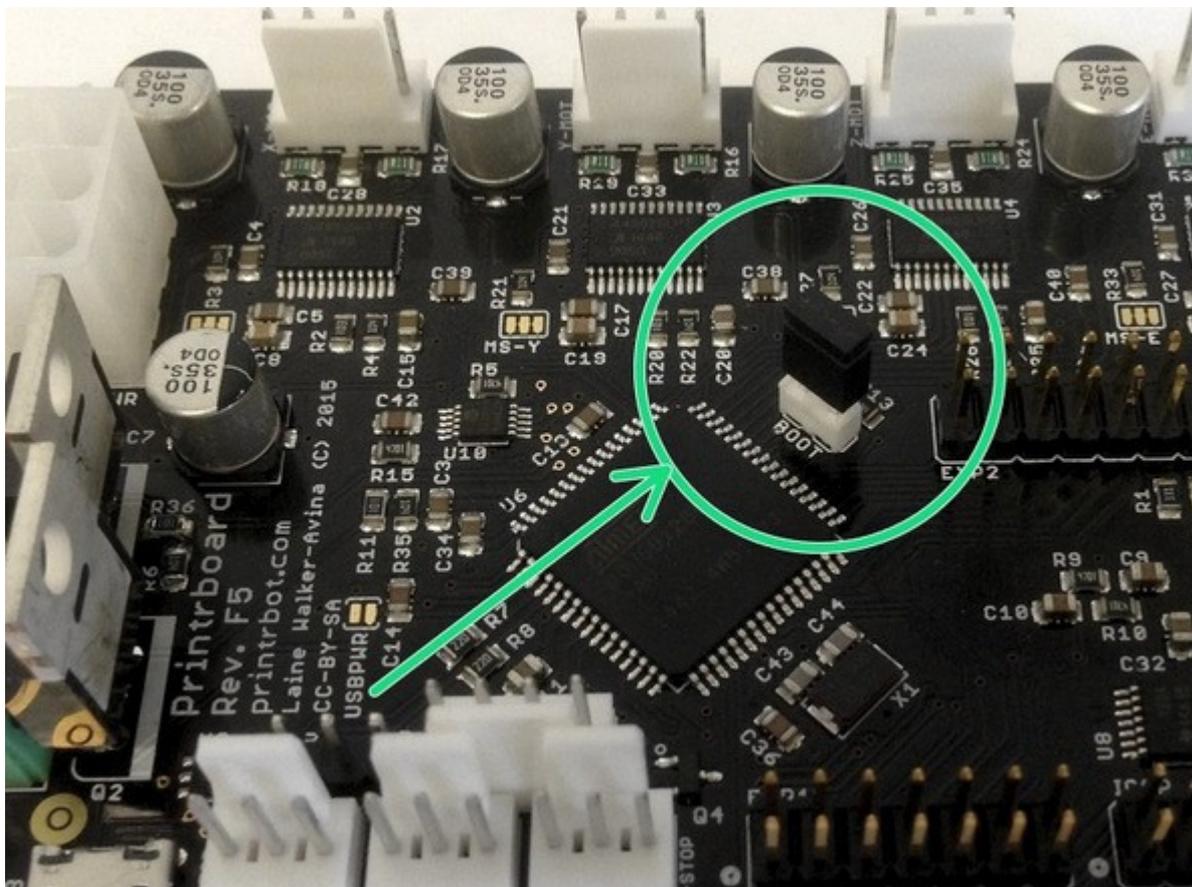
Rev D users will need to install their own jumper in order to short these pins, you can use some simple jumper wires connecting each pin to achieve this.

Once the jumper is added, power on the unit and connect the USB cable. Now press the RESET button on the Printrboard.

After pressing the RESET button, your computer will detect the printrboard as a new hardware device. Open up device manager and under Other Devices you will see a device called AT90USB128

Right click this device and select Update Driver.

You will be presented with a screen asking you for options on how to search for the Driver Software. Select "Browse my computer for driver software"

When prompted, go to Program Files (x86)/Atmel/FLIP 3.4.7/ and select the USB directory.
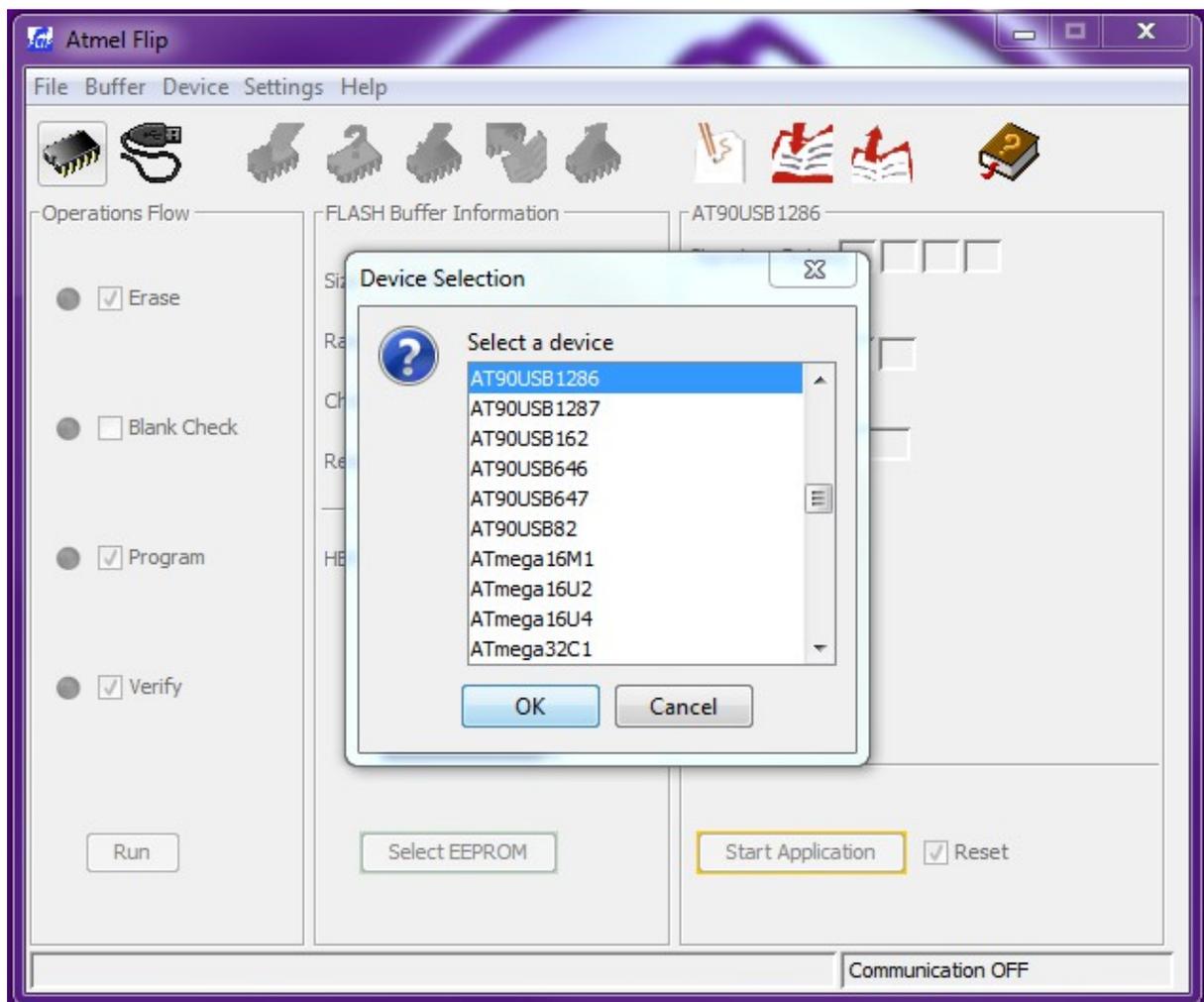
You will then be asked to install the device software – select the Trust box and click install.

After this - you will be presented with a screen saying you have successfully installed the driver software.

Now, open up FLIP 3.4.7 and click on the 'Select a target Device" Icon (highlighted in red in the image below)
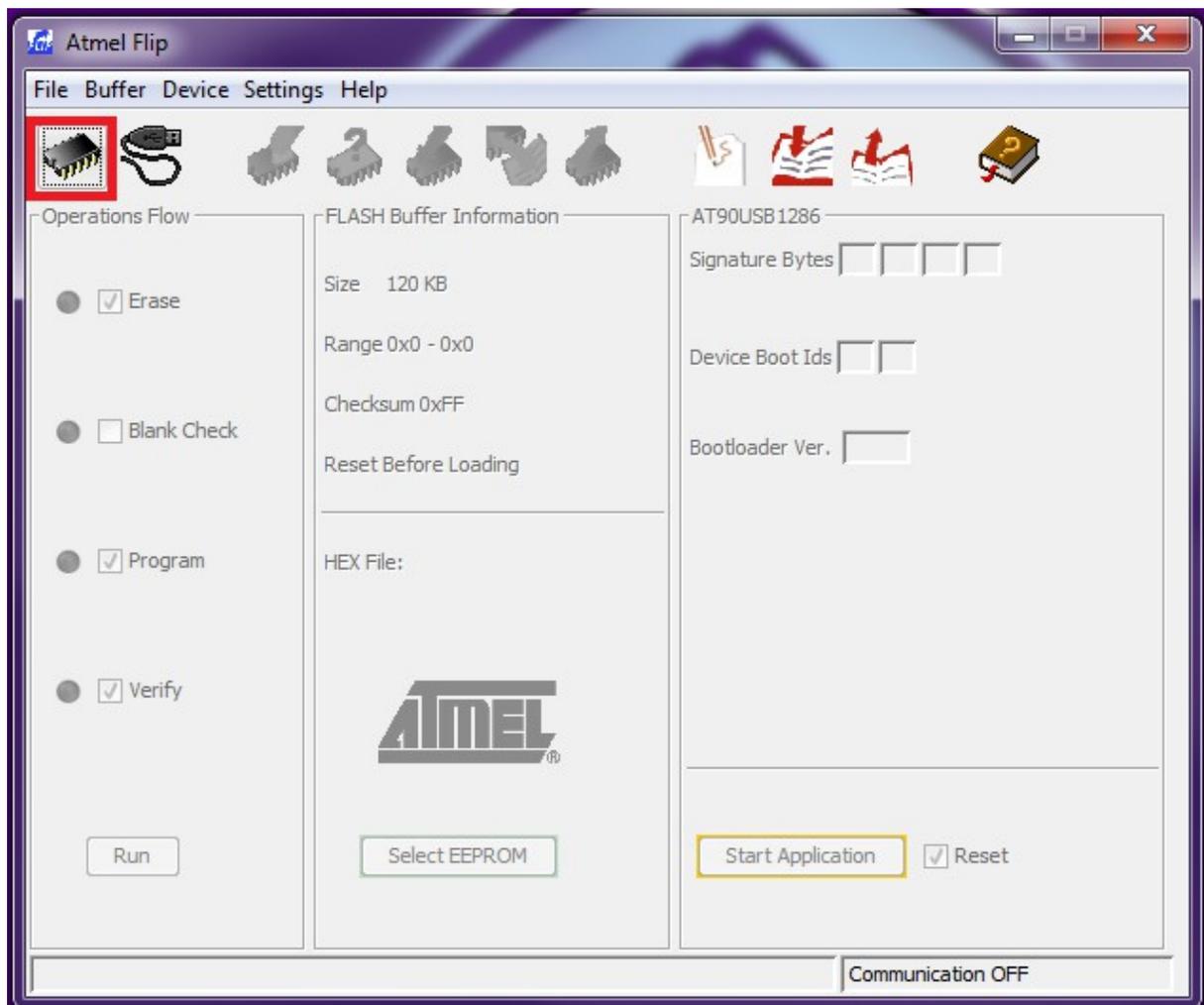
From the list, select the AT90USB1286 and click OK

Click on the next Icon on the toolbar to "Select a communication Medium" and select USB.

Click Open when prompted to start the communication with the device. All of the options on the left hand side should now become active.

Use the Load HEX button to load the hex file onto the Printrboard.

Browse to the location of the downloaded hex file on your computer and select it.

Make sure all of the check boxes on the left side are checked, double check that the correct hex file is loaded above the ATMEL icon. Click the Run button and a progress bar will move through the stages and complete.

Once complete, power OFF the device. And remove the jumper that is on the BOOT pins and put it back on the HV pins.

Wait 5 minutes and power it back on and connect to the computer. Open up Cura and PronterFace and run the "M501" command in PronterFace again.

Compare the settings to your previous settings. You have now completed the re-flashing of the firmware on your device.