



## TROUBLESHOOTING: Re-flashing Edison (using Windows PC)

1

This document is intended to help solve **problems with hooking-up** and getting your Handibot/FabMo running.

It is an extreme solution involving totally re-flashing the Edison Single Board Computer on your tool.

2

## Re-Flash the onboard Intel-Edison SBC with full OS and Software Image

- This procedure re-installs **all software** on FabMo's Single Board Computer, including OS and FabMo. It is a **last-resort option** for FabMo units that are locked, bricked, or in-accessible. All configuration and history data will be lost and settings restored to default values. You will need a Windows PC, standard USB A (male) to micro-USB B (male) cable. This is the type cable typically used for phone charging.
- You will need to download a very large file (+200M) for the install before you start. Note though, that the re-flashing does not require the FabMo unit to itself have either an AP mode or Network mode connection. An internet connection is only needed to download the large installation file to your device.

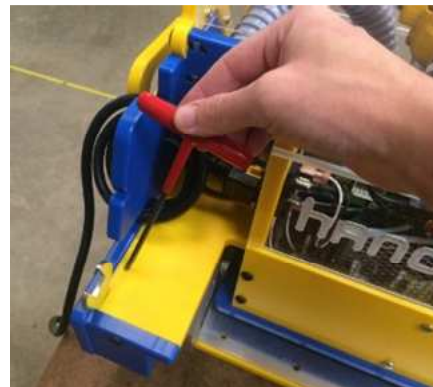
3

First let's prep the Edison SBC on your Handibot

**Download and follow these instructions to remove (and later re-install) your FabMo Control Card:**

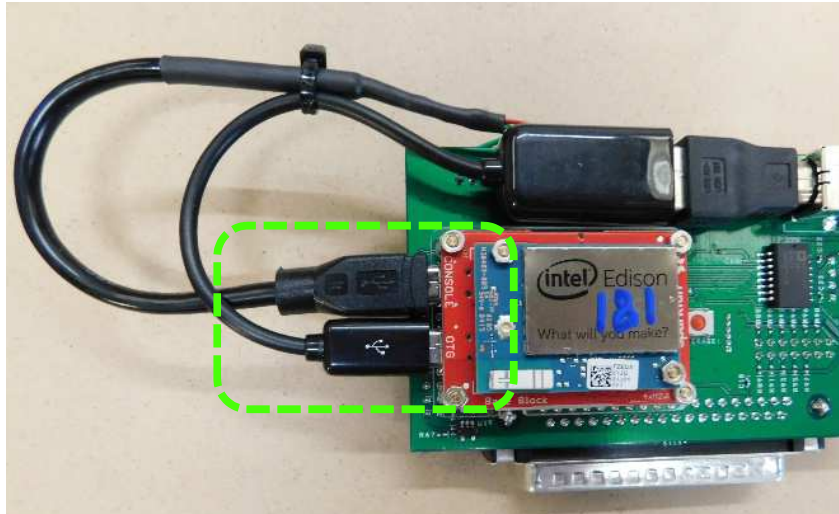
[http://docs.handibot.com/doc-output/Handibot2\\_Replacing\\_FabMo\\_Control\\_Card.pdf](http://docs.handibot.com/doc-output/Handibot2_Replacing_FabMo_Control_Card.pdf)

(On the docs.Handibot.com site: "Replacing your Control Card")



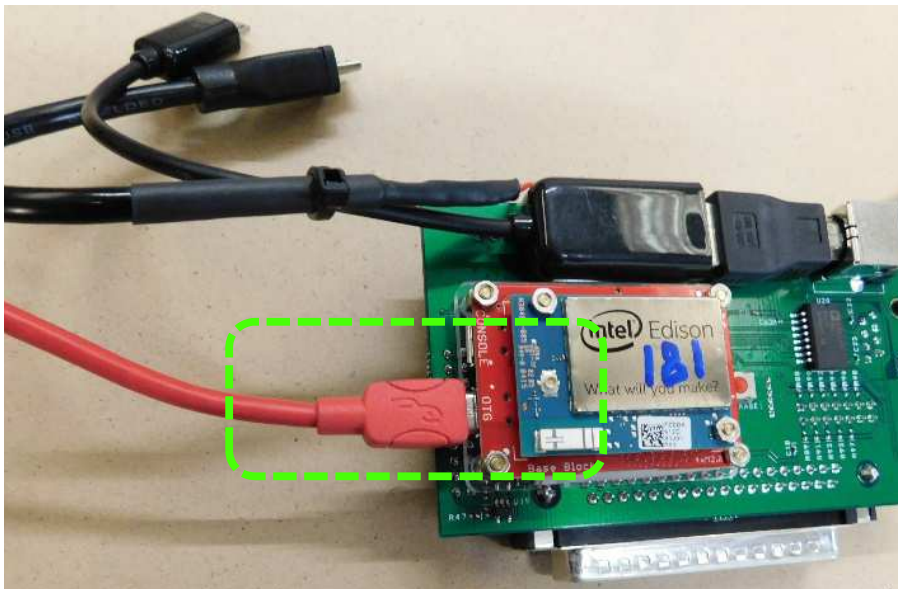
4

Disconnect BOTH USB cables from Edison.



5

Plug USB micro connector on your cable into Edison at “OTG” location. Do not plug the other end in yet.



6

We'll first download the file you will use to reflash (and to install some drivers for talking to the Edison if you have not done this before).

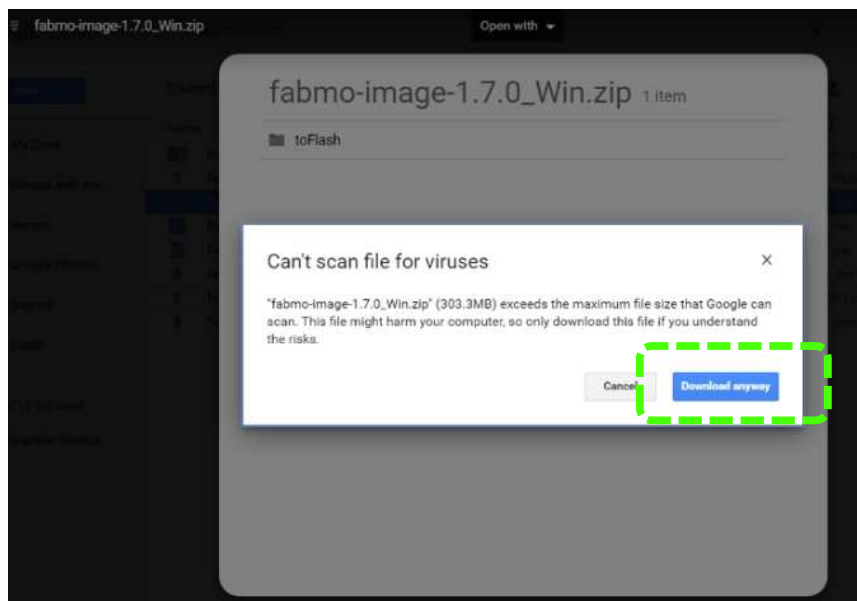
From your PC's Browser:

- Go to the link below
- Download the reflash file to a convenient location like your Desktop.

<https://drive.google.com/open?id=0B5S7sMQs5whAOVpfZzInYUN0VzQ>

7

You'll get a screen like this ... but, click **Download Anyway** to start the download ...



8

Extract the compressed files (Unzip). Usually you can right click on the .zip file to extract it and a new folder with unzipped contents will be created for you.

a. Open the unzipped Folder usually labeled:  
*fabmo-image-xxxx-win*

9

If this is the first time you've flashed a FabMo Control Card on this computer:

You will need to install the USB Drivers for the Intel Edison. Double click on ...

IntelEdisonDriverSetup1.2.1.exe

... and follow the instructions giving Windows necessary permissions.

[\*You only need to install these one time.]

*In this process, plug in the USB cable from the Card to your computer for a minute or two to trigger the completion of the driver install -- usually confirmed by Windows. Unplug when you are finished.*

10

Now you're ready to re-flash your Card.

a. Open the next Folder labeled "toFlash".

b. Double click (to run): *flash.bat*

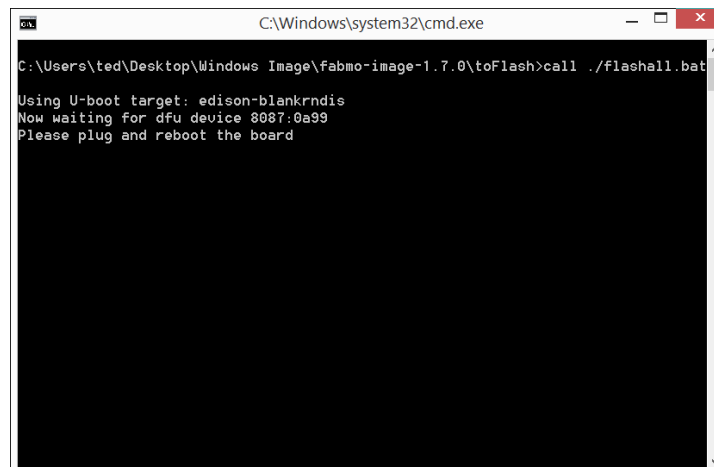
*Careful, **not** flashall.bat !*

**If you get a security warning from Windows:**

Click "more info" and choose "Run Anyway" ...

11

You should see a console screen that looks something like this.



```
C:\Windows\system32\cmd.exe
C:\Users\ted\Desktop\Windows Image\Fabmo-image-1.7.0\toFlash>call ./flashall.bat
Using U-boot target: edison-blankrdis
Now waiting for dfu device 8087:0a99
Please plug and reboot the board
```

Now, PLUG-IN the USB cable to a USB 2.0 slot on your computer to start the re-flash.

12

- a blue LED on the Edison should come on
- you may hear a couple beeps from the PC
- (you may need to wait a couple of minutes before things continue)
- the screen will show several download messages before one that says: "...up to 5 minutes" ... so wait a bit

```
C:\Windows\system32\cmd.exe
Using U-boot target: edison-blankrdis
Now waiting for dfu device 8087:0a99
Please plug and reboot the board
Dfu device found
Flashing IFWI
Download [=====] 100% 4194304 bytes
Download done.
Download [=====] 100% 4194304 bytes
Download done.
Flashing U-Boot
Download [=====] 100% 237568 bytes
Download done.
Flashing U-Boot Environment
Download [=====] 100% 65536 bytes
Download done.
Flashing U-Boot Environment Backup
Download [=====] 100% 65536 bytes
Download done.
Rebooting to apply partiton changes
Dfu device found
Flashing boot partition (kernel)
Download [=====] 100% 14925824 bytes
Download done.
Flashing rootfs, (it can take up to 5 minutes... Please be patient)
Download [====] 12% 13421728 bytes
```

13

Eventually, the primary download will complete.

```
C:\Windows\system32\cmd.exe
Download [=====] 100% 4194304 bytes
Download done.
Flashing U-Boot
Download [=====] 100% 237568 bytes
Download done.
Flashing U-Boot Environment
Download [=====] 100% 65536 bytes
Download done.
Flashing U-Boot Environment Backup
Download [=====] 100% 65536 bytes
Download done.
Rebooting to apply partiton changes
Dfu device found
Flashing boot partition (kernel)
Download [=====] 100% 14925824 bytes
Download done.
Flashing rootfs, (it can take up to 5 minutes... Please be patient)
Download [=====] 100% 1036036096 bytes
Download done.
Rebooting
U-boot & Kernel System Flash Success...
Your board needs to reboot to complete the flashing procedure, please do not unplug it for 2 minutes.
Exit Code = 0
Press any key to continue . . .
```

After the primary download completes, wait 2 full minutes for all processes to update before unplugging the cable.

14

### The Re-Flash is Complete!

\*Re-install the Control Card and you are about ready to run your Handibot again.

Turn your Handibot on once, let it sit about 2 min to upgrade firmware, then turn it off and back on before using your device to connect.

15

### After a Full REFLASH!

We try to keep the Full Reflash as up-to-date with current software as possible.

\*But, it is always a good idea to, after you connect to the internet, **update FabMo** (green button in configuration) and install the **latest version of Macros and Apps** that you currently use.

They are always available at:

[docs.Handibot.com](https://docs.Handibot.com)



16

Possible Issues:

- download may not work on USB3.0 or USB port designated high power (“+” or lightening symbol) ... try another USB port
- download may require installing the dfu-utility.exe for Windows. This utility is also in the folder you unzipped. Right click it and “Run as Administrator”. Then re-flash.

17

**Give us a call if you have  
problems with this procedure!**

919.680.4800