



Intel[®] Edison Troubleshooting Guide

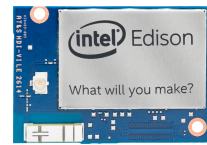


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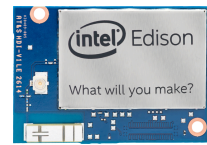
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Revision history		
Version	Date	Comment
1.0	9/21/2015	First Draft



Troubleshooting

Find the problem you have encountered from the list below and follow the instruction.

1. The Edison keeps rebooting.
 - **Step 1.** If you are using a USB cable to power on the Edison on the Arduino breakout, make sure the breakout board is in “device mode”. If the problem is not solved, proceed to Step 2.
 - **Step 2.** Please make sure your Edison is supplied with enough power. Use a powered USB hub or an external power supply. Make sure the Edison is not driving any components the power supply can supply enough power to. For example, servo motors draw lots of current. If the problem is not solved, proceed to Step 3.
 - **Step 3.** Make sure the Edison compute module is thoroughly pushed onto the breakout board. Securing the module with nuts help ensure that the module is well connected. If problem is not solved, proceed to Step 4.
 - **Step 4.** Proceed to “Updating Firmware” section.
2. I forgot the login password.
 - **Step 1.** Proceed to “Updating Firmware” section.
3. I cannot connect to a network via WiFi.
 - **Step 1.** Log into the Edison and enter “**rfkill unblock all**”. If the problem is not solved, proceed to Step 2.
 - **Step 2.** Enter “**ifconfig wlan0 down**” and then “**ifconfig wlan0 up**”. If the problem is not solved, proceed to Step 3.
 - **Step 3.** Enter “**vi /etc/wpa_supplicant/wpa_supplicant.conf**”. Delete everything except the first eight lines as shown in Figure 1.

```
ctrl_interface=/var/run/wpa_supplicant
ctrl_interface_group=0
config_methods=virtual_push_button virtual_display push_button keypad
update_config=1
fast_reauth=1
device_name=Edison
manufacturer=Intel
model_name=Edison
```

Figure 1. wpa_supplicant.conf

Then, reboot the Edison and configure WiFi again. If the problem is not solved, proceed to Step 4.

- **Step 4.** Proceed to “Updating Firmware” section.



Updating Firmware

Note: The method provided in this section may be different from Intel’s official method. Please adhere to the steps described below to avoid problems.

1. Toggle the switch to enable “device mode”.
2. Connect a micro USB cable to the multi-gadget micro USB port and follow either of two options below to connect your Edison to your computer.
 1. **Important:** If you have a **powered USB hub**, please connect the USB hub to your computer and the USB cable to the USB hub. Otherwise, your Edison may not be supplied with enough power and reboot occasionally.
 2. If you are using an external power supply for your Edison, a powered USB hub may not be necessary. Your Edison can be directly connected to your computer.
3. The board will power on. Wait for it to finish booting. You can look at the on-board LEDs that indicates the booting progress as shown in Figure 2.

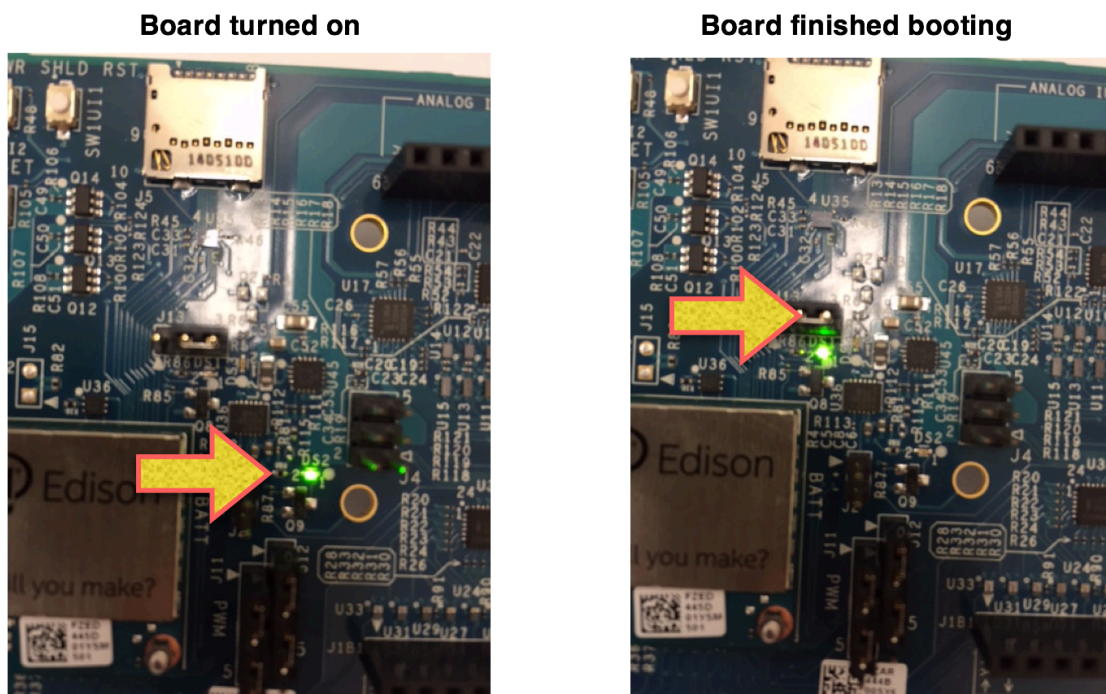
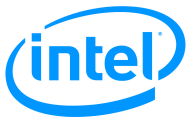


Figure 2. Board Close-up

4. Unplug the USB cable from the Edison board’s multi-gadget port and make sure the Edison is turned off (the on-board LEDs must be off).
5. Then, follow the steps below for your computer’s OS. (Windows on page 5, Mac OS X on page 6, and Linux on page 7)



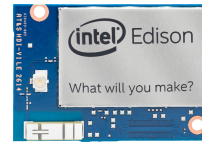
Windows

1. Follow the instruction on <https://software.intel.com/en-us/get-started-edison-windows-32-step2> to install the USB drivers (CDC, RNDIS, and DFU).
2. Download the latest **Yocto complete image** at <https://software.intel.com/edison-image/latest>
3. Extract the downloaded file to a folder.
4. Download **dfu-util.exe** at <https://www.dropbox.com/sh/jhzwqm355guccj9/AACvh1Nrv69Nkt-LZXWtCDyia?dl=0>.
5. Put **dfu-util.exe** into the folder you extracted the image to.
6. Double-click on a Windows Batch file named “**flashall**” in the folder.
7. When you see a message “Please plug and reboot the board”, plug a USB cable into the multi-gadget port and wait for a few second for your Edison to finish booting.
8. Do **NOT** unplug the cable while the installation process is running.

```
C:\Windows\system32\cmd.exe
Now waiting for dfu device 8087:0a99
Please plug and reboot the board
Dfu device found
Flashing IPFW
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% 6111232 bytes
Download done.
Flashing rootfs, (it can take up to 5 minutes... Please be patient)
Download [=] 6% 68751360 bytes
```

Figure 3. Firmware Installation

9. Once this process is successfully finished, your Edison now runs the latest firmware.
10. You are now ready to build systems on this platform!



Mac OS X

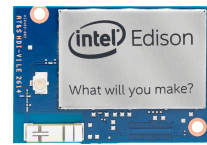
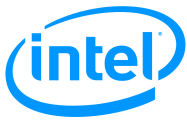
1. Download the latest Yocto complete image at <https://software.intel.com/edison-image/latest>
2. Extract the downloaded file to a directory.
3. Open **Terminal**.
4. Navigate to the directory you extracted the image to. If you are not familiar with the command line, refer to page 6 of Tutorial 2.
5. `$ ruby -e "$(curl -fsSL https://raw.githubusercontent.com/Homebrew/install/master/install)"`
6. `$ brew install dfu-util coreutils gnu-getopt`

```
wifi-131-179-5-143:Linux Image Chris$ cd edison-iotdk-image-280915/
wifi-131-179-5-143:edison-iotdk-image-280915 Chris$ ruby -e "$(curl -fsSL https://raw.githubusercontent.com/Homebrew/install/master/install)"
=> This script will install:
/usr/local/bin/brew
/usr/local/Library/...
/usr/local/share/man/man1/brew.1

Press RETURN to continue or any other key to abort
=> /usr/bin/sudo /bin/mkdir /Library/Caches/Homebrew
Password:
=> /usr/bin/sudo /bin/chmod g+rxw /Library/Caches/Homebrew
=> /usr/bin/sudo /usr/sbin/chown Chris /Library/Caches/Homebrew
=> Downloading and installing Homebrew...
remote: Counting objects: 3931, done.
remote: Compressing objects: 100% (3775/3775), done.
remote: Total 3931 (delta 32), reused 2217 (delta 20), pack-reused 0
Receiving objects: 100% (3931/3931), 3.42 MiB | 2.96 MiB/s, done.
Resolving deltas: 100% (32/32), done.
From https://github.com/Homebrew/homebrew
 * [new branch] master -> origin/master
HEAD is now at 90b9bdf apt-cacher-ng: prefer mirrorservice mirror
=> Installation successful!
=> Next steps
Run `brew help` to get started
wifi-131-179-5-143:edison-iotdk-image-280915 Chris$ brew install dfu-util coreutils gnu-getopt
=> Installing dependencies for dfu-util: libusb
=> Installing dfu-util dependency: libusb
=> Downloading https://homebrew.bintray.com/bottles/libusb-1.0.20.yosemite.bottle.tar.gz
##### 100.0%
=> Pouring libusb-1.0.20.yosemite.bottle.tar.gz
📦 /usr/local/Cellar/libusb/1.0.20: 11 files, 293.3K
=> Installing dfu-util
=> Downloading https://homebrew.bintray.com/bottles/dfu-util-0.8.yosemite.bottle.tar.gz
##### 100.0%
```

Figure 4. Terminal Output

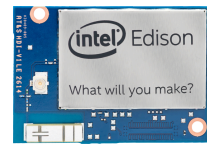
7. `$ sudo ./flashall.sh`
8. Enter your Mac login password when you are asked for password.
9. If you get an error message “permission denied”, enter “`chmod +x flashall.sh`” and then repeat Step 7.
10. When you see a message “Please plug and reboot the board”, plug a USB cable into the multi-gadget port and wait for a few second for your Edison to finish booting.
11. Do **NOT** unplug the cable while the installation process is running.



```
Using U-Boot target: edison-blankcdc
Now waiting for dfu device 8087:0a99
Please plug and reboot the board
dfu-util: Device has DFU interface, but has no DFU functional descriptor
Flashing IFWI
dfu-util: Device has DFU interface, but has no DFU functional descriptor
Download [=====] 100% 4194304 bytes
Flashing U-Boot
Download [=====] 100% 237568 bytes
Flashing U-Boot Environment
Flashing U-Boot Environment Backup
Rebooting to apply partition changes
Now waiting for dfu device 8087:0a99
Flashing boot partition (kernel)
Download [=====] 100% 6111232 bytes
Flashing rootfs, (it can take up to 5 minutes... Please be patient)
█
```

Figure 5. Firmware Installation

12. Once this process is successfully finished, your Edison now runs the latest firmware.
13. You are now ready to build systems on this platform!



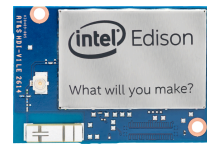
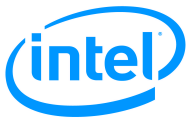
Linux (Ubuntu)

1. Download the latest Yocto complete image at <https://software.intel.com/edison-image/latest>
2. Extract the downloaded file to a directory.
3. Open **Terminal**.
4. Navigate to the directory you extracted the image to.
5. **\$ sudo apt-get install dfu-util**
6. Enter your Ubuntu login password when you are asked for password.
7. **\$ sudo ./flashall.sh**
8. If you get an error message “permission denied”, enter “**chmod +x flashall.sh**” and then repeat step 7.
9. When you see a message “Please plug and reboot the board”, plug a USB cable into the multi-gadget port and wait for a few second for your Edison to finish booting.
10. Do NOT unplug the cable while the installation process is running.

```
Using U-Boot target: edison-blankcdc
Now waiting for dfu device 8087:0a99
Please plug and reboot the board
Flashing IFWI
#####] finished!
#####] finished!
Flashing U-Boot
#####] finished!
Flashing U-Boot Environment
#####] finished!
Flashing U-Boot Environment Backup
#####] finished!
Rebooting to apply partition changes
Now waiting for dfu device 8087:0a99
Flashing boot partition (kernel)
#####] finished!
Flashing rootfs, (it can take up to 5 minutes... Please be patient)
```

Figure 6. Firmware Installation

11. Once this process is successfully finished, your Edison now runs the latest firmware.



Firmware Update Troubleshooting

If the firmware is not being properly installed, try to steps below.

Step 1. Please make sure your Edison is in “device mode”.

- The switch near the USB port on your Edison needs to be in **down** position.

Step 2. If you use a Windows machine, please check if the USB drivers are installed properly.

1. Connect your Edison to your computer via multi-gadget port.
2. Open **Device Manager**.
3. If you can find “Edison” listed under “Other devices” with “!” in a yellow triangle, you need to re-install the drivers.
4. Right-click on “Edison” and click on **uninstall**.
5. Follow the instruction on <https://software.intel.com/en-us/get-started-edison-windows-32-step2> to manually install the drivers.

Step 3. Please check whether your computer recognizes your Edison as a mass storage device. If your computer does not, the firmware installation was interrupted and the image is corrupted. Try this section again and please keep the USB cable plugged for few minutes after the installation process is finished.