

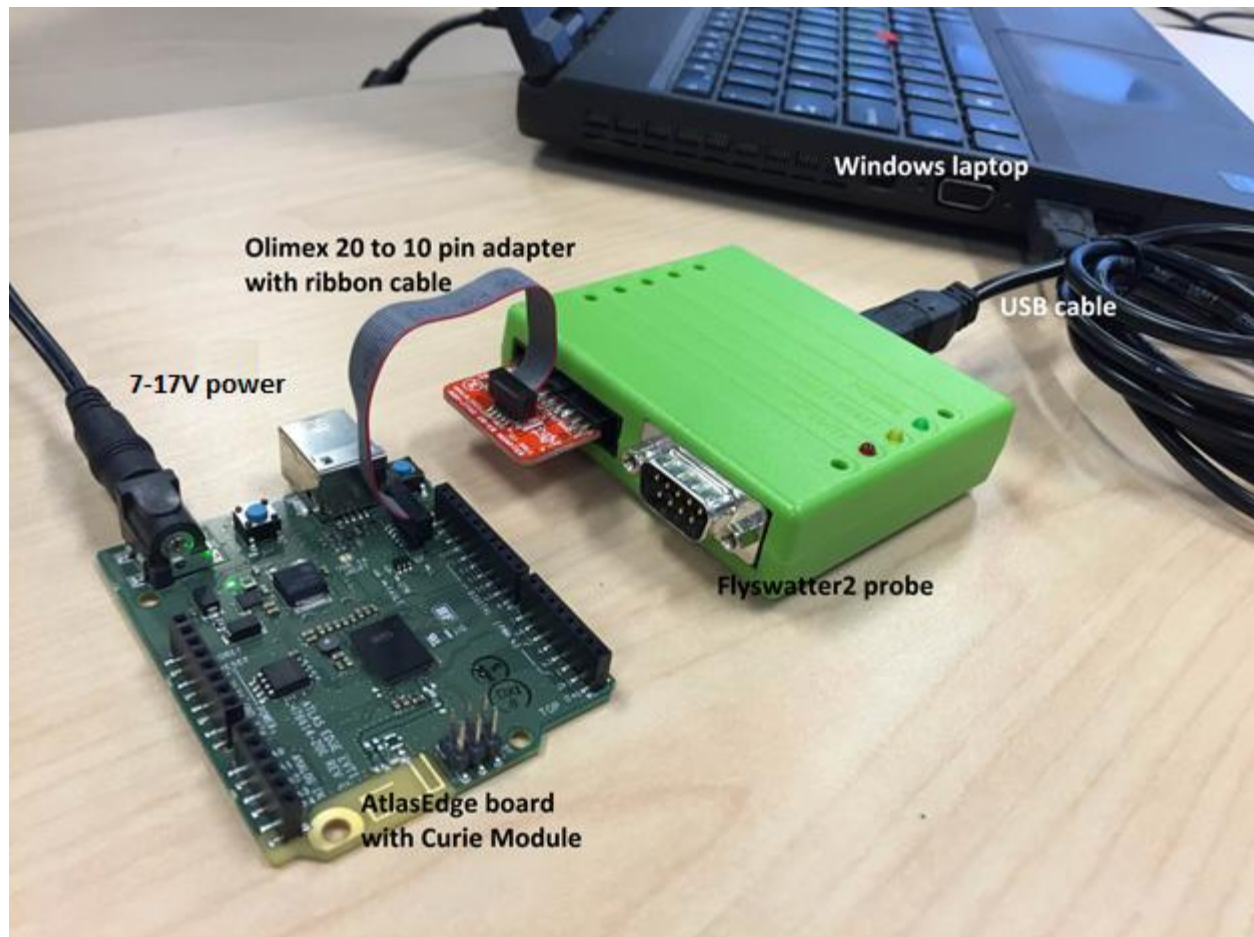
AtlasEdge Firmware Update

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Firmware Update Using JTAG

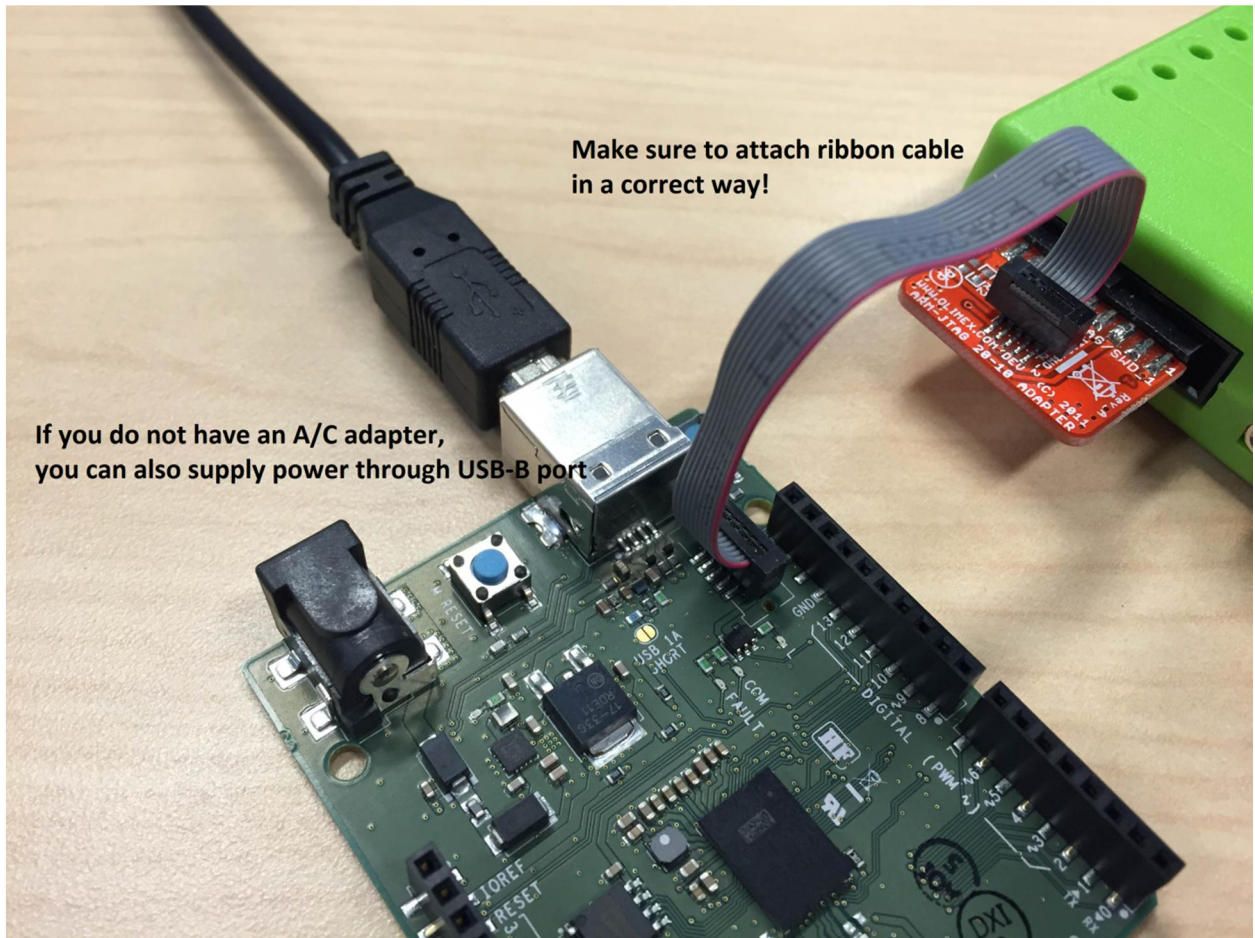
1. Connect all wires as shown on the picture



Components listing:

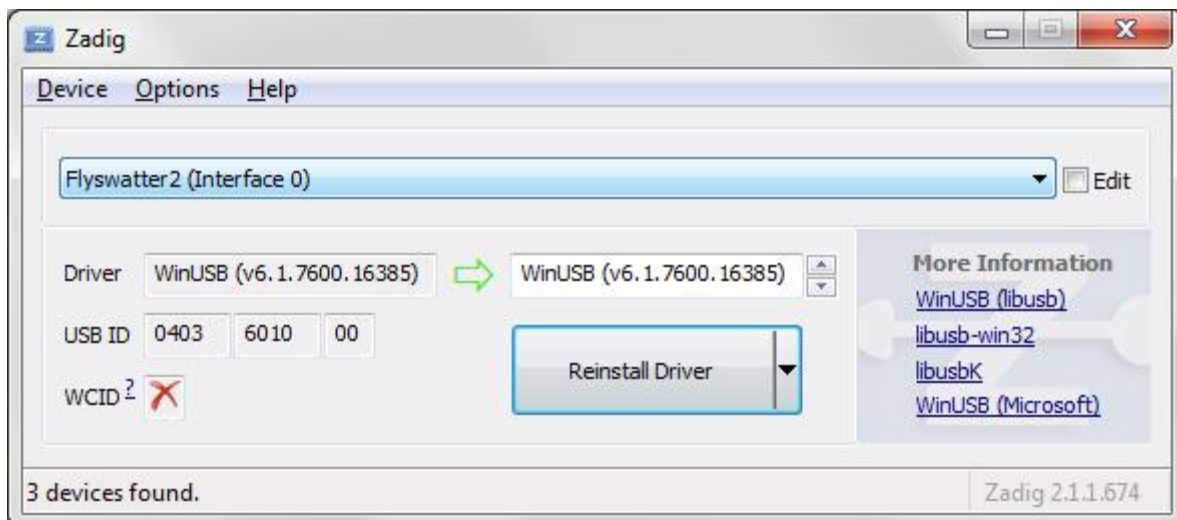
- a. Windows laptop
- b. Flyswatter2 JTAG probe with USB cable
- c. Olimex 20 to 10 pin adapter with ribbon cable
- d. AtlasEdge board with 7-17V DC power supply (or USB-B cable)

Make sure to attach ribbon cable in a correct way, as shown on the photo!



2. Install Flyswatter2 probe drivers:

2.1. Windows



- Plug in Flyswatter2 probe to the host

- b. Go to bin\ directory, run "zadig_2.1.1.exe".
- c. Options > List all devices.
- d. Select your probe (Flyswatter2), pick WinUSB and hit Reinstall Driver; do it for Interface 0 and Interface 1.
- e. Close zadig and **REPLUG YOUR PROBE!**

2.2. Linux

By default, non-root users won't have access to the JTAG pods connected via USB. You must grant write access to the proper /dev/bus/usb entry every time a device is connected to be able to run OpenOCD using a non-root account. The process can be automated by adding an udev rule. Simply create a text file in the rules directory:

```
$ sudo vim /etc/udev/rules.d/99-openocd.rules
```

The IDs depend on the JTAG device. For example, for the Flyswatter2* and the Olimex-ARM-USB-OCD-H, the rules file must have the following content:

```
SUBSYSTEM=="usb", ATTR{idVendor}=="0403",  
ATTR{idProduct}=="6010", MODE="0666"  
SUBSYSTEM=="usb", ATTR{idVendor}=="15ba",  
ATTR{idProduct}=="002b", MODE="0666"
```

(See drivers/rules.d/99-openocd.rules)

3. Flash the firmware

- a. Download and extract the latest firmware release and extract it
- b. In the extracted atlasedge_flasher directory, run the flashing script:
 - **Windows:** Execute (double-click) **flash-jtag.bat** in order to flash production image.
 - **Linux:** Run **flash-jtag.sh** in order to flash production image
 - **OSX:** Not supported

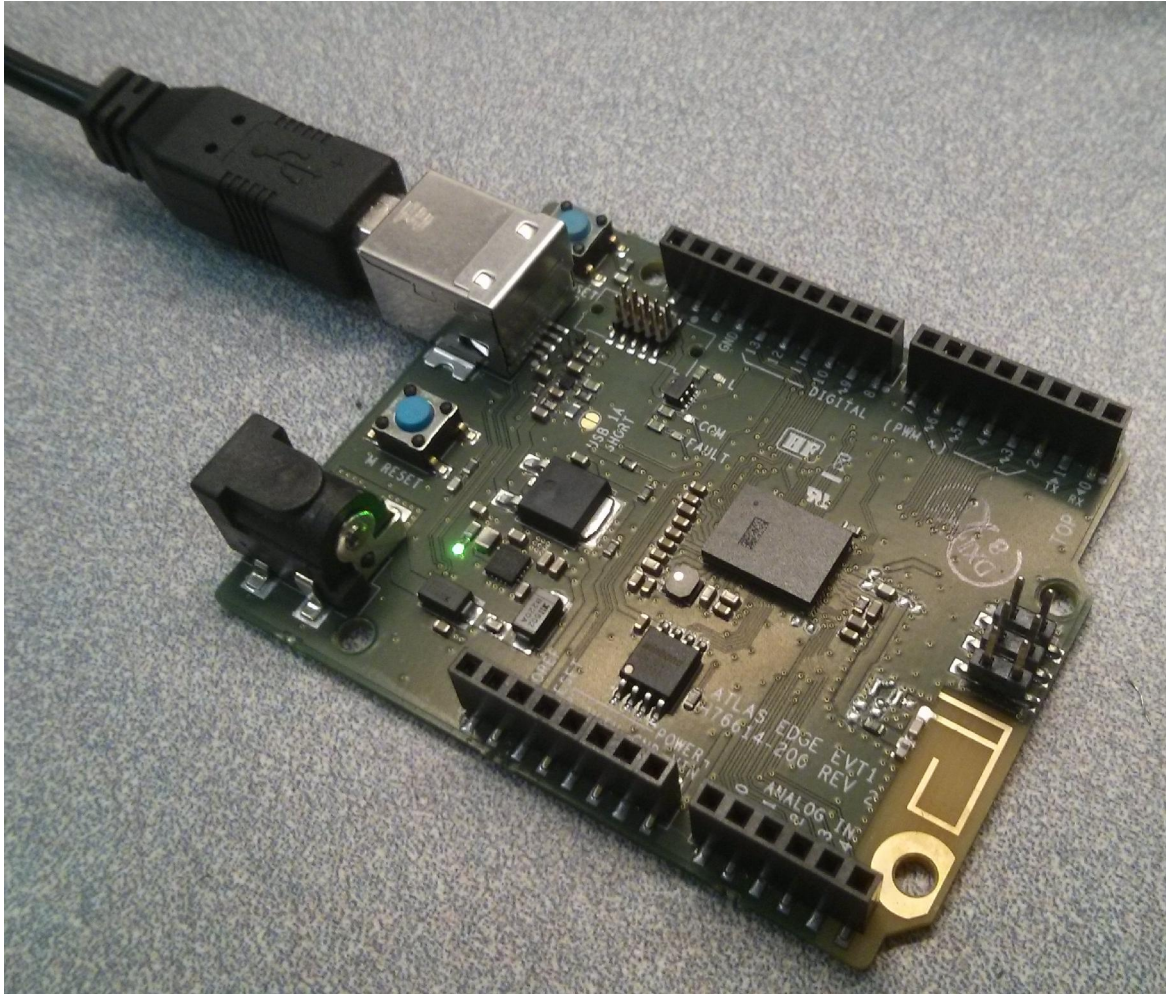
Below is how a successful flash looks like



```
Administrator: Windows Command Processor - flash_jtag.bat
t: 0xe765, ver: 0x0
Enabling arc core tap
Info : JTAG tap: firestarter.arc-em enabled
Enabling lmt core tap
Info : JTAG tap: firestarter.lmt enabled
target state: halted
target halted due to debug-request at 0x0000ffff in real mode
target state: halted
force hard breakpoints
.....39628 bytes written at address 0x40000000
downloaded 39628 bytes in 5.415200s (7.146 KiB/s)
.....30440 bytes written at address 0x40034000
downloaded 30440 bytes in 3.931200s (7.562 KiB/s)
.....131072 bytes written at address 0x40010000
downloaded 131072 bytes in 17.204201s (7.440 KiB/s)
.....16384 bytes written at address 0x40030000
downloaded 16384 bytes in 2.110000s (7.583 KiB/s)
....7168 bytes written at address 0xffffe400
downloaded 7168 bytes in 1.138800s (6.147 KiB/s)
verified 39628 bytes in 0.140400s (275.635 KiB/s)
verified 30440 bytes in 0.109200s (272.221 KiB/s)
verified 131072 bytes in 0.436800s (293.040 KiB/s)
verified 16384 bytes in 0.062400s (256.410 KiB/s)
verified 7168 bytes in 0.031200s (224.359 KiB/s)
target running
shutdown command invoked
!!!SUCCESS!!!
Press any key to continue . . . _
```


Firmware Update Using USB

1. Connect USB cable to board as shown



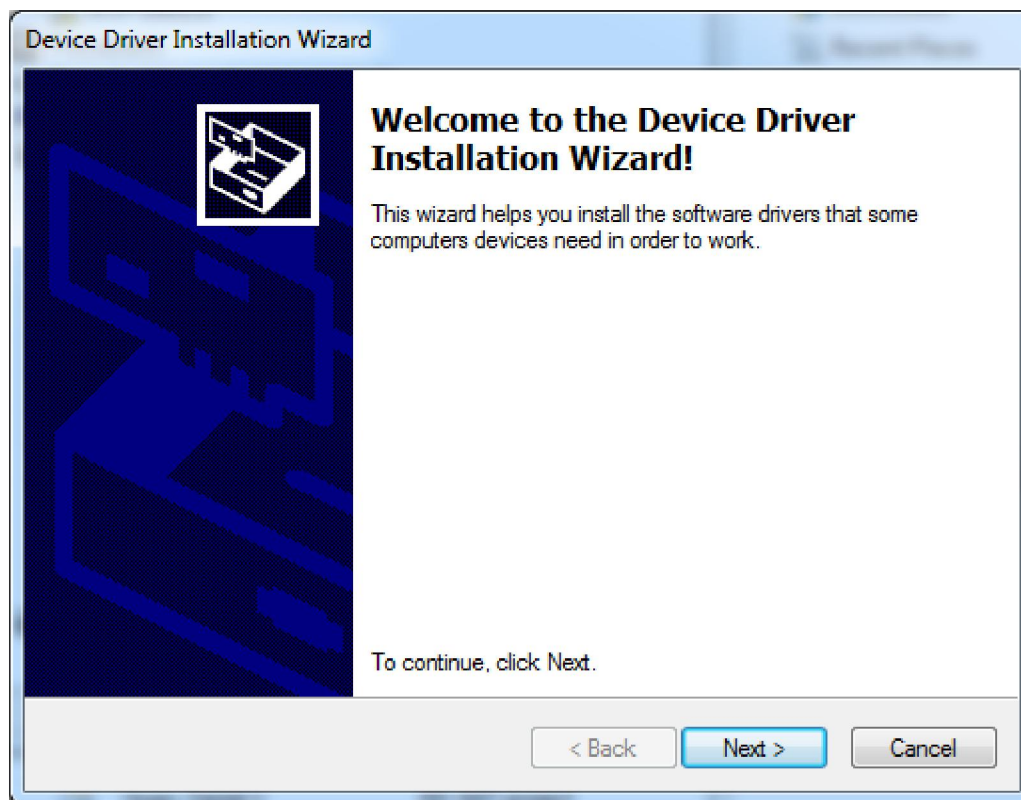
Components listing:

- a. PC with installed operating system: Mac OSX/Linux/Windows
- b. USB cable
- c. AtlasEdge board
- d. 7-17V **DC** power supply (or USB-B cable)

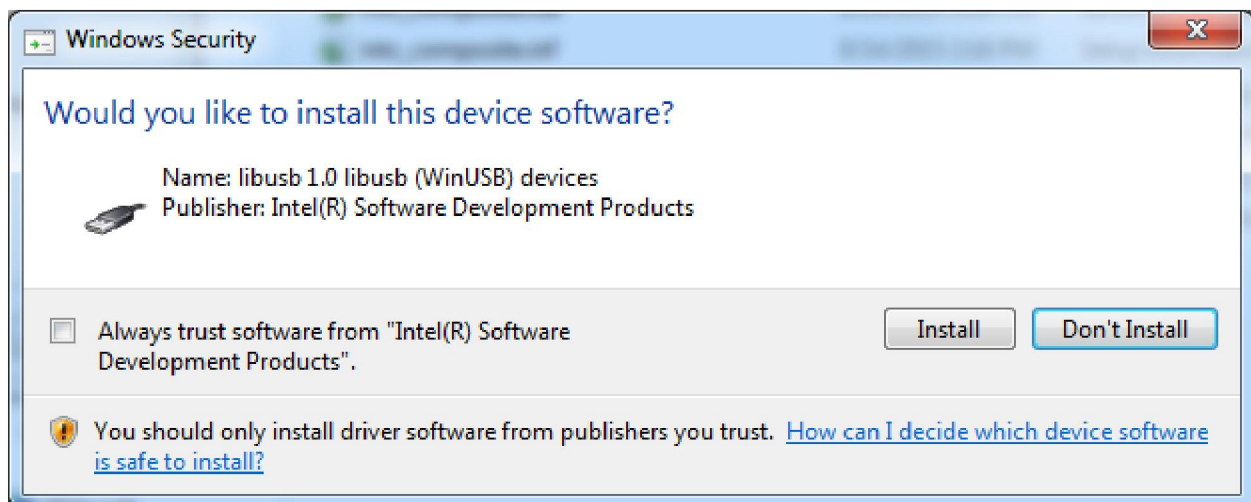
2. Install drivers

2.1. Windows

- a. Run:
 - drivers\Windows\dpinst-amd64.exe (on 64-bit Windows systems)
 - drivers\Windows\dpinst-x86.exe (on 32-bit Windows systems)



b. Click Next



c. Click **Install**



d. Click **Finish**

2.2. Linux

The DFU device can be set up for use by regular users by editing a text file in the rules directory:

```
$ sudo vi /etc/udev/rules.d/99-dfu.rules
```

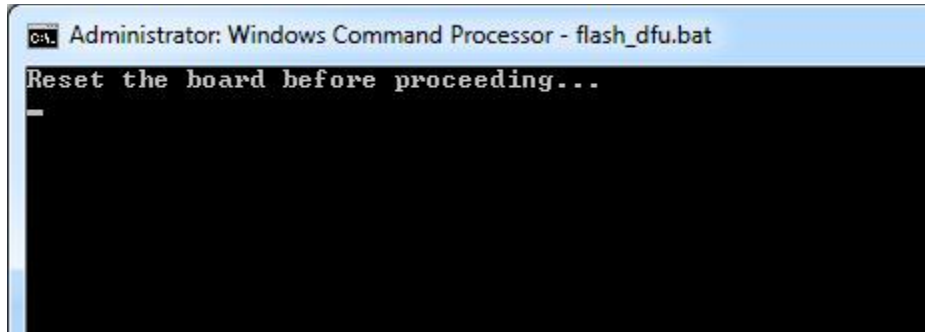
```
SUBSYSTEMS=="usb", ATTRS{idProduct}=="0a??",
ATTRS{idVendor}=="8087", MODE="666", GROUP="plugdev"
```

(See drivers/rules.d/99-dfu.rules)

3. Flash firmware

a. In the extracted "atlasedge_flasher_..." directory, run the flashing script:

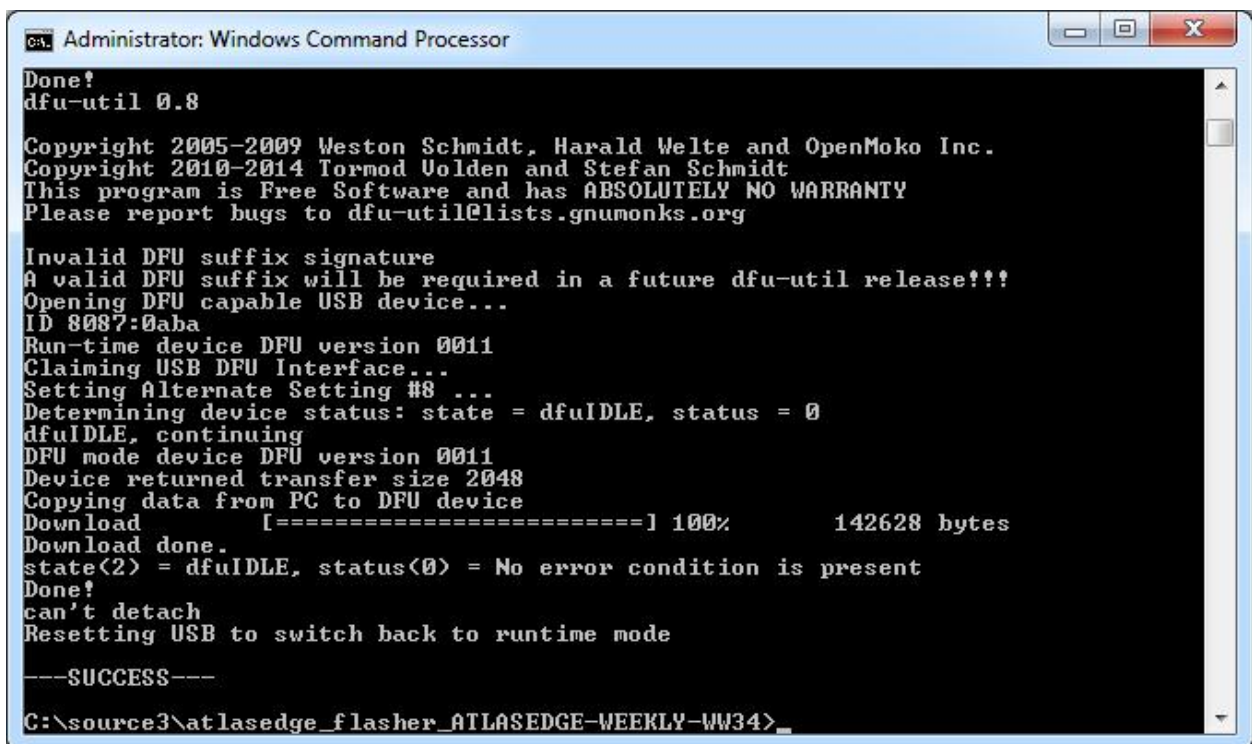
- **Windows:** Execute (double-click) **flash-dfu.bat**
- **Linux or OSX:** Run **flash-dfu.sh**



```
Administrator: Windows Command Processor - flash_dfu.bat
Reset the board before proceeding...
_
```

b. Press the **reset** button on the board to start the flash process

b. Below is how a successful **DFU** flash looks like



```
Administrator: Windows Command Processor
Done!
dfu-util 0.8

Copyright 2005-2009 Weston Schmidt, Harald Welte and OpenMoko Inc.
Copyright 2010-2014 Tormod Volden and Stefan Schmidt
This program is Free Software and has ABSOLUTELY NO WARRANTY
Please report bugs to dfu-util@lists.gnumonks.org

Invalid DFU suffix signature
A valid DFU suffix will be required in a future dfu-util release!!!
Opening DFU capable USB device...
ID 8087:0aba
Run-time device DFU version 0011
Claiming USB DFU Interface...
Setting Alternate Setting #8 ...
Determining device status: state = dfuIDLE, status = 0
dfuIDLE, continuing
DFU mode device DFU version 0011
Device returned transfer size 2048
Copying data from PC to DFU device
Download [=====] 100%          142628 bytes
Download done.
state(2) = dfuIDLE, status(0) = No error condition is present
Done!
can't detach
Resetting USB to switch back to runtime mode

---SUCCESS---

C:\source3\atlasedge_flasher_ATLASEDGE-WEEKLY-WW34>
```