



How to Recover the Andromeda Box™ Edge from a Bad Flash

Ver 0.1

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Document Conventions



Note: Provides related information or information of special importance.



Caution

Caution: Indicates potential damage to hardware or software, or loss of data.



Warning: Indicates a risk of personal injury.



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1. Overview

The purpose of this document is to outline how to recover the Marvell Andromeda Box™ Edge from a bad flash.

The document describes how to recover the board with the bad flash with different tools, including Linux, Windows and the Linux tool running under Virtual Machine, such as VirtualBox, etc.

2. Acquiring Recovery Images

There are two ways to get the required recovery image package:

- 1) Follow the BDK guide to build the Brillo images for Andromeda Box Edge, the three steps to build the images are shown below:

```
$source build/envsetup.sh  
$lunch abox_edge-eng or "your product name"  
$m dist
```

When finished, build the Brillo image, a zip file named "<product>-flashall-eng.<user>.zip" will be generated in the product out directory like "out/dist".

- 2) Download the pre-built recovery image package from AndromedaBox.org

3. Linux-Version Tool

3.1 Preparing the recovery tool running environment

Install ia32-libs for your 64-bit Linux Host PC used for provisioning/flashing.

```
$ sudo apt-get install lib32z1 lib32ncurses5 lib32bz2-1.0
```

Get the flash tool from the vendor sub-directory of the BDk, example: "vendor/bsp/marvell/device/abox_edge/tools/" or download it from the AndromedaBox.org website.

3.2 Recover the board

Run the flash tool to recover the board with the zipped images.

```
$ ./brillo-flashall-abox_edge.sh -f <product>-flashall-eng.<user>.zip
```

The system will prompt for a password in order for a root privilege to run. After inputting the password, it will prompt: "**Please plug in your USB device**" and wait for the board to enter into the flash mode.

Then connect your Host PC with the USB cable to the micro USB OTG port on the board.

Put the board into software download mode per the instructions below:

If the board is powered-off

- Press the "power" button and meanwhile to keep holding "fastboot" button for 3 seconds and then release "fastboot" button.

If the board is powered-on

- Press the "reset" button while holding "fastboot" button for 3 seconds; then release the "fastboot" button.

Once the board is in the software download mode, the recovery process begins; wait for the prompt: "**Burn Successful**" which appears after the recovery is complete.

Once complete, press the "reset" button to restart the board.

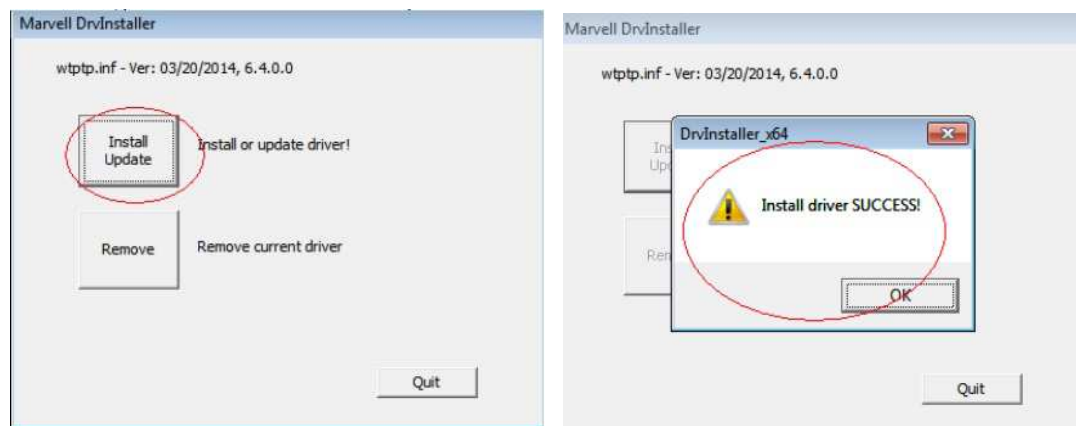
4. Windows-Version Recovery Tool

You can get the Windows-version recovery tool at:
Andromeda_Windows_Recovery_Tool.zip from the AndromedaBox.org
website.

4.1 Prepare the Recovery Tool Running Environment

The recovery tool driver needs to be installed on your Windows machine.
The driver is in the: “unzip folder”\driver. For 32-bit Windows, run
“DrvInstaller.exe”; for 64-bits Windows, run “DrvInstaller_x64.exe”.

After the program runs, click the “Install Update” button to install/update the
driver as shown in the picture below. After complete, the system will prompt:
“Install driver SUCCESS!”



4.2 Recover the Board

First, copy the “<product>-flashall-eng.<user>.zip” file generated from the
“m dist” to the PC or download the pre-built image zip package from the
Andromeda.org website.

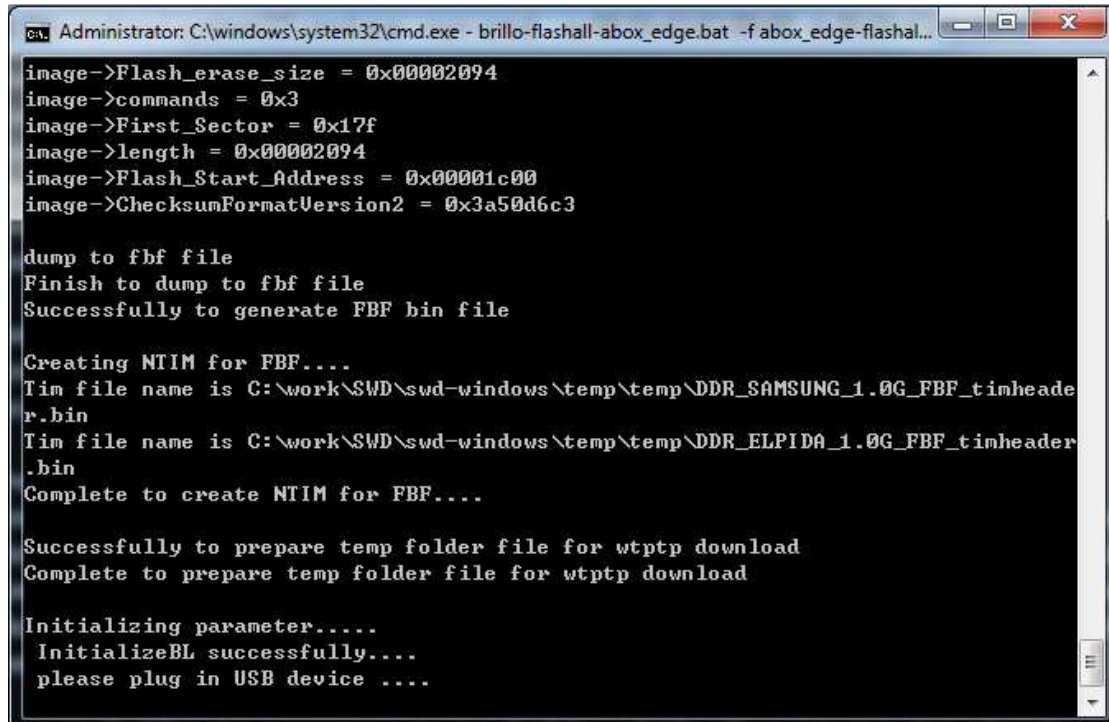
Next, run the brillo-flashall-abox_edge.bat to recover the board from the bad
flash.

```
brillo-flashall-abox_edge.bat -h  
Usage: brillo-flashall-abox_edge.bat [options]  
-h,--help  
-f,--file [zipfile] recovery image zip file
```

To start the board recovery enter:

```
brillo-flashall-abox_edge.bat -f "path"\abox_edge-flashall-eng.<user>.zip
```

Now you should be able to see "Please plug in USB device" as shown below:



```
Administrator: C:\windows\system32\cmd.exe - brillo-flashall-abox_edge.bat -f abox_edge-flasha...
image->Flash_erase_size = 0x00002094
image->commands = 0x3
image->First_Sector = 0x17f
image->length = 0x00002094
image->Flash_Start_Address = 0x00001c00
image->ChecksumFormatVersion2 = 0x3a50d6c3

dump to fbf file
Finish to dump to fbf file
Successfully to generate FBF bin file

Creating NTIM for FBF...
Tim file name is C:\work\SWD\swd-windows\temp\temp\DDR_SAMSUNG_1.0G_FBF_tinheader.bin
Tim file name is C:\work\SWD\swd-windows\temp\temp\DDR_ELPIDA_1.0G_FBF_tinheader.bin
Complete to create NTIM for FBF...

Successfully to prepare temp folder file for wtptp download
Complete to prepare temp folder file for wtptp download

Initializing parameter....
InitializeBL successfully....
please plug in USB device ....
```

Follow the steps below to allow the board to enter into software download mode:

If the board is powered-off

- Press the "power" button while holding the "fastboot" button for 3 seconds; then release the "fastboot" button.

If the board is powered-on

- Press the "reset" button while holding the "fastboot" button for 3 seconds; then release the "fastboot" button.

Once set, you should see the following:


```
Administrator: C:\windows\system32\cmd.exe
dump to fbf file
Finish to dump to fbf file
Successfully to generate FBF bin file

Creating NTIM for FBF....
Tim file name is C:\work\SWD\swd-windows\temp\temp\DDR_SAMSUNG_1.0G_FBF_tinheader.bin
Tim file name is C:\work\SWD\swd-windows\temp\temp\DDR_ELPIDA_1.0G_FBF_tinheader.bin
Complete to create NTIM for FBF....

Successfully to prepare temp folder file for wtptp download
Complete to prepare temp folder file for wtptp download

Initializing parameter.....
  InitializeBL successfully....
  please plug in USB device ....

Add an WTPTP device: Device 1.....
Device 1: Burning flash percentage is 100
Add an WTPTP device: Device 1.....
Device 1: Burning flash percentage is 100
Device 1: Download Completed successfully.....
```

Caution When you are in the process of burning the image, please do not power off or unplug the USB to avoid damaging the board.

Finally, press the “reset” button to restart the board.

5. Linux-Version Recovery Tool Running in Virtual Machine

Because the recovery tool running in VM is nearly the same as the physical Linux machine, only differences are highlighted below. Please refer to Chapter 3 for detailed operations.

- 1) Put the Andromeda Box Edge into software download mode.
- 2) In the USB device list for VM, you should be able to find the “**MARVELL ULC1**” USB device. If it is listed, that means the board is in software download mode correctly. If not listed, retry.
- 3) Run the command:

```
$ ./brillo-flashall-abox_edge.sh -f <product>-flashall-eng.<user>.zip
```

- 4) After seeing “Please plug your USB device”, select the Devices -> USB Devices -> MARVELL ULC1.
- 5) The recovery tool runs into the “Finish to disconnect”. At this moment, you need to select Devices -> USB Devices -> MARVELL ULC1 to connect to the board micro USB port again.
- 6) The recovery process begins and will prompt: “Burn Successful” once complete.



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