

## DREEVO<sub>3</sub> UPDATE GUIDE v2.2

Last update: 2011-06-22



## Contents

1.	Requirements .....	3
2.	Build the microSD to update the Dreevo3 .....	3
3.	Update the Dreevo3 .....	6
4.	Appendix A - How to enable/disable the suspendOnROM? .....	7
5.	Appendix B - How to install a user application? .....	8
6.	Appendix C - How to manage the map data (carto)? .....	9
7.	Appendix D - How to install a custom boot screen? .....	10
8.	Appendix E - How to reset the device? .....	12
9.	Appendix F - How to perform a proper format? .....	13

## 1. Requirements

1. One microSD
2. The HP Drive Key Boot Utility<sup>(1)</sup>
3. The update package containing the following files:
  - **microSD restoration file**
    - update\_and\_test.img
  - **System/software update files**
    - fs.cramfs
    - image.bin
    - sbsl.bin
    - user.img
  - **Optional files**
    - force\_format [Allows to format the device before the update]
    - update\_only [Allows to skip the test procedure]

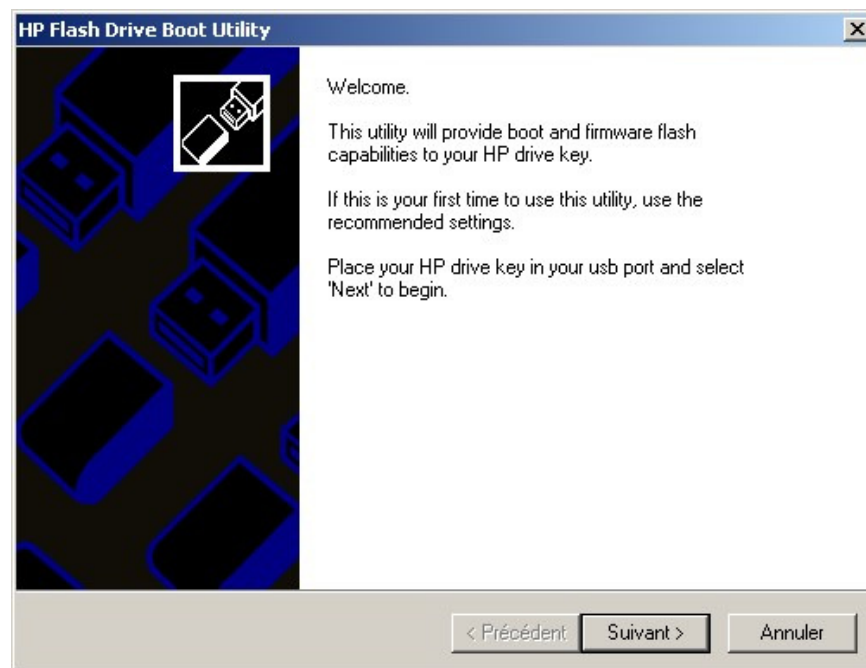
<sup>(1)</sup> <ftp://ftp.hp.com/pub/products/servers/supportsoftware/cp006001-006500/cp006049.exe>

**Note:** The HP Drive Key Boot Utility is not compatible with windows Vista/7.

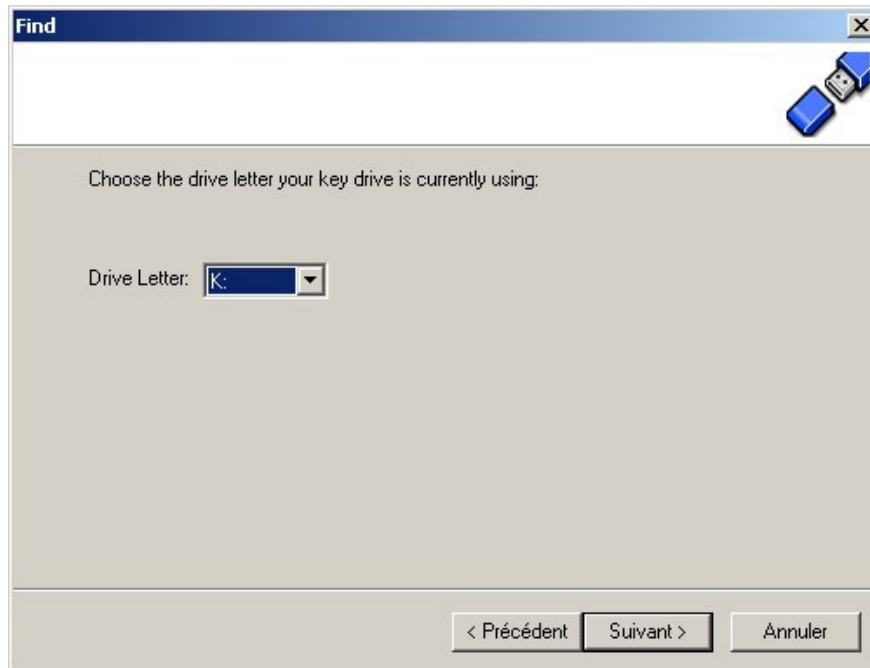
## 2. Build the microSD to update the Dreevo3

The following instructions explain how to build a microSD under Windows or Linux to restore the system and the software of your Dreevo3.

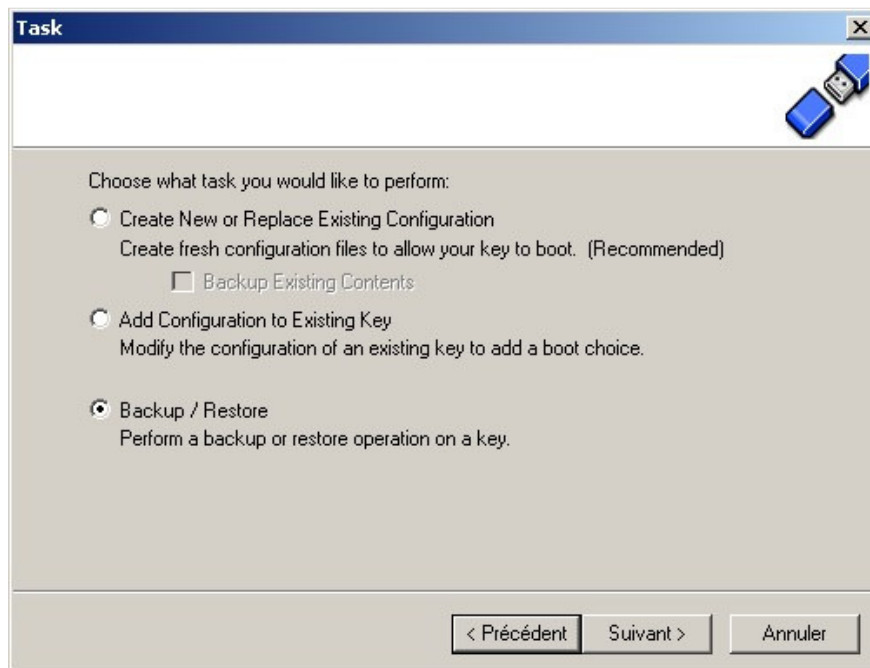
1. Windows procedure
  - Download and extract the update package (MDI\_PCK\*.rar).
  - Install the HP Drive Key Boot Utility and launch it.
  - Click on next.



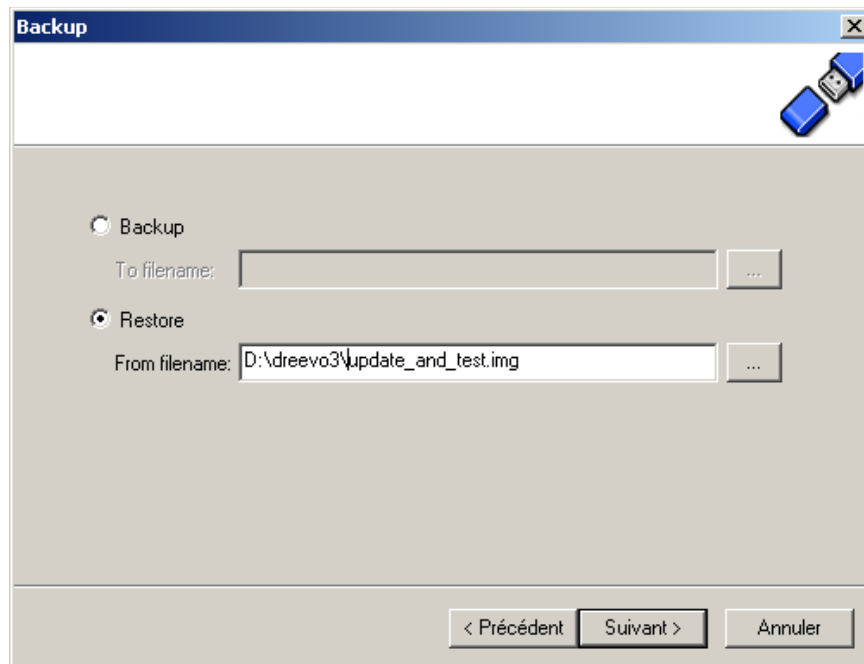
- Select the drive letter and click on next.



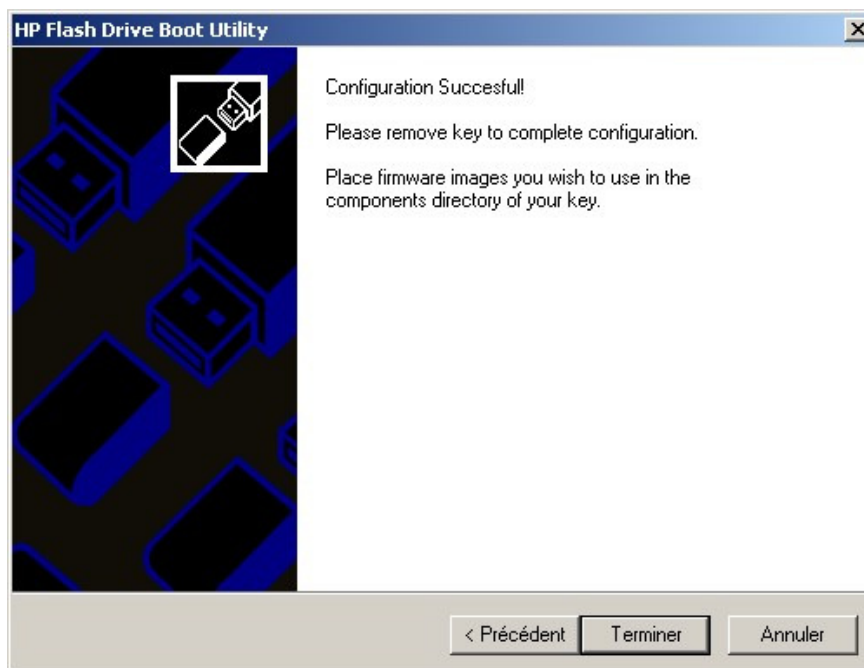
- Select Backup/Restore and click on next.



- Browse your drive, select the file update\_and\_test.img and click on next.



- Click on Finish. The drive is un-mounted.



- Unplug/plug the microSD adapter and browse it. It looks empty.
- Copy the files fs.cramfs, image.bin, sbsl.bin, user.img, force\_format and update\_only on the microSD.

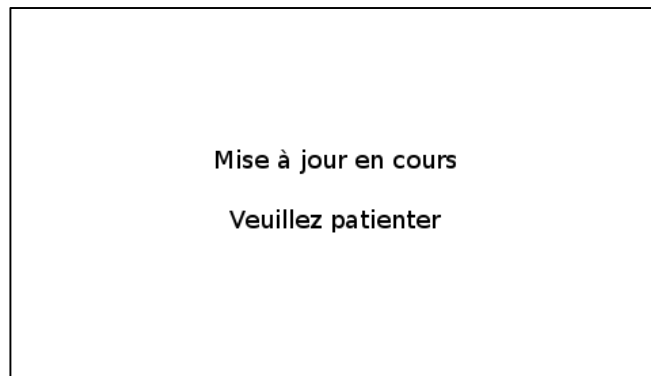
**Note:** The restoration procedure spends at least 3-4 minutes. If it spends a few seconds verify the microSD isn't writing protected.

## 2. Linux procedure

- Download and extract the update package (MDI\_PCK\*.rar).
- Open a Linux console.
- Insert the microSD card, type dmesg.
  - This command returns the name of the new detected device.
  - Here we will use sda.
- Type `cat update_and_test.img > /dev/sda`.
- Unplug/plug the microSD adapter and browse it.
- Copy the files `fs.cramfs`, `image.bin`, `sbsl.bin`, `user.img`, `force_format` and `update_only` on the microSD.

## 3. Update the Dreevo3

1. The Dreevo3 must be OFF.
2. Insert the microSD then turn the Dreevo3 ON.
3. The message following screen is displayed. The update is running.



4. Once updated, the following screen is displayed. The update is finished.



5. Remove the microSD then use the stylus to reset the Dreevo3. See Appendix E.
6. The suspendOnROM image will be created at the next boot. See Appendix A.

## 4. Appendix A - How to enable/disable the suspendOnROM?

The **suspendOnROM** creates an image in memory which allows booting the device within 20-30 sec. This feature is active by default.

### 1. How to enable the suspendOnROM?

- From the graphical interface
  - Select Settings/Configuration/muiSwitcher.
  - Set the parameter activeSuspendOnROM to 1.
  - Select Settings/Configuration/muiConfiguration.
  - Set the parameter displayMenuInvalidateSuspendOnROM to 1.
  - Select Settings/Reboot to reset the device.
- From the console
  - Type #SWITCH# to open the basic console.
  - Type s muiSwitcher activeSuspendOnROM 1.
  - Type s muiConfiguration displayMenuInvalidateSuspendOnROM 1.
  - Type reboot to reset the device.

### 2. How to disable the suspendOnROM?

- From the graphical interface
  - Select Settings/Update to invalidate the current suspend image.
  - Select Settings/Configuration/muiSwitcher.
  - Set the parameter activeSuspendOnROM to 0.
  - Select Settings/Configuration/muiConfiguration.
  - Set the parameter displayMenuInvalidateSuspendOnROM to 0.
  - Select Settings/Configuration/pwrManager.
  - Set the parameters gpsStartMode and modemStartMode to 1.
  - Select Settings/Reboot to reset the device.
- From the console
  - Type #SWITCH# to open the basic console.
  - Type isuspend to invalidate the current suspend image.
  - Type s muiSwitcher activeSuspendOnROM 0.
  - Type s pwrManager gpsStartMode 1.
  - Type s pwrManager modemStartMode 1.
  - Type s muiConfiguration displayMenuInvalidateSuspendOnROM 0.
  - Type reboot to reset the device.

**Note:** If you meet GPS/GSM troubles after the suspendOnROM deactivation, check the parameters pwrManager.gpsStartMode and pwrManager.modemStartMode. They must be set to 1.

## 5. Appendix B - How to install a user application?

- From the console (via IBD cable)
  - Type #SWITCH# to open the basic console.
  - Type screen 1 to open the advanced console.
  - If the suspendOnROM is active type isuspend to invalidate the current image.
  - Type update then transfer the PKG-usersd-\*.tar.gz package via Kermit.
  - Type reboot to reset the device. The update will be done on the next reboot.
  
- From the console (via USB cable)
  - Type #SWITCH# to open the basic console.
  - Type screen 1 to open the advanced console.
  - If the suspendOnROM is active type isuspend to invalidate the current image.
  - Type update then transfer the PKG-usersd-\*.tar.gz package via ftp.
  - ➔ ftp://anonymous:anonymous@192.168.10.3
  - Once the transfer is done type y to complete the update.
  - Type reboot to reset the device. The update will be done on the next reboot.
  
- Using a microSD
  - Take a blank microSD (Do not restore it with the HP Drive Key Boot Utility)
  - Download and extract the ADD-ON package on the microSD.
  - Copy the PKG-usersd-\*.tar.gz package in the /iso-dir of the microSD.
  - Insert the microSD then turn the device ON to start the update.

Add the following step if the suspendOnROM is active

- From the GUI select Settings and Update to invalidate the current suspend image.
- Select Reboot to reset the device. The update will start on the next reboot.

**Note:** From a microSD you can also update a configuration file (config.txt), a custom boot screen (boot.bmp) or a package containing the map data (carto.tgz).



## 6. Appendix C - How to manage the map data (carto)?

The map data can be loaded from the folder **carto** of the microSD or from the flash memory. Maximum flash memory allocated for map data is about 1.2 GB.

**Note:** The microSD containing the map data must be inserted in the device when the suspend image is created otherwise the map won't be loaded. If so, invalidate the current suspend image, insert your microSD then reboot the Dreevo3.

Follow the steps below if you want load the map data from the flash memory.

### 1. Build a carto.tgz package

- How to create a carto.tgz file under Windows?
  - Download and install 7-zip ([www.7-zip.org](http://www.7-zip.org))
  - Create a folder tmp\_carto then open it.
  - Copy in the folder chart plus all the map data (\*.ncf, \*.psd, \*.nod, \*.svs, \*.cty).
  - Press CTRL+A to select all the tmp\_carto folder content.
  - Right click and use 7-zip to create a carto.tar package then a carto.tar.gz package.
  - Rename the package carto.tar.gz in carto.tgz.
- How to create a carto.tgz file under Linux?
  - Create a folder tmp\_carto then open it.
  - Copy in the folder chart plus all the map data (\*.ncf, \*.psd, \*.nod, \*.svs, \*.cty).
  - From tmp\_carto type the command **tar -cvzf carto.tar.gz \*** to create the package.
  - Rename the file carto.tar.gz in carto.tgz.

### 2. Install the carto.tgz package

- Take a blank microSD (Do not restore it with the HP Drive Key Boot Utility)
- Download and extract the ADD-ON package on the microSD.
- Copy the carto.tgz package in the /iso-dir of the microSD.
- Insert the microSD then turn the device ON.

Add the following step if the suspendOnROM is active

- From the GUI select Settings and Update to invalidate the current suspend image.
- Select Reboot to reset the device. The update will start on the next reboot.

**Note:** If the suspendOnROM is active you must invalidate the current image before installing the carto.tgz package.

## 7. Appendix D - How to install a custom boot screen?

To replace the default boot screen, first you have to create your own image then use the ADD-ON microSD to install it.

1. Create a new boot screen
  - Name: boot.bmp
  - Size: 480\*272
  - Colors: 16,7 Millions (24Bits)
2. Install the new boot screen
  - Take a blank microSD (Do not restore it with the HP Drive Key Boot Utility)
  - Download and extract the ADD-ON package on the microSD.
  - Copy the file boot.bmp in the /iso-dir of the microSD.
  - Insert the microSD then turn the device ON to start the update.

Follow the steps below to replace the boot screen when the suspendOnROM is active.

3. Build a PKG-Deployment-Patch.tar.gz package
  - How to create a PKG-Deployment-Patch.tar.gz package under Windows?
    - Download and install 7-zip ([www.7-zip.org](http://www.7-zip.org))
    - Create a folder tmp\_bmp and open it.
    - Create 2 subfolders img and writeDir.
    - Copy the file boot.bmp in both subfolders.
    - Press CTRL+A to select both subfolders.
    - Right click and use 7-zip to create a PKG-Deployment-Patch.tar package then a PKG-Deployment-Patch.tar package.
  - How to create a PKG-Deployment-Patch.tar.gz package under Linux?
    - Create a folder tmp\_bmp and open it.
    - Create 2 subfolders img and writeDir.
    - Copy the file boot.bmp in both subfolders.
    - From tmp\_bmp type the command **tar -cvzf PKG-Deployment-Patch.tar.gz \*** to create the package.
4. Install the PKG-Deployment-Patch.tar.gz package
  - Using the microSD
    - Take a blank microSD (Do not restore it with the HP Drive Key Boot Utility)
    - Download and extract the ADD-ON package on the microSD.
    - Copy the PKG-Deployment-Patch.tar.gz in the /iso-dir of the microSD.
    - Insert the microSD then turn the device ON.
    - From the GUI select Settings and Update to invalidate the current suspend image.
    - Select Reboot to reset the device. The update will start on the next reboot.

- From the console (via IBD cable)
  - Type #SWITCH# to open the basic console.
  - Type screen 1 to open the advanced console.
  - Type isuspend to invalidate the current image.
  - Type update then transfer the PKG-Deployment-Patch.tar.gz package via Kermit.
  - Type reboot to reset the device. The update will be done on the next reboot.
  
- From the console (via USB cable)
  - Type #SWITCH# to open the basic console.
  - Type screen 1 to open the advanced console.
  - Type isuspend to invalidate the current image.
  - Type update then transfer the PKG-Deployment-Patch.tar.gz package via ftp.
  - ➔ ftp://anonymous:anonymous@192.168.10.3
  - Once the transfer is done type y to complete the update.
  - Type reboot to reset the device. The update will be done on the next reboot.

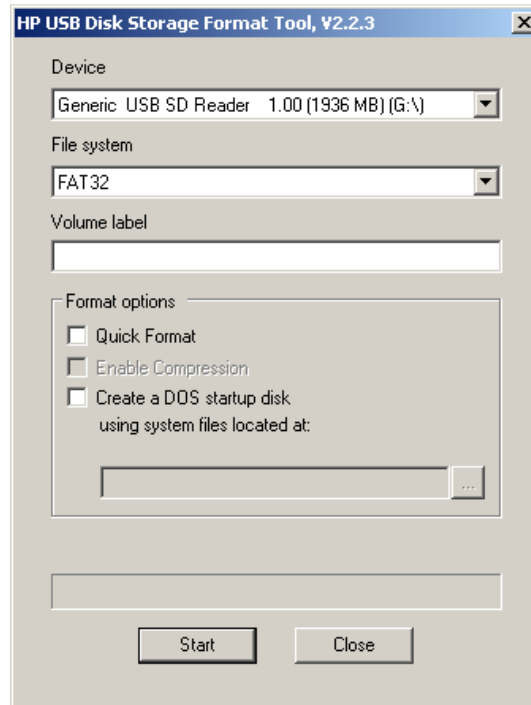
## 8. Appendix E - How to reset the device?

To reset the Dreevo3 you have to insert the stylus (included to the suction foot) into the reset 'hole'.



## 9. Appendix F - How to perform a proper format?

- Format the microSD using a specific tool like HP USB Disk Storage Format Tool.



Panasonic SD formatter tool

<http://panasonic.jp/support/global/cs/sd/download/index.html>

Hewlett Packard USB Disk Storage Format Tool

<http://downloads.pcworld.com/pub/new/utilities/peripherals/SP27608.exe>

- Manually delete the hidden partitions
  - Under Windows select Start>Run, type *compmgmt.msc* and press <enter>.
  - Select *Disk management* and check the removable disk



- Right click then select *Format*.



- Right click then select *create a new partition*.
- Follow the guidelines.