

Recovering the Android Operating System

Devices with Intel Bay Trail Processor

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1 Overview

This manual describes how to recover the Android operating system on your MEDION device with an Intel Bay Trail microprocessor. This can be necessary if your device is not working properly anymore and reset to factory settings is either impossible or does not solve your problem.

Please find a table with supported device models at the end of this document. Make sure that your device model is listed. Please also make sure that you download the correct or required recovery package from our service homepage. You also need a PC with either Ubuntu Linux (tested with Ubuntu 14.04 LTS and 16.04 LTS, each 64 bits) or Microsoft Windows (tested with version 7 to 10, each 64 bits) as well as the USB cable that came with your MEDION device.

NOTICE! Please read this manual carefully before you start the recovery of the Android operating system!

CAUTION! Please use this package just for device models listed at the end of this document. The usage on other device models can cause irreparable damage. If you are unsure please contact our hotline.

CAUTION! All data that is stored on your device can get lost during the recovery process! Back up your data – if possible – on an external medium (e.g. microSD card or USB stick) before initiating the recovery process.

NOTICE! Take the steps in this manual as explained and in the provided order. Start again with step 1 if any problems occur during the recovery process.



2 Preparatory Actions

1. If you are using Microsoft Windows please download and install the Intel Android USB Driver. You can find this driver here:

<https://software.intel.com/en-us/android/articles/intel-usb-driver-for-android-devices>

NOTICE! The driver is not digitally signed. In case you see a system warning message during the driver installation please acknowledge the warning and install the driver anyway.



NOTICE! Windows 8 and newer need to be started in a special manner to allow the installation of drivers that are not digitally signed. If you **don't** see any warning during the driver installation the installation has actually **failed** even though the installer did not display any error message. To learn more about how to start your Windows system for installing unsigned drivers please consult the Microsoft support website or the internet.



2. When using Ubuntu Linux, please create or edit the following text file (requires root permissions):

```
/etc/udev/rules.d/51-android.rules
```

Add the following line and save the file:

```
SUBSYSTEM=="usb",ATTR{idVendor}=="8087", MODE="0666", GROUP="plugdev"
```

3. Download the recovery package that matches your device model and your desired Android version from our service page and unpack it (for example by right-clicking and choosing "Extract all"):

<http://www.medion.com/de/service/start/>

NOTICE! Please note that not every Android version will be available for every device model.

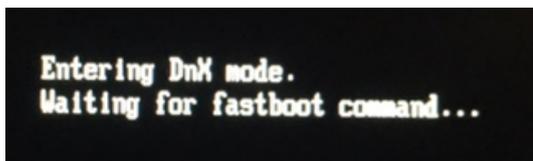


NOTICE! When recovering a **LIFETAB P831X** please make sure to read the corresponding remarks in section 4.

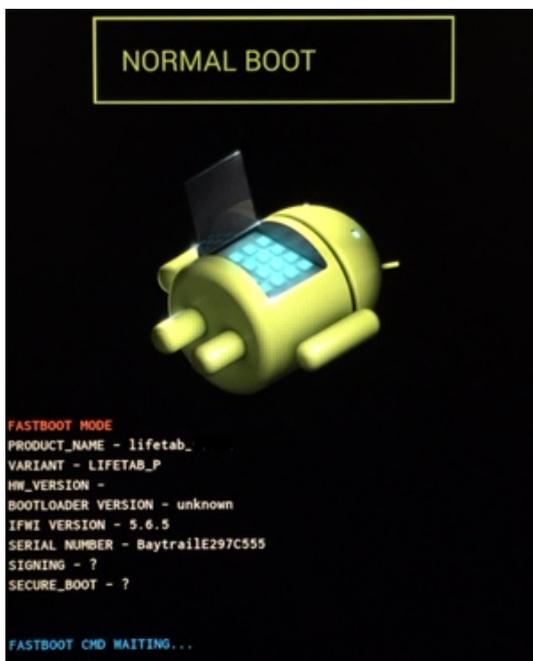


3 Accomplish the Recovery Process

1. Power off your Android device. Remove the USB connection to your PC and take out any microSD card that might be inserted.
2. Initiate the recovery process as follows:
 - a) When using Linux, execute the command `source flash.sh` (sudo may be required) in a terminal.
 - b) When using Windows, double-click the file `flash.bat`.
3. The script waits for the tablet to be connected and shows the message „<waiting for device>“.
4. Press and hold the power button and both volume buttons simultaneously for about 10 seconds. The device will start into the so-called DnX fastboot mode.



5. Use the USB cable to connect the tablet to the PC. The recovery process will start automatically. Your device will reboot several times during the course of it.



6. Depending on the recovery package the BIOS of your device may be updated at the end of the recovery process. In this case the screen will contain a lot of text output in a small font, ending with the message „Press any key to reset system!!!“. Do press one of the volume keys briefly then.
7. The device will reboot automatically. The first start can take up to 15 minutes. Afterwards you can set up your device.

4 Advanced Options

Depending on the recovery package there may be several options for customizing the recovery process. These options should only be used by experienced users. They need to be appended to the actual command (`flash.sh` or `flash.bat`). Using the options requires that you are running the recovery process in a terminal window (Ubuntu) or a command prompt (Windows).

--update Normally all user data is erased during the recovery process. This option allows to keep the user data. This can result in compatibility problems when going back to an older Android release. In addition this option is not able to solve problems that are caused by erroneous user data.

--nobios Some recovery packages do also update the BIOS of the device, a very fundamental part of the system software. Use this option to disable the BIOS update, if necessary. This can result in problems when a newer Android version depends on a certain BIOS.

--force Some recovery packages do check the compatibility of the target device and abort if this is not the case. Use this option to completely disable the compatibility check.

NOTICE! Not every recovery package does support the full range of these advanced options.

CAUTION! Using incompatible recovery packages can result in permanent damage to the device.



5 Troubleshooting

If, after executing the recovery process, your device does not start the Android system anymore, but always goes into a screen resembling the following picture instead,

please download from our service page a package called “EFI Boot Fix” and follow the instructions contained therein.

```
000000000003,0x9B02B,0x8000)
blkA :HardDisk - Alias (null)
      PciRoot (0x0) /Pci (0x17,0x0) /Ctrl (0x0) /HD (11,GPT,80868086-8086-8086-8086-
000000000004,0xA002B,0x8000)
blkB :HardDisk - Alias (null)
      PciRoot (0x0) /Pci (0x17,0x0) /Ctrl (0x0) /HD (12,GPT,80868086-8086-8086-8086-
000000000005,0xA802B,0x200000)
blkC :HardDisk - Alias (null)
      PciRoot (0x0) /Pci (0x17,0x0) /Ctrl (0x0) /HD (13,GPT,80868086-8086-8086-8086-
000000000006,0x2A002B,0x10000)
blkD :HardDisk - Alias (null)
      PciRoot (0x0) /Pci (0x17,0x0) /Ctrl (0x0) /HD (14,GPT,80868086-8086-8086-8086-
000000000007,0x2B002B,0x400000)
blkE :HardDisk - Alias (null)
      PciRoot (0x0) /Pci (0x17,0x0) /Ctrl (0x0) /HD (15,GPT,80868086-8086-8086-8086-
000000000008,0x6B002B,0x7D7FB7)
blkF :BlockDevice - Alias (null)
      PciRoot (0x0) /Pci (0x17,0x0) /Ctrl (0x0)
blk10 :BlockDevice - Alias (null)
      PciRoot (0x0) /Pci (0x17,0x0) /Ctrl (0x1)
blk11 :BlockDevice - Alias (null)
      PciRoot (0x0) /Pci (0x17,0x0) /Ctrl (0x2)

Shell> _
```

If you are using a **LIFETAB P831X** two different recovery packages will be offered for download per Android version. This is caused by the fact that there are two different, mutually incompatible hardware revisions of the device. Please proceed as follows:

1. Download both packages and see if the recovery executes full automatic and without errors for either of the packages. If this is the case, then you used the correct package. The script files `flash.sh` and `flash.bat` do check the compatibility of the target device first and abort if the device is not correct or cannot be identified.
2. If neither of the two recovery packages accepts your device automatically, please load a system information app from Play Store. Use the app to display the complete model name of the device. If this ends in **.2**, please use the package **p831x.2-...**, otherwise use the package **p831x-...**
3. Start the recovery script with the parameter `--force` to disable the compatibility check.

In case there are display problems after performing the recovery process (e.g. flickering or a fully black screen) please perform the recovery process again with the other package. Note that it may be difficult or impossible to read the message “Entering DnX mode” now.

6 Legal Notices

The information of this manual can be changed without notice, depending on technical progress made. Neither the manufacturer nor the retailer can be held liable for damage caused by mistakes or omission of information provided in this manual.

Whenever you edit any of your data, make a backup copy on an external medium (external hard disk, USB memory stick). No claims can be accepted for damages resulting from loss of data or consequential losses. We will never be held liable for:

- Loss of or damage to personal data stored on your device
- Demands from third parties against you for loss of or damage to personal data stored on your device.
- Economic damage (including loss of income or savings) or accompanying damage thereof. This will even apply if we have been informed of those damages.

In some countries or states it is unlawful to exclude parts of or limit liability, only in these countries or states the above can be ignored.

7 Supported Device Models

The following table lists the device models and Android versions for which this manual is valid.

Model(s)	Android Version(s)
P733X	5.0.2
P831X	5.0.2
P891X	4.4.4, 5.0.2
P1032X	5.0
P1034X	4.4.4
P1035X	5.0
S1034X	4.4.4, 5.0.2
S1036X	5.1.1