

# 3GSwupFU2 for the Qualcomm Multi Image Boot Concept - manual

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## 1. Description

This tool supports updating your mobile phone software using the BenQ 3GSwup2 application. The 'Multi Image Boot concept' was introduced by Qualcomm with the Wolf 5 integration build IB 7. It describes a mechanism, which divides the firmware into several pieces, the so called "mbn" files, i.e. multi image binaries. Before the 'Multi Image Boot concept' was introduced, there was the 'Single Image Boot concept' implemented, which provides the firmware a single binary file. It is not possible to update phones from 'Single Image Boot concept' to 'Multi Image Boot concept' using 3GSwup2. You can do this using Qualcomm's QPST Server version 2.7.209 (or greater).

This tool has also functionality of Duck tool (only download direction, see "*DUCK\_spec\_v1255.doc*" document)

There are three use cases:

- 3GSwup2 for Developers - 3GSwup2
  - version that use QPST Server
  - version that do not use QPST Server – you have to switch off QPST Server
- 3GSwup2 for Friend Users - 3GSwupFU2
- 3GSwup2 for End Users – Internet Update

## 2. Preconditions

- 2.1. PC operating system Windows 2000 or Windows XP.
- 2.2. USB cable.

## 3. 3GSwup2 for Friend Users – 3GSwupFU2

### 3.1. Delivery Content

3GSwupFU2 installer, for installing and removing the 3GSwupFU2 including mobile software, customization and USB drivers.

**Example of the installer name:**

W5V0\_1433\_SGLFK\_009.05\_de-BRDHandel-std\_12\_0087.exe

During installation of the packet, shortcut on the desktop will be created. Packet for uploading the software should be launched using that shortcut.

### 3.2. Functionality

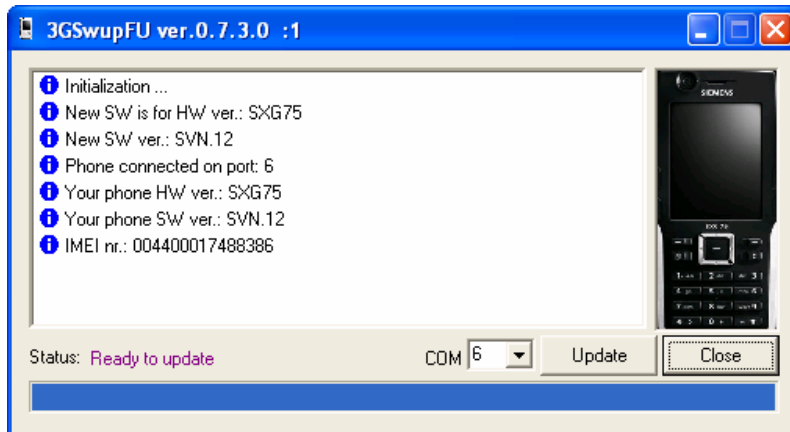
- Backup/restore NV-items
- Downloading software
- Downloading entire customization (CEFS, EFS, NV-items)

### 3.3. Package creation

To create Friendly User package you should use PCC.exe tool (see *PCC(1).doc* documentation)

### 3.4. Graphical User Interface

Upon launching 3GSwupFU2 the following GUI will be shown.



**Figure 1: 3GSwupFU2 GUI**

The tool will automatically look for a connected device on the USB ports. Status will be displayed on screen. If after one or two minutes phone will not be recognized, please make sure that phone is on and USB cable is connected in the proper way. If tool still was not able to recognize the phone, please take off the USB cable and plug it in again. Please remember that you can always choose the phone by clicking combo box button “COM” and selecting the available USB port from the list. In combo box “COM” user can read the number of the USB port on which mobile was found. Additionally user can read version of the software that is currently in the mobile and version of the software that is going to be loaded to the mobile.

Possible actions:

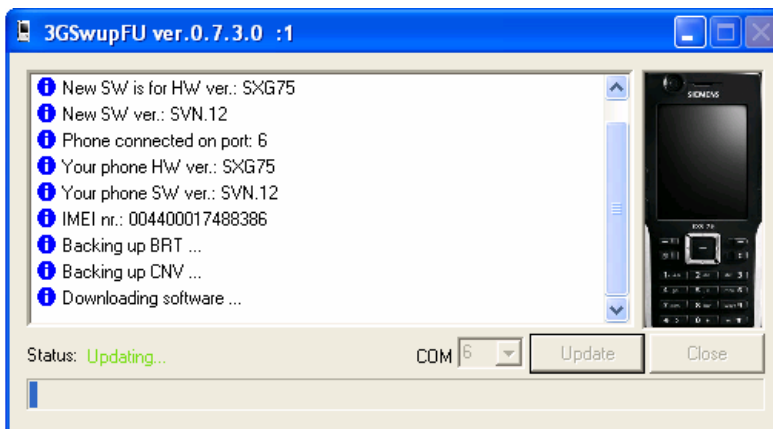
- user can change automatically chosen port by clicking combo box button “COM” and selecting the available USB port from the list.
- user can close the application by clicking “Close” button,
- user can start the download process by clicking the “Update” button,

If during download any problems interrupted downloading the mobile software file, tool will automatically prepare emergency download. Emergency download is a download operation without changing mobile mode into download. Mobile in such case should be by default in download mode, because only boot loaders should be active.

### 3.5. Updating the Software

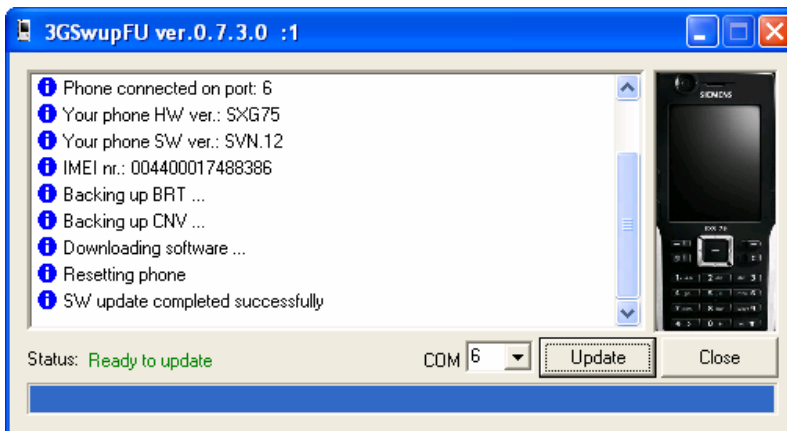
**Note:** It appears that the update process runs more stable if you reboot your device before starting the update process. It is therefore recommended to reset the phone before launching 3GSwupFU2.

1. Make sure that your battery is charged at least 25%
2. Launch 3GSwupFU2 application and you will see the GUI as shown in Figure 1: 3GSwupFU2 GUI
3. Wait, until “Ready to update” message is shown
  - a. Note: the application will look for a connected mobile automatically
  - b. If it does not find any port then user can choose it manually by click on combo box button “COM” and selecting the available USB port from the list”
4. Launch 3GSwupFU by pressing button “Update”.
5. You will see information about the progress of the download process.



**Figure 2: 3GSwupFU2 – download in progress**

6. When the download process is finished you will see the “SW update completed successfully”



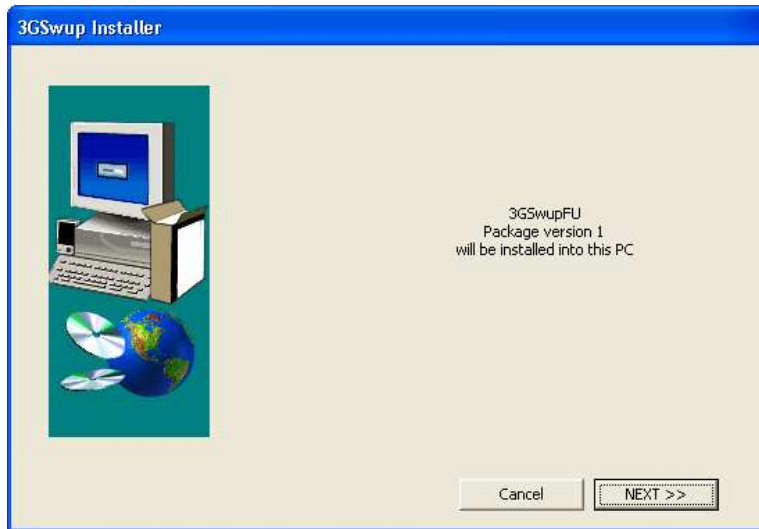
**Figure 3: 3GSwupFU2 – download successfully finished**

In case error you should repeat the whole process from the beginning. You have to restart mobile by putting batteries off while it is disconnected. Then you should run application again.

## 4. Installation

This chapter is concerning 3GSwup2 (developer) and 3GSwupFU2 (Friendly User) installation. For convenient installation an installation, a single setup executable file is provided. Launching the setup will guide you through the installation process.

1. Disconnect your mobile phone
2. Launch proper \*.exe file.



**Figure 4: Start of installation wizard**

... and click next button

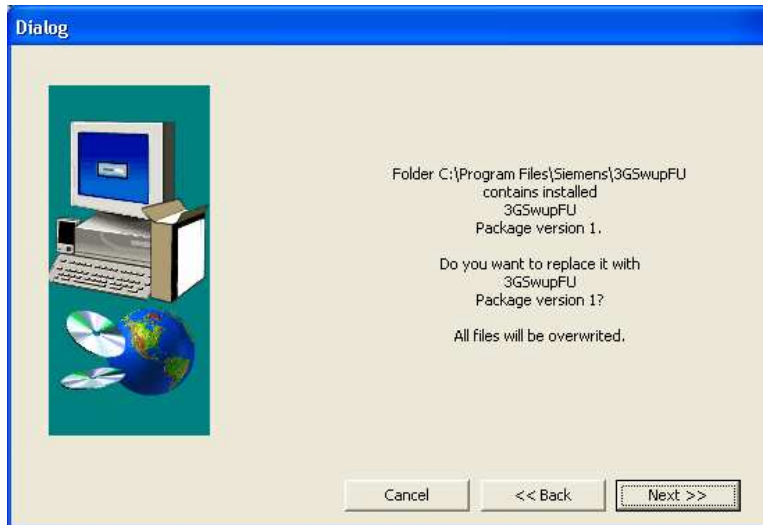
3. Select folder where your application should be installed.



**Figure 5: Select installation destination**

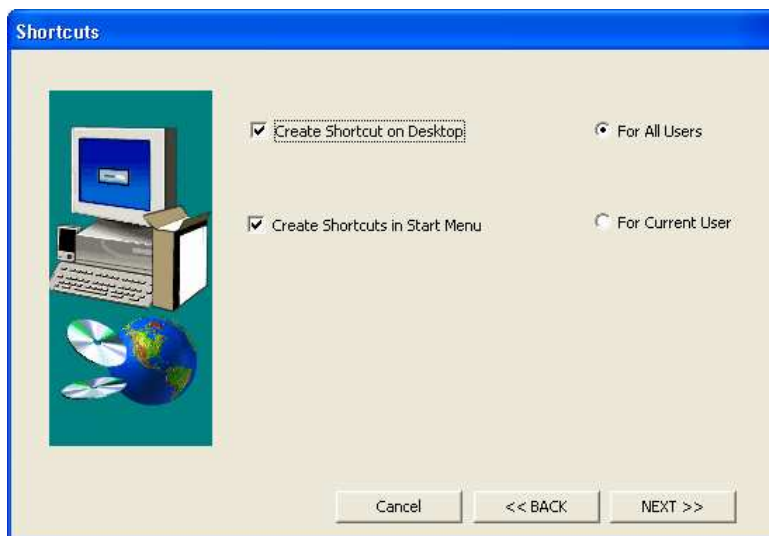
... and click next button.

- 3a) In case the destination directory already exists, the following warning will be shown.



**Figure 6: Warning**

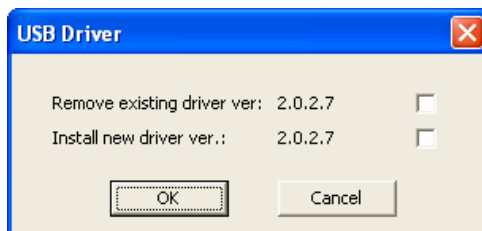
4. Select whether a shortcut and an entry in the Start Menu should be created



**Figure 7: Menu settings**

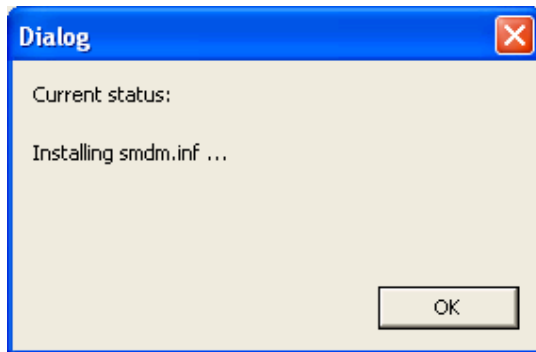
5. The installation process will now begin.

During the installation process you will be asked, whether you would like to remove existing USB drivers and/or install new USB drivers.



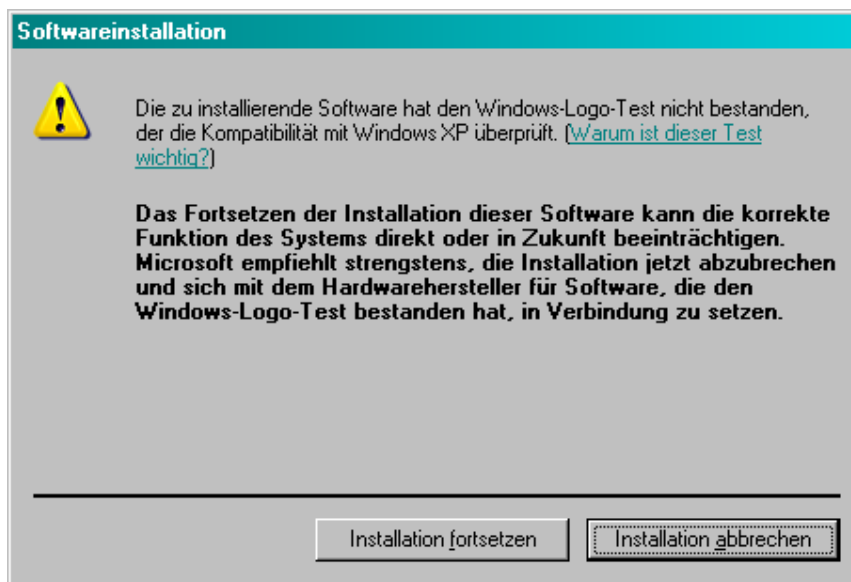
**Figure 8: USB driver installation query**

5a.) During USB driver installation you will see the following screen



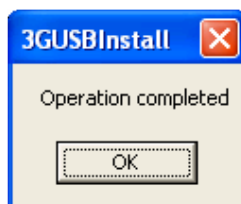
**Figure 9: USB Installation information**

5b.) 3 times you will be asked to continue the installation process. Just click "Continue Anyway" button to continue the installation process.



**Figure 10: USB driver installation (3 times)**

5c.) Upon installation you will see the following message.



**Figure 11: USB notification**

Click "OK".



6. Installation is completed

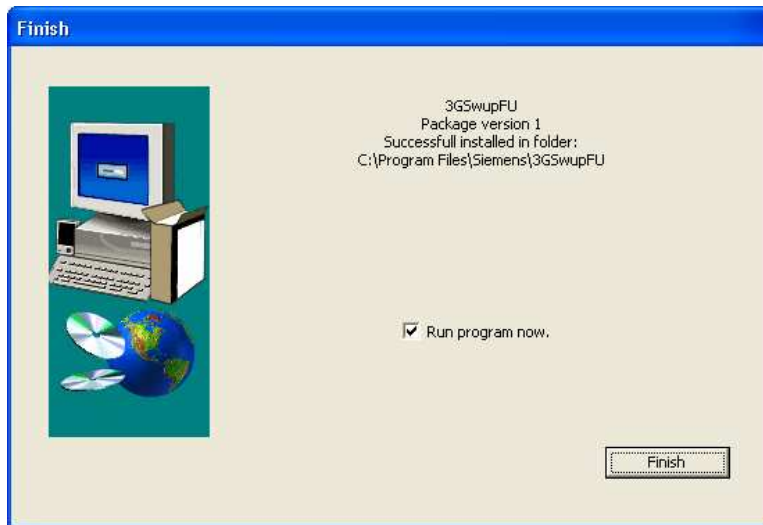


Figure 12: Successfully finished installation

7. Connect your mobile (switched on) via USB cable to your PC.

If your phone is connected for the first time you will be asked to install the driver for this specific COM port.

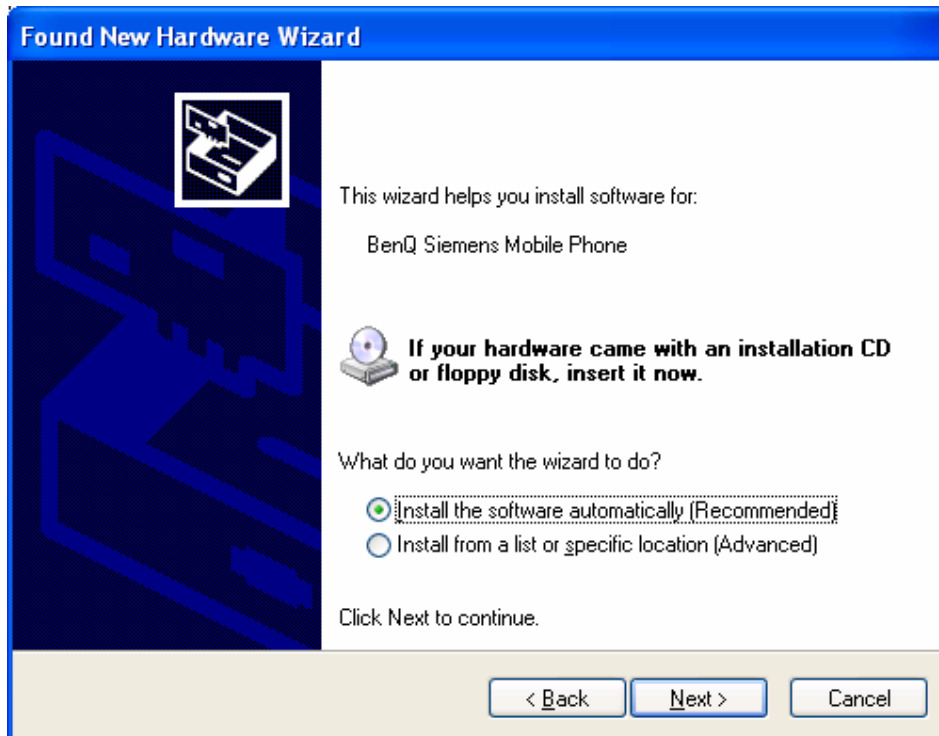


Figure 13: Installation of the USB driver on a specific COM port

Because the USB driver is not certified, you will have to manually continue the installation.  
Note: The USB driver will install several USB ports on your machine. In the regular case, there are three ports Diagnostic, NMEA and a Modem one. You can verify this by opening the device manager and opening the folders "Ports (COM & LTP)" and "Modems".

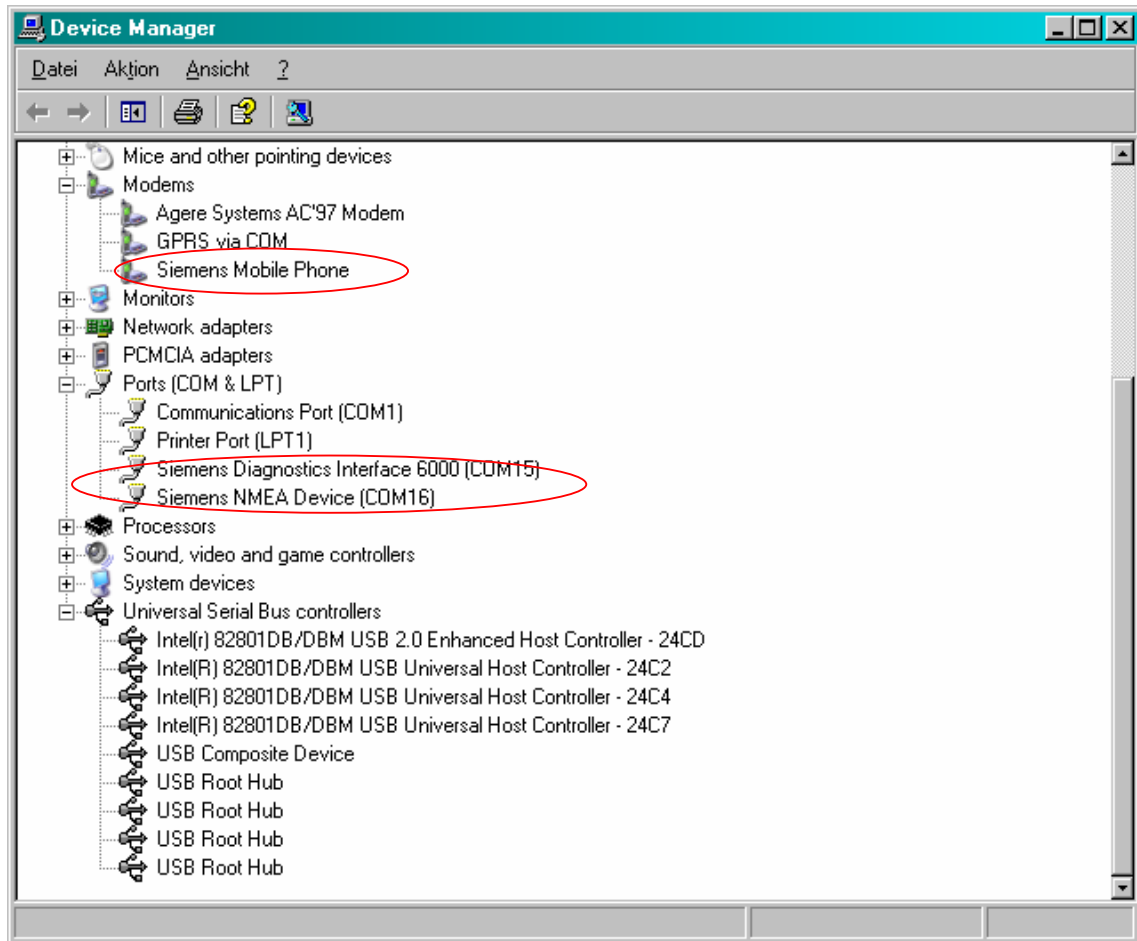


Figure 14: Device manager (example)

## 5. Trouble shooting, FAQs

This chapter describes some feedback, known issues regarding the update process

**Problem:**  
*3GSwupFU2 does not detect the connected mobile*

Possible Solutions:

1. Is the device switched on?

Check, whether the device is switched on.

2. Is the phone connected to the PC via USB cable?

Check, whether the device is connected to the PC via a USB cable.

3. Is the phone detected by Windows OS?

**Check, whether the device manager shows the Diagnostic, NMEA and Modem port; see Figure 14: Device manager (example).**

3a) No device is shown in the device manager and no USB driver was installed

1. switch off the mobile and disconnect it from the USB cable
2. switch on the mobile and wait for the screen "Enter PIN". Then connect the device to USB cable again
3. in case no USB driver was installed for the specific COM port, Windows should come up with a message like "New Hardware found"
  - go ahead with the installation process

If Windows is still not able to detect the USB device, please check the USB cable (there is a fuse inside which may be blown) or try a different COM port.

3b) The device is shown in the device manager

4. close 3GSwupFU2.exe
5. kill process QPST Server in the Windows Task Manager explicitly

3c) No device is shown in the device manager and you are sure the USB driver was installed

6. Launch 3GUSBInstall.exe, can be found in the installation folder of 3GSwup and uninstall the existing driver and install the driver again

or

7. Try a different COM port

**Problem:**  
*Can I run multiple instances of 3GSwupFU2 and update several phones in parallel?*

Yes, it is tested with 4 instances in parallel.

**Problem:**

The download was interrupted and does not work proper anymore or the download was performed correctly, but upon reset the phone is resetting.

**Solution:**

The phone is in a mode, which does not accept any user actions anymore.

1. Switch off the phone completely (take out the battery and disconnect the USB cable)
2. Close 3GSwupFU2 (if application is completely hung up – you have to end the application via the Task Manager explicitly)
3. Kill any QPST Server process via the Task Manager explicitly
4. Insert battery again and keep the # and PowerOn key pressed for 5 seconds
5. The phone will show the Siemens/BenQ-Siemens splash screen and remain in this state (“*Download Mode*”)
6. Connect the phone to the USB cable again (the Device Manager should show the device again)
7. Start 3GSwupFU2

Important Note: Using the *Emergency Download* does only work, in case the phone can manually be set into Download Mode. In case the process was interrupted during downloading obl, pbl or qcsbl the phone may be not recoverable.

**Problem:**

The download was performed correctly, but upon reset the phone is completely dead.

**Solution:**

Most likely, you have downloaded software, that is

1. not working on this device
2. not signed with the correct key

In both cases try to enter the download mode and try the “*Emergency Download*”.

Note: It is most likely, that the phone may not be recovered anymore.