



UFED Touch/4PC

Physical extraction using enhanced bootloader

October 2015

Version 4.2.6

1. Introduction

As part of our ongoing effort to provide the best physical extraction capabilities for the latest Samsung Android devices, you can now obtain additional data by performing a physical extraction using the enhanced bootloader method that supports the latest firmware running Android 5.x on Samsung Android devices.



This extraction method uses a blank memory card that is not related to the case and needs to be inserted into the source device.

1.1. FAQ

■ *Why is a blank memory card required?*

A blank memory card is used in this method as part of the bypass process and it does not contain any user information.

■ *What is stored on the memory card?*

This method enforces the bypass of the device password, by "opening" the device via the memory card's interface. It does *NOT* store any user data or system data on the memory card. It only emulates a mass storage device in the system, and thereby bypasses the password and performs a physical extraction.

■ *What happens to the data on the device during the extraction?*

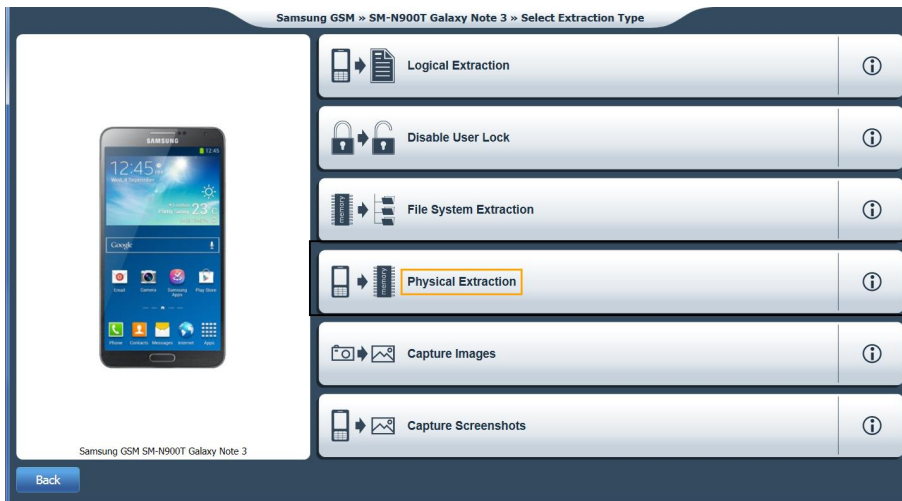
The device's system data or the user data files are not tampered with or corrupted during the extraction. This extraction method is forensically sound.

■ *What should I do if the extraction does not work?*

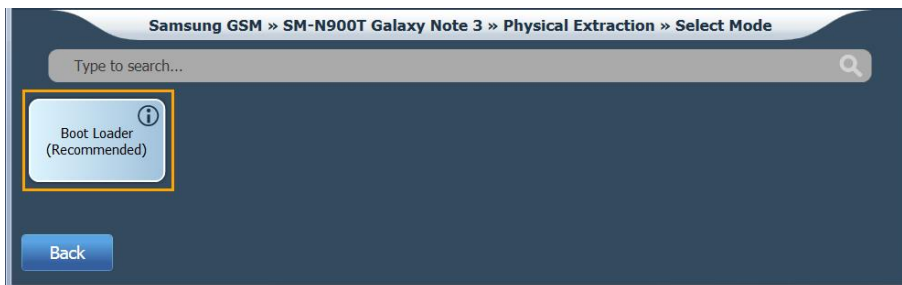
Perform all the steps for the extraction again or try a different memory card.

Performing a physical extraction using the enhanced bootloader method:

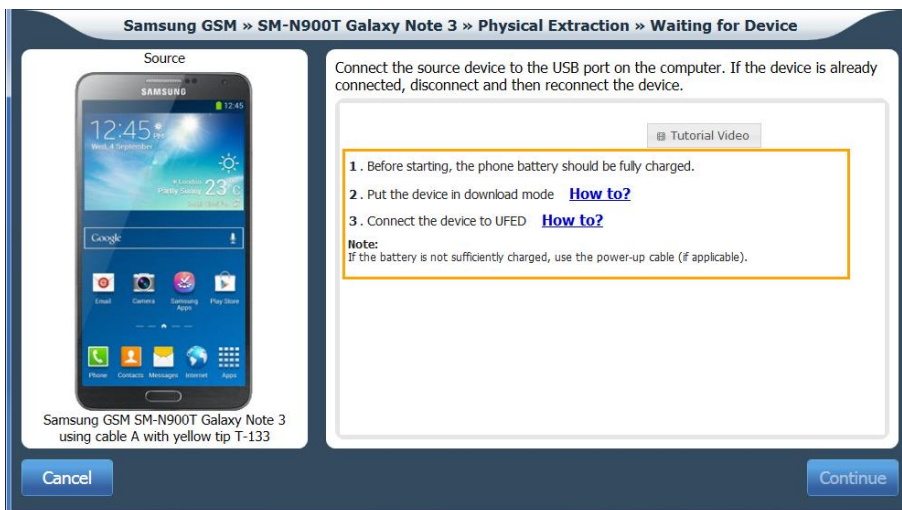
1. Tap **Mobile device** in the home screen.
2. Identify the device. The Select Extraction Type window appears:



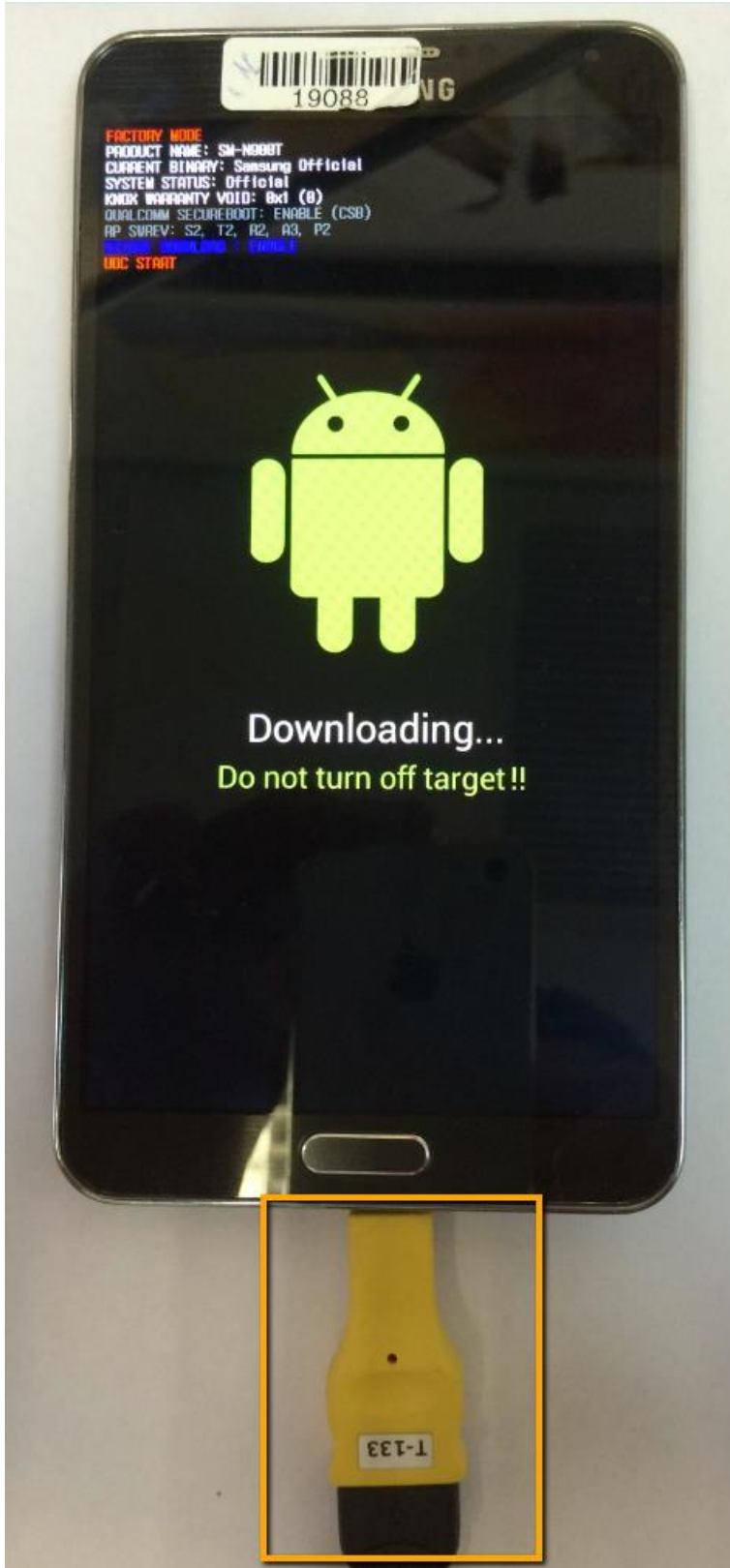
3. Tap **Physical Extraction**. The following window appears:



4. Tap **Boot Loader**. The following window appears:



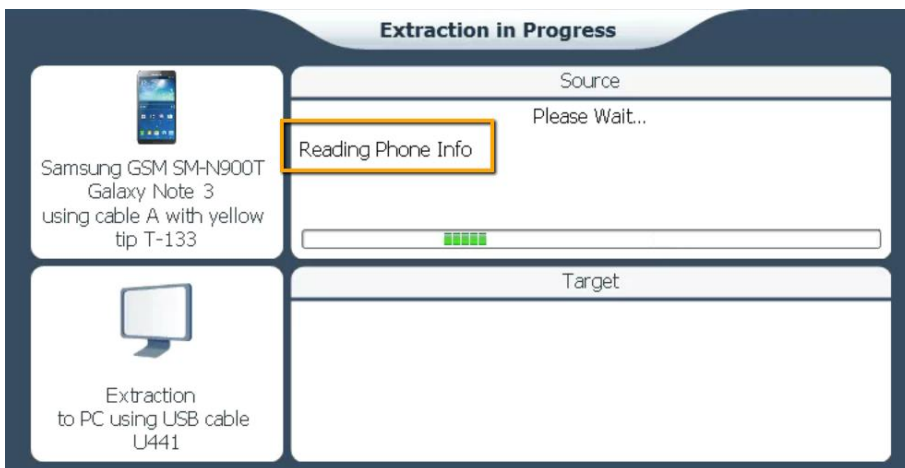
5. Connect the source device to the USB port. If the device is already connected, disconnect and then reconnect the device. Follow the instructions to place the device in Download mode using cable A with the Yellow tip T-133. Examples are displayed next.





 The Cellebrite Extension Cable is recommended for UFED Touch, but is not required when using UFED 4PC.

6. In the Waiting for Device window, tap **Continue**. The following window appears:



Reading Phone Info appears on the Extraction in Progress window for approximately 2 minutes. The following window appears:

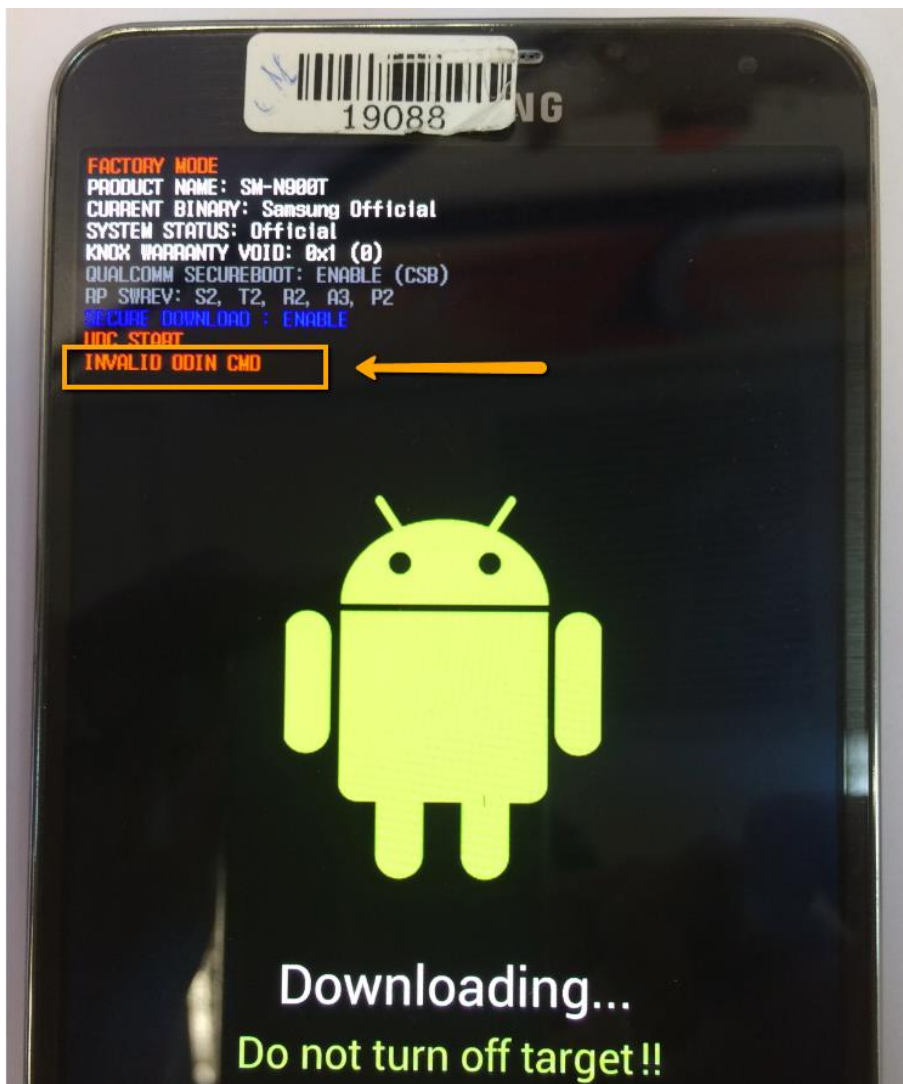
Initialization in progress. Perform the following steps to proceed.

1. Disconnect Cellebrite Extension cable and phone from the UFED.
2. Remove the BATTERY
3. Reinsert the BATTERY
4. Do NOT power on the phone
5. Connect cable-A with tip 133 to the phone
6. Connect the Cellebrite Extension Cable to Cable-A.
- * Do NOT connect USB end of the Cellebrite Extension Cable to the UFED.
7. Wait until the download mode logo appears on the phone screen
8. Connect the USB end of the Cellebrite Extension Cable to the UFED.
9. Press Continue.

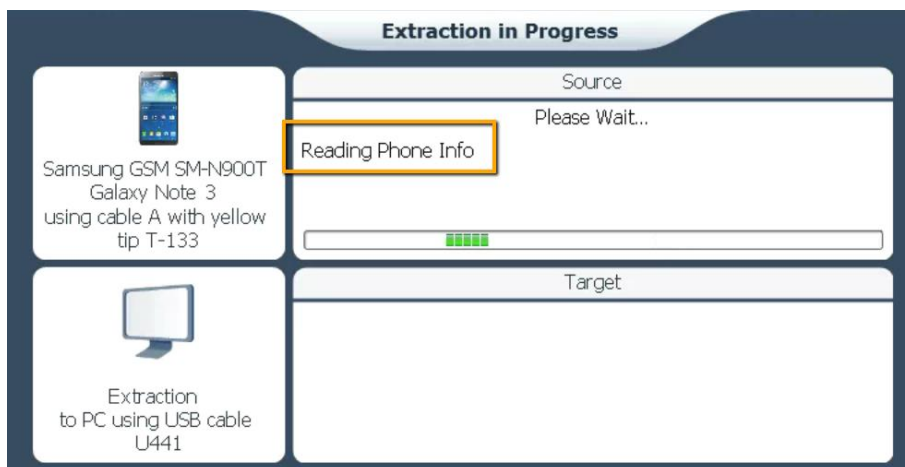
Continue

7. Follow the steps and tap **Continue**.

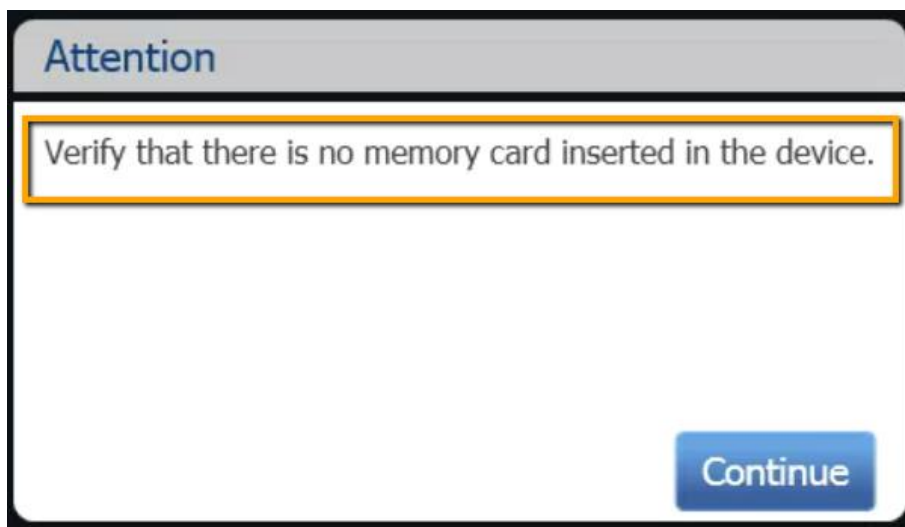
"INVALID ODIN CMD" should be displayed on the device's screen.



The following window appears:



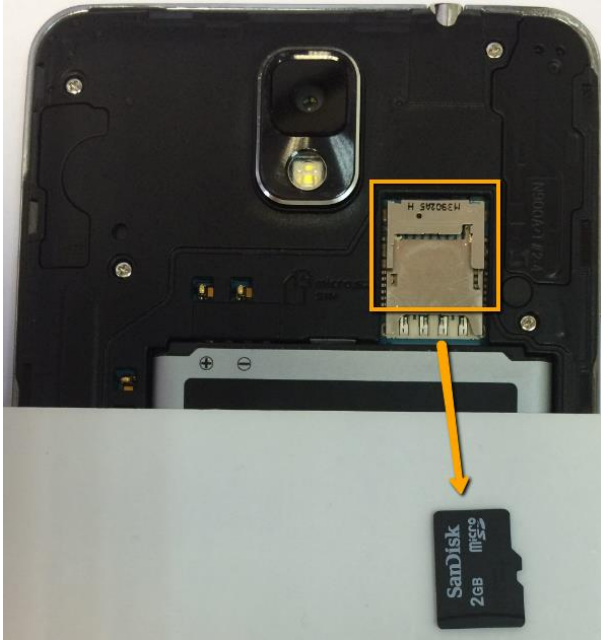
Reading Phone Info appears on the Extraction in Progress window for approximately 5 seconds. The following window appears:



8. Make sure that the device is connected to UFED, and remove the memory card. Do not disconnect anything such as the battery or cable.



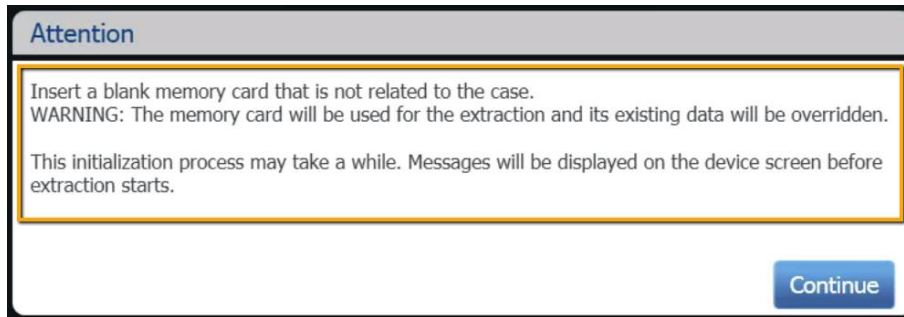
To protect the user data on the memory card, if you do not remove the memory card the extraction will end.



9. Tap **Continue** a message will appear on the device "Failed to Initialize SD card".

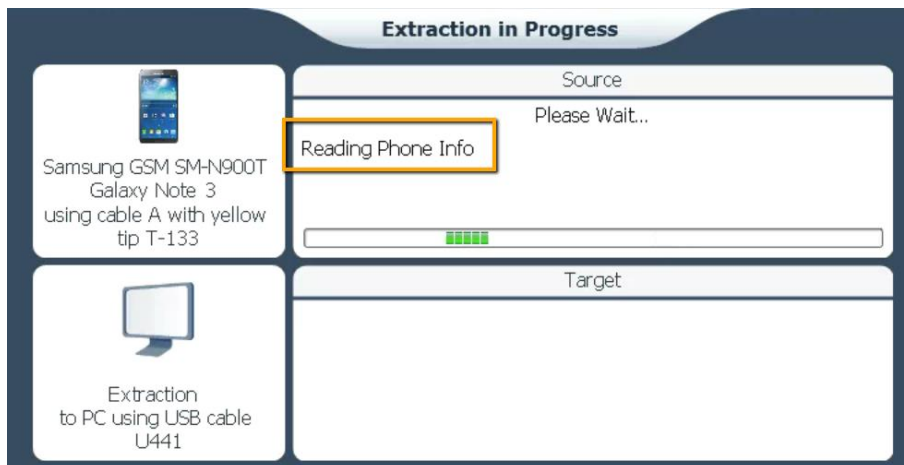


The following window appears:

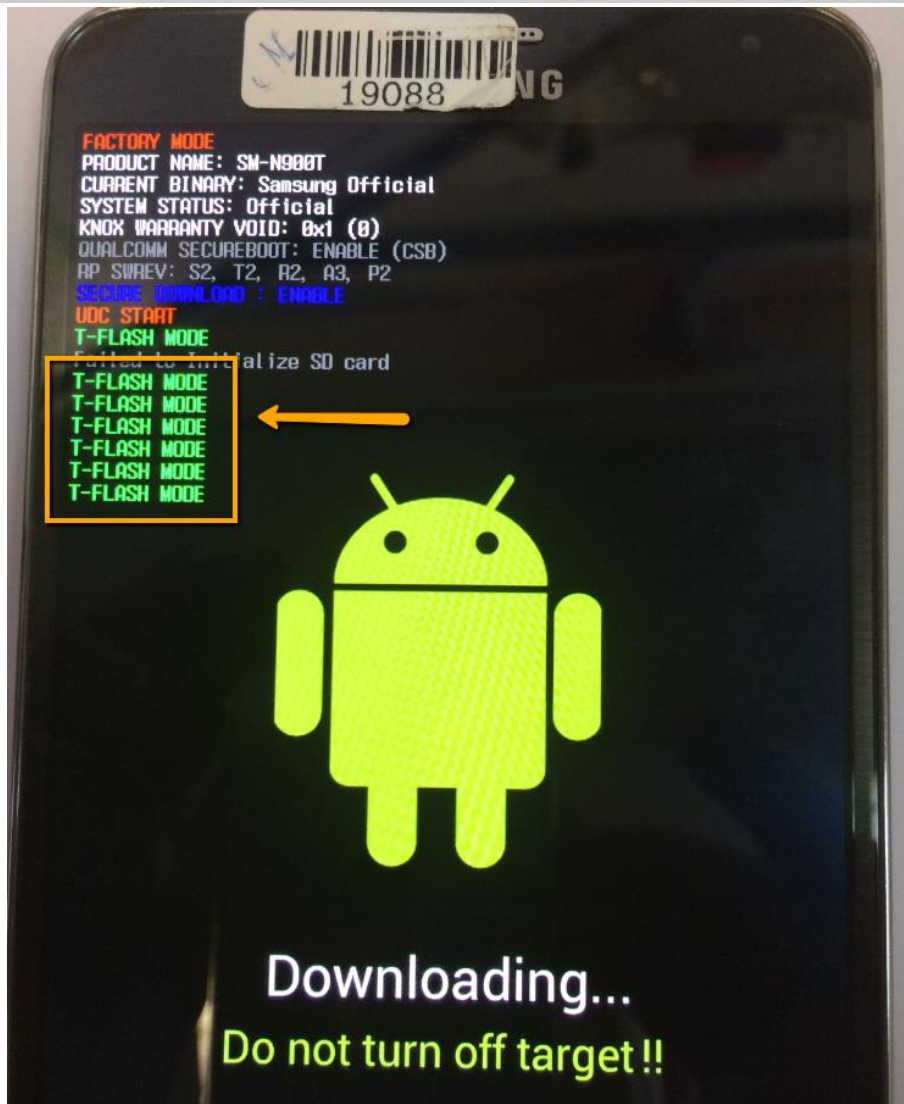


10. Insert a blank memory card into the device that is not related to the case (without disconnecting anything such as the battery or cable) and tap **Continue**. The memory card will be used for the extraction and its existing data will be overridden.

If a blank memory card was inserted in the device the extraction continues. Reading Phone Info appears in the Extraction in Progress window for approximately 2 – 3 minutes.



During the extraction process, numerous "T-FLASH MODE" messages appear on the device's screen.



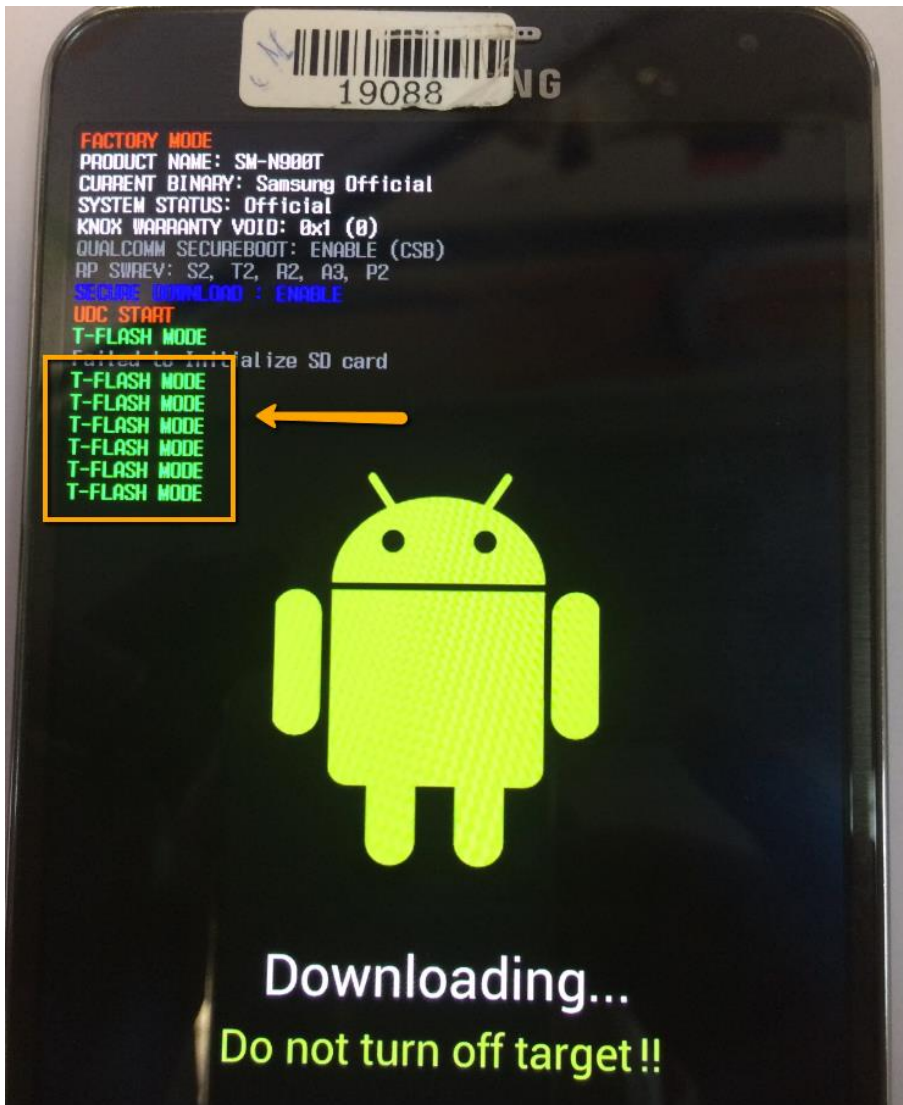
The following window appears:

Initialization in progress. Perform the following steps to proceed.

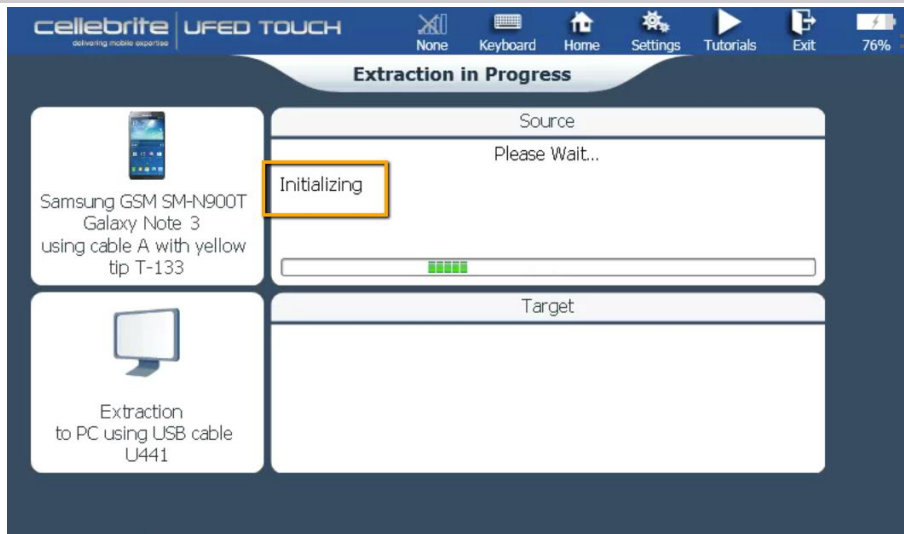
1. Disconnect Cellebrite Extension cable and phone from the UFED.
2. Remove the BATTERY
3. Reinsert the BATTERY
4. Do NOT power on the phone
5. Connect cable-A with tip 133 to the phone
6. Connect the Cellebrite Extension Cable to Cable-A.
- * Do NOT connect USB end of the Cellebrite Extension Cable to the UFED.
7. Wait until the download mode logo appears on the phone screen
8. Connect the USB end of the Cellebrite Extension Cable to the UFED.
9. Press Continue.

Continue

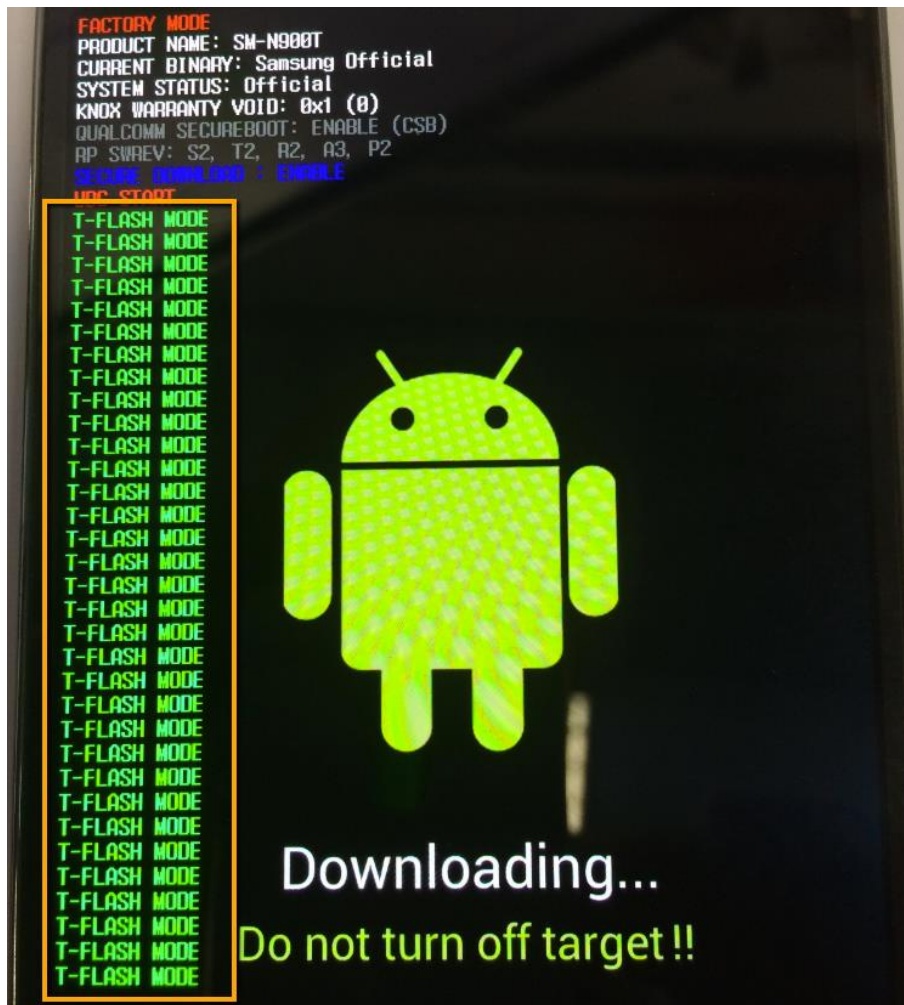
11. During the extraction process, Reading Phone Info appears on the Extraction in Progress window for approximately 2 minutes and numerous "T-FLASH MODE" messages appear on the device's screen.

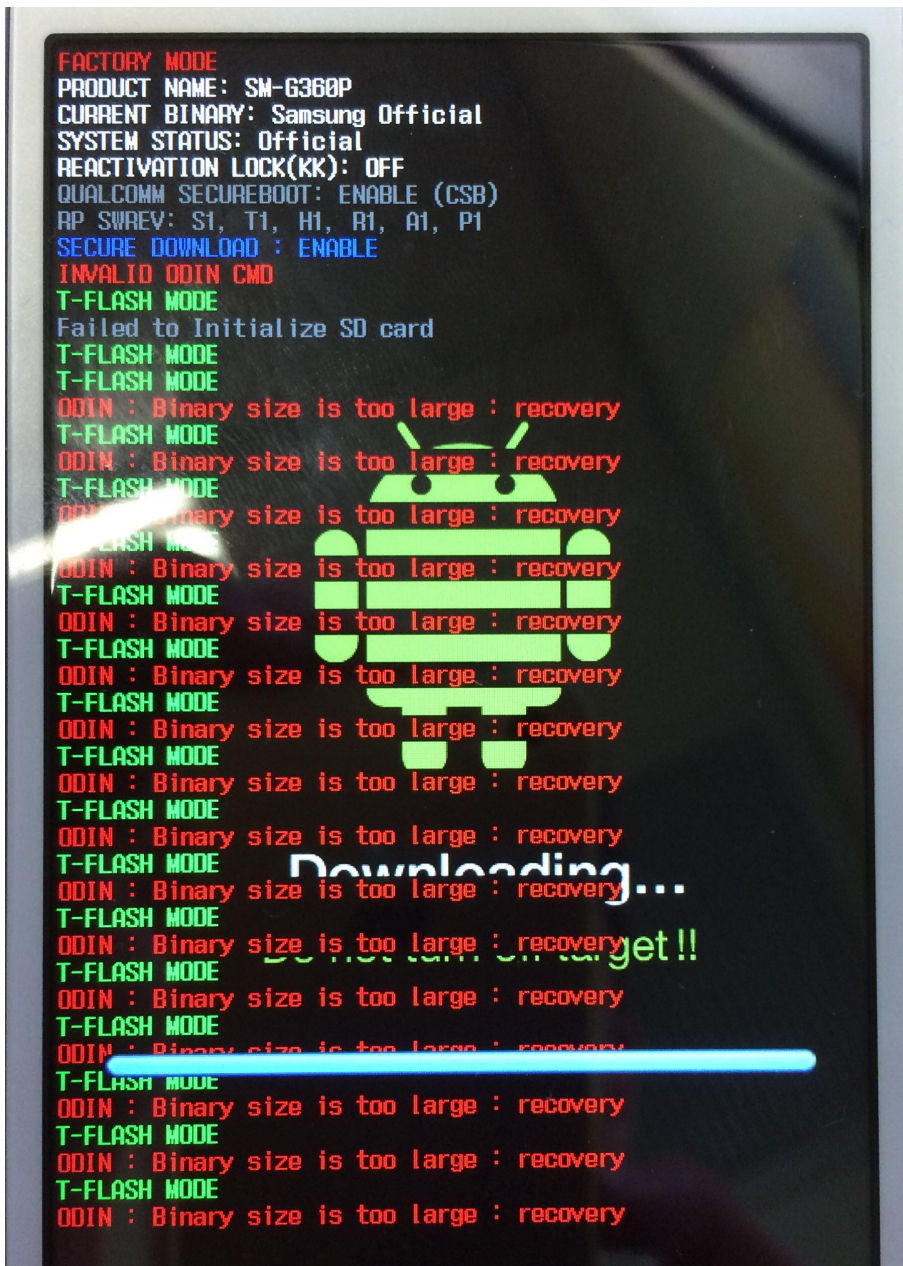


Initializing is displayed on the Extraction in Progress window for approximately 20 minutes.

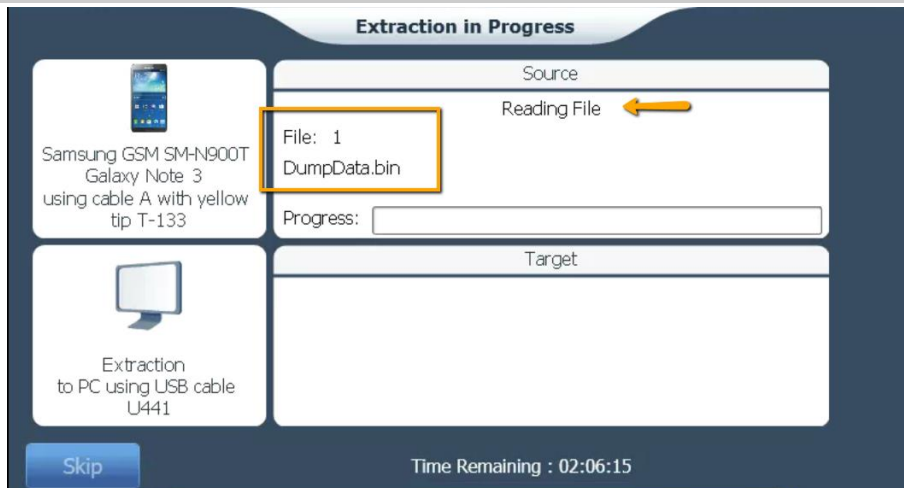


Numerous "T-FLASH MODE" messages appear on the device's screen. Examples are displayed next.

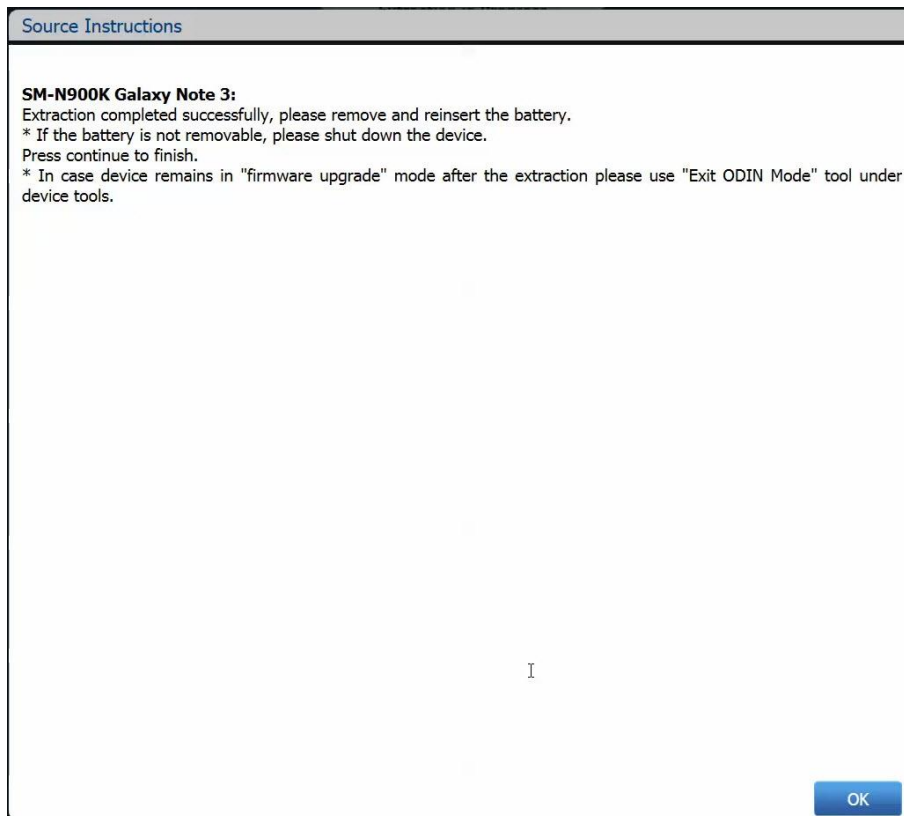




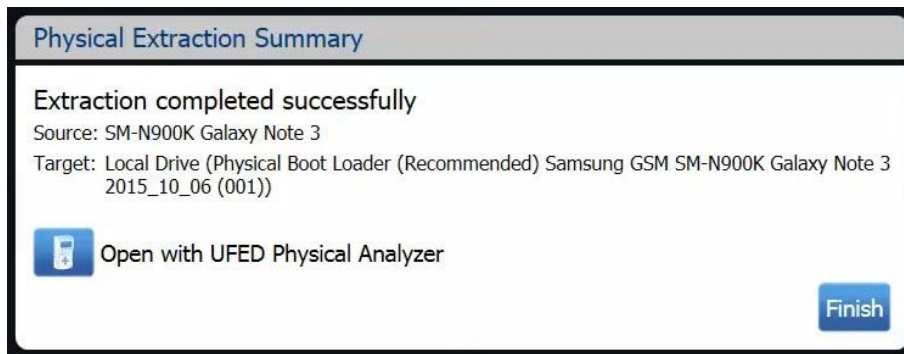
The Reading File process starts, wait until the extraction completes.



The following window appears:



12. Follow the instructions for the source device and then tap OK. The following window appears:



13. Tap Finish.