Logicube®

# CELLDEK®

## CellDEK User's Manual

**Version: 1.29**

**Date: 07/2014**

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**NOTE:** Opening the CellDEK faceplate to access the embedded PC will void the warranty.

**NOTE:** “Hacking” the CellDEK application to access the embedded PC’s Operating System will also void the warranty. Logicube can reload the CellDEK application for a substantial fee.

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# 1. Introduction to CellDEK

## Introduction

**CellDEK**

Congratulations on your purchase of CellDEK. This unit will provide many years of dependable service if used properly. It is designed to be utilized by the expert and novice alike.

CellDEK stands for Cellular Data Extraction Kit. It is designed to carry out data extractions from cell phones, Satellite Navigation Devices, PDA's, SIM cards and flash based media. Data can be extracted from phones and PDAs using three connection methods; data cables, infrared ports or Bluetooth radio frequency communications. The target devices may connect to CellDEK by one, two or all three of these methods.

The CellDEK software also helps with easy identification of the target device and informs the user of available connection methods. The user can select the preferred connection method. Historically, data cable connection has been time-consuming as it can be difficult to locate and identify the correct data cable for the target device. CellDEK eliminates this by using a set of intelligent data cable connectors. Once the target device has been identified,

CellDEK automatically selects the correct data cable connecter from the connector rack. This is a fast and reliable data cable connector selection process.

### Recommended use of CellDEK

CellDEK is a forensically sound mobile phone and PDA data extraction tool, able to obtain real time intelligence from a mobile handset at a scene. It is designed to extract as much information as possible in a forensic manner and disclose any other information which might be present but has not been extracted. It is aimed at getting information immediately from the mobile handset to help move forward an investigation. CellDEK has been designed with a full audit trail allowing users to demonstrate when actions were taken. The examination is write-protected to ensure that information cannot be written to the handset or media card.

CellDEK has been tested on a large range of handsets and its capabilities are displayed during the data extraction process. The tests have verified that CellDEK extracts data reliably. The User should consult this information to ensure that the captured data meets their needs

Users should consider using CellDEK in an appropriate environment to prevent any messages or calls being received which will change the data on the handset. This can also be considered as interception. The user should consult with their local authorities for recommendations on legal implication of intercepting data in the context of their examinations.

There are several changes to handsets that will result from examination by CellDEK.

- If an unread SMS is opened during the examination process, the unread SMS status will change to read on the phone or SIM card. However CellDEK will report the original status of the message.

  CellDEK operation will remove the missed call message or symbol from the handset.
- Bluetooth acquisitions will leave the extracting device name in the “trusted devices” list in the handset Bluetooth menu.

The extraction of SMS messages can be skipped thus preventing these changes to the data on the handset.

### Features

- Able to connect to a wide variety of cellular phone, Satellite Navigation, SmartPhones, PDA (Personal Digital Assistant) and Flash Memory devices.
- Direct connection via cable, IR (Infrared) or Bluetooth.
- Built-in cellular phone identification module.
- Water-resistant, rugged carrying case.
- Embedded PC with 30GB of storage.
- MD5 Hash to ensure that captured data is not tampered with.

### Using this guide

This user guide is made up of 6 sections:

- Introduction
- Getting Started (Fast Start)
- Capturing Data
- Analyzing Captured Data
- Other Features
- FAQ's and Troubleshooting Guide

## System description

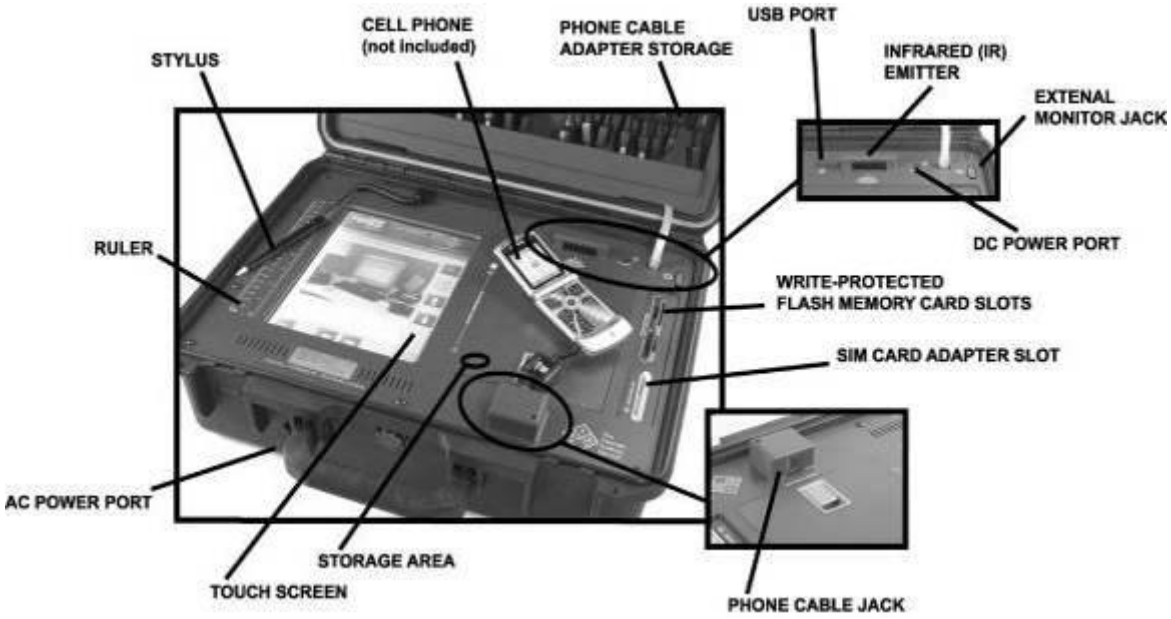
The CellDEK system is packed in a rugged, water-resistant carrying case. Inside, you will find the following components:

- Embedded PC built into the case.
- A stylus for use with the embedded PC's touch screen.
- A set of intelligent data cables, which are able to connect to a variety of cellular phones. These cables are stored in sequential holders built into the case lid.
- 1 Nokia CA-42 Cable.
- Nokia Flash Adapters.
- A SIM card adapter.
- An AC power adapter that charges the internal battery of CellDEK .
- A Network Isolation Card (NIC), which is used to isolate a target device from the network.
- This manual.

**NOTE:** Opening the CellDEK faceplate to access the embedded PC will void the warranty.

**NOTE:** "Hacking" the CellDEK application to access the embedded PC's Operating System will also void the warranty. Logicube can reload the CellDEK application for a substantial fee.

## Overview of the CellDEK




**CellDEK Overview**

1. **TOUCH SCREEN** - All of the CellDEK software and user input is controlled from here.
2. **AC POWER SOCKET** – The AC power supply plugs into this socket. The power supply charges the CellDEK battery.
3. **RULER** – This ruler is used to measure the dimensions of a suspect wireless device. It is printed in mm and inches.
4. **STYLUS** – This can be used on the touch screen instead of the user's finger. It is more precise and keeps the display clean.
5. **CELL PHONE** – This is one of many types of cellular phones that can be connected to the CellDEK with one of the included adapter cables.
6. **PHONE CABLE ADAPTER STORAGE** – This rack is for cell phone adapter cables that are not currently in use. It is also where the CellDEK detects the adapter cable prior to a capture.

7. **USB PORT** – This USB port is used to connect an external USB drive for data backup purposes. When used to extract data from a USB drive, the port becomes write-protected.
8. **INFRARED (IR) EMITTER** – During an infrared capture, the wireless device's IR port is pointed toward this emitter
9. **EXTERNAL MONITOR JACK** – An external PC monitor can be plugged into this port.
10. **DC POWER PORT** – This is a 12VDC power socket that can be used to power external devices like a jammer, light source, etc.
11. **FLASH MEMORY CARD SLOTS** – These ports work for CF, SD, SM and Memory Stick cards. Additional Flash memory cards of different types can be attached via an adapter. The slots are write-protected.

    **NOTE**: Other flash-based media cards (i.e. transflash cards) can be read in an adapter that connects to one of the existing card reader slots. Such adapters are available in any electronic store.
12. **SIM CARD ADAPTER SLOT** – This port allows users to capture data directly off the SIM or USIM card. A SIM card adapter is provided for this purpose.
13. **PHONE CABLE JACK** – When CellDEK illuminates the correct adapter; it gets plugged into this slot.
14. **STORAGE AREA** – This compartment can be used to hold extra items, adapters, cables, etc. It also contains a bag with additional adapters that extend the functionality of certain cables and the DKU Nokia cable.

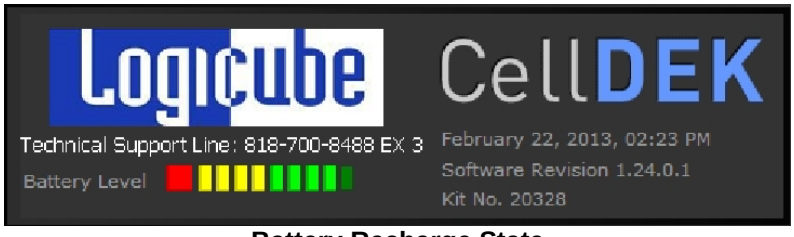
**NOTE:** The CellDEK case lid should always remain closed when the unit is charging or not in use.

## Setting Up CellDEK

### Battery Status

Before CellDEK is powered up for the very first time; it needs to have the battery charged. Attach the AC cable into the AC socket and connect the other end to an AC wall outlet. Make sure that the CellDEK case is closed. Allow CellDEK to charge for 24 hours prior to use.

The CellDEK main application screen displays the battery life of the unit. When the battery has depleted to around 5%, CellDEK will alert the user to carry out a recharge. When the battery level drops below this state, CellDEK will shut down and will not restart correctly until the unit is charged. The image below shows that the CellDEK battery is about 90% charged:




**Battery Recharge State**

## Charging CellDEK

CellDEK may be charged with the included AC power supply. The power supply can be plugged into 110 or 230 VAC power.

Normal charge time = 8 Hours – A full charge will give 3 hours of usage.

**NOTE:** The CellDEK lid should always remain closed when the unit is charging or not in use.

## Powering Up CellDEK

CellDEK is designed to boot quickly and with minimal fuss. The procedure is as follows:

1. The power switch only moves vertically and is located next to this symbol.

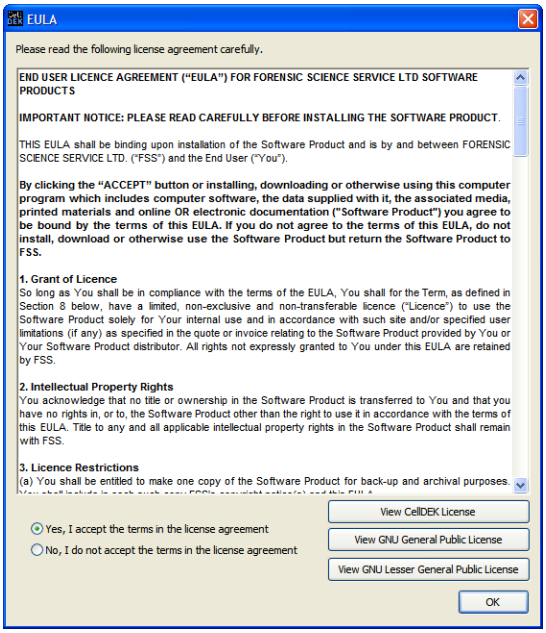
**Power symbol**

2. Slide the switch in an upwards direction and let it go. CellDEK will initialize and boot-up the CellDEK application.
3. At the login prompt, type **CellDEK** for the user name and leave the password blank. This is the operator login.

**NOTE:** The operator login restricts the use of the device operating system solely for use of the CellDEK application. The operator does not have access to the operating system settings.

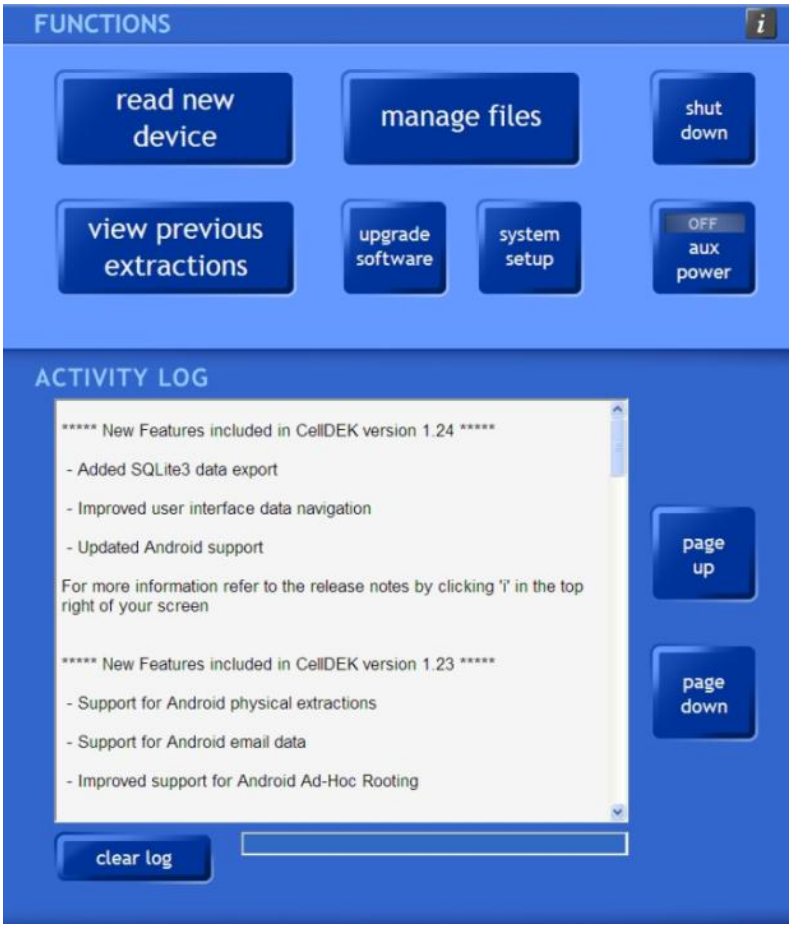
**NOTE:** Accessing the embedded PC's Operating System for purposes other than running the CellDEK application will void the warranty.

4. The EULA (End User License Agreement) will appear.




**End User License Agreement**

5. CellDEK will boot to the Main Application Menu.




**CellDEK Main Application Screen**

## Virus Protection

To enhance the security of the data held on CellDEK it is recommended that the user installs virus protection software on the unit. The user may install virus protection of their choice through the Windows interface.

### Installation

There are three possible ways to gain access to the windows desktop from the main CellDEK application:

- Insert a USB keyboard and press the return key
- If your CellDEK's screen has option buttons to the right of the screen, press the screen option buttons 1 and 4 simultaneously which are located at the bottom right corner of the screen.
- If neither of the above ways work, open the storage compartment and locate the target ('bull's-eye' button) located in the top left hand corner of the compartment.

When on the windows desktop you will need to run 'Shortcut to HideStartBar.exe' located on the desktop (this may be located inside the unused desktop items folder).

The virus software can then be installed using a CD drive or from a USB thumb drive following the providers installation instructions.

### Virus Updates

To gain access to the windows desktop from the main CellDEK application press the following where applicable:

Virus protection software requires regular updates in order to recognize the latest virus threats. The update method can vary but usually requires an update file to be downloaded on an internet PC. This update file can then be copied to the CellDEK desktop folder and the virus settings can be set to point to the location. When the update option is selected in the virus software, the software will retrieve the file from the desktop folder rather than from the internet. The desktop folder contents can then be updated daily, weekly or when required.

If virus protection software is installed we recommend that the system is monitored for changes in performance to the CellDEK application. If the system performance is affected it may be necessary to adjust the virus software settings to enable CellDEK to operate without restriction.

## Virus Checker

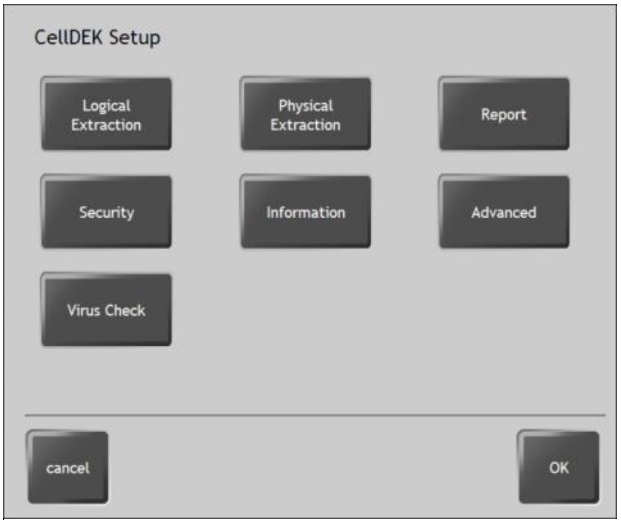
A virus check option has been included within the system setup menu. The user can now run a malware removal tool to check for virus infection.

### Introduction

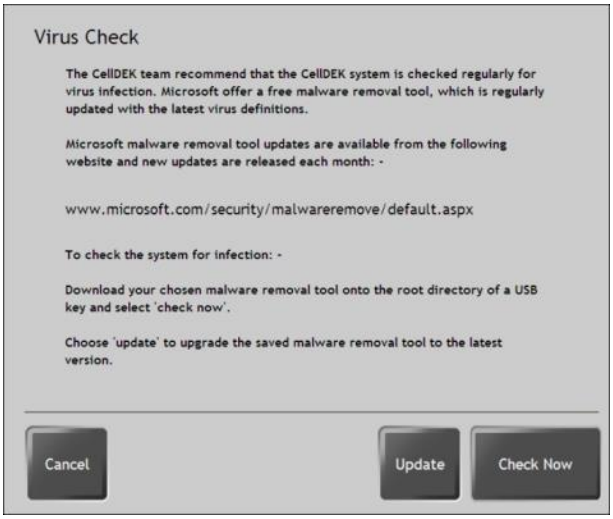
Computer viruses are very common, easily spread and can be difficult to remove. Viruses can cause damage to computer systems by corrupting files, changing information and gathering personal data. Generally, virus files can only infect a system if the file is executed. This briefing note has been produced to help identify infection of your CellDEK unit.

### Checking for Infection

CellDEK software 1.16 and newer enables the user to run a regular virus check on the system within the system setup screen. On selection, the 'Virus Check' will request for a USB key to be inserted that contains the latest virus removal tool. The selected tool will be copied to memory and can be updated at any time using the update button.




**CellDEK System Setup Screen**




**Virus Check Screen**

A suitable free tool produced by Microsoft is listed below. This tool checks for specific, prevalent malicious software and helps remove any infection found. This tool can be downloaded directly from the Microsoft website and is updated with the latest virus definitions on the second Tuesday of each month:

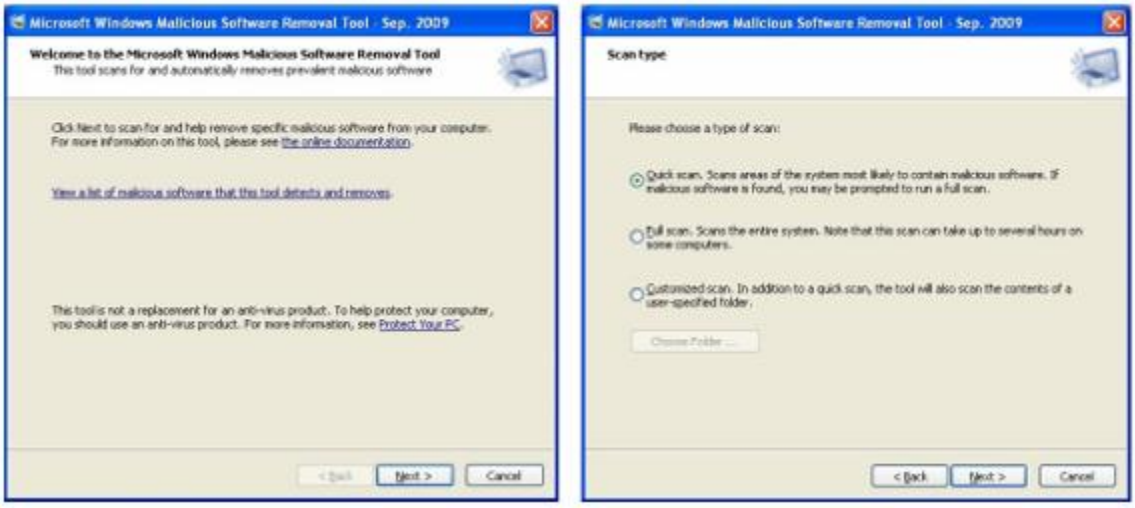
http://www.microsoft.com/security/malwareremove/default.aspx

**Please note that this tool may not remove all known viruses. Other antivirus software may be required to remove specific viruses or malware not covered by this tool. Instructions on how to install antivirus programs through the Windows interface within CellDEK can be found in the CellDEK Users' Guide.**

**Note:** The Microsoft Windows Malicious Software Removal Tool is a single .exe file that is used to locate and remove an infection only. It will not install on the CellDEK system and will not actively protect the CellDEK from further infection.

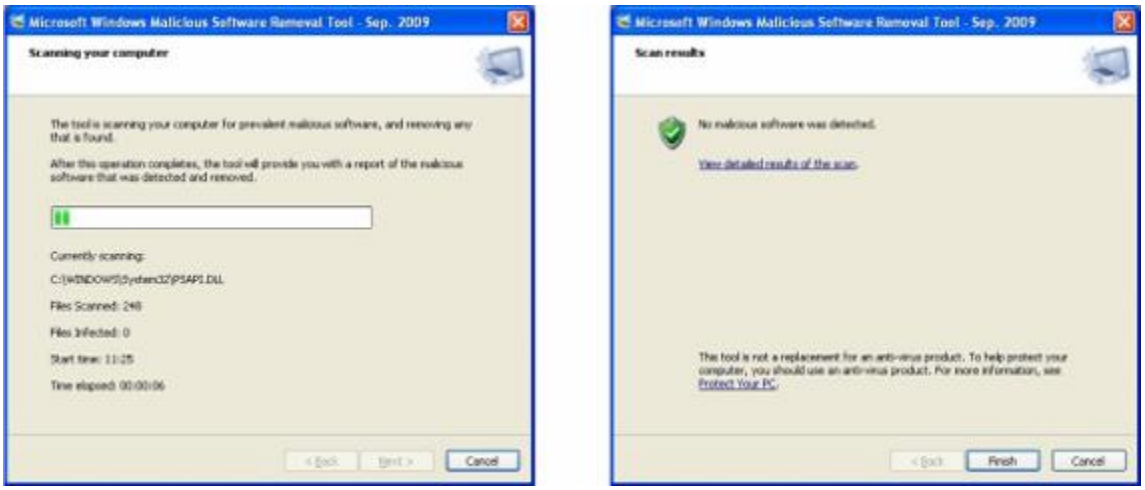
**IMPORTANT:** Other virus checking tools that have not been tested by the CellDEK team are available. Please proceed with caution when using untested software. If the system performance is affected it may be necessary to adjust the virus software settings or remove entirely to enable CellDEK to operate without restriction. Logicube is not liable for damages or lost files when using untested software.

## Windows Malicious Software Removal Tool Screen Shots




**Windows Malicious Software Removal Tool**

To prevent changes to the evidential data content in the data files folder the user can select a custom scan and choose to scan system folders only*.




**Windows Malicious Software Removal Tool cont'd.**

**Carrying out a full or quick scan may result in files that have been identified by the Microsoft Windows Malicious Software Removal Tool as 'malicious', to be removed from the CellDEK system. To protect evidential files you may wish to isolate the data files folder from the scan by selecting the customized option.*

*Data Files folder location: C://Program Files/FSS/CellDEK/Data Files*

***Note:** Any files identified as 'malicious' that are removed from the data files folder during the scan will remain listed as downloaded in the CellDEK report.*

## CellDEK Operation

**Using the CellDEK stylus**

The CellDEK is operated via a touch screen interface. A stylus is included and is stored in a holder located directly above the touch screen.

**NOTE:** The CellDEK lid should always remain closed when the unit is charging or not in use.

## Touch Screen Calibration

The touch screen on the CellDEK can be calibrated. There are two sets of instructions that can be followed to perform a touch screen calibration depending on the CellDEK you have.

- Asus tablet – CellDEKs that have the power switch on the bottom right hand corner of the display.
- Fujitsu tablet - CellDEKs that have power switch on the top right hand corner of the display.
- Panasonic tablet - CellDEKs that require you to open the storage area to turn the power on.

### Calibrating the Asus model

1. Turn the CellDEK.
2. On the Windows Log On screen, tap **OK** to log on to Windows.
3. The End User License Agreement should appear. Do not do anything to the License Agreement. Do not close it. Do not click OK.
4. On the Windows desktop, double-tap the ***Hide StartBar*** icon. If you cannot locate it on the desktop, look for a folder called “Unused Icons”. Double-tap that folder and see if the Hide StartBar icon is there. After double-tapping the Hide StartBar, the Windows

Start button should appear on the bottom left of the screen.

5. Tap the Windows Start button.
6. Locate and tap ***Touch Panel Tool*** on the left side. If this cannot be found, tap ***All Programs*** then the ***Touch Panel Tool*** folder. In that folder, you will find the program called ***Touch Panel Tool***.
7. The Touch Panel Tool window will appear.

   **NOTE:** The Touch Panel Tool window may appear behind the End User License Agreement (EULA) window. If this happens, tap the Touch Panel Tool window to bring it in front of the EULA.
8. In the ***Calibration*** section, make sure ***9 Points*** is selected.
9. Tap the ***Calibration*** button. The calibration screen will appear.
10. Tap the blinking symbol until it beeps or stops blinking. There will be a total of 9 symbols to tap.
11. After the 9th symbol, the calibration screen will close and you will see the ***Touch Panel Tool*** window.
12. Tap the ***Hide*** button to hide the Touch Panel Tool window.
13. Accept the End User License Agreement to load the CellDEK software.

**Calibrating the Fujitsu model**

1. Turn the CellDEK on.
2. On the Windows Log On screen, tap **OK** to log on to Windows.
3. The End User License Agreement should appear. Do not do anything to the License Agreement. Do not close it. Do not click OK.
4. Double-tap the ***Hide StartBar*** icon. If you cannot locate it on the desktop, look for a folder called “Unused Icons”. Double-tap that folder and see if the Hide StartBar icon is there. After double-tapping the Hide StartBar, the Windows Start button should appear on the bottom left of the screen.
5. Tap the ***Start*** button.
6. Tap Control Panel.
7. In the Control Panel, double-tap ***Tablet Calibration***.
8. Follow the instructions on the screen, touching the red + marks. There will be 9 of them (3 rows (top, middle, and bottom) and 3 columns (left, middle, and right).
9. When you are done with the 9th mark, a pop will appear “Calibration is succeeded. Settings change is effective after system restart”.

10. Tap **OK**, and close Control Panel window.
11. Re-start system in order for settings to take effect. Start, Shut Down.
12. Once re-started tap **OK** on Windows log in.
13. Tap **OK** on the End User License Agreement to load the CellDEK software.

### Calibrating the Panasonic model

**Note:** The steps below require a USB keyboard.

1. Turn the CellDEK on.
2. On the Windows Log On screen, tap **OK** to log on to Windows.
3. The End User License Agreement should appear. Do not do anything to the License Agreement. Do not close it. Do not click OK.
4. Attach the USB keyboard to the USB port.
5. Double-tap the ***Hide StartBar*** icon. If you cannot locate it on the desktop, look for a folder called "Unused Icons". Double-tap that folder and see if the Hide StartBar icon is there. After double-tapping the Hide StartBar, the Windows Start button should appear on the bottom left of the screen.
6. Tap the ***Start*** button.
7. Tap ***Control Panel***.
8. In the Control Panel, double-tap ***Mouse***.
9. In the Mouse Properties window, tap the ***TouchScreen*** tab.
10. In the Calibration & Test section, tap the ***Calibration*** button. The screen should go into calibration mode.
11. Follow the instructions on the screen, touching the red + marks. There will be 9 of them (3 rows (top, middle, and bottom) and 3 columns (left, middle, and right).
12. When you are done with the 9$^{th}$ mark, the mark will go back to the top left. At this point, press the Enter key on the keyboard and it will bring you back to the Mouse Properties window.
13. Tap OK to close the Mouse Properties window and close the Control Panel window.
14. Tap OK on the End User License Agreement to load the CellDEK software.

## Identifying a Target Device

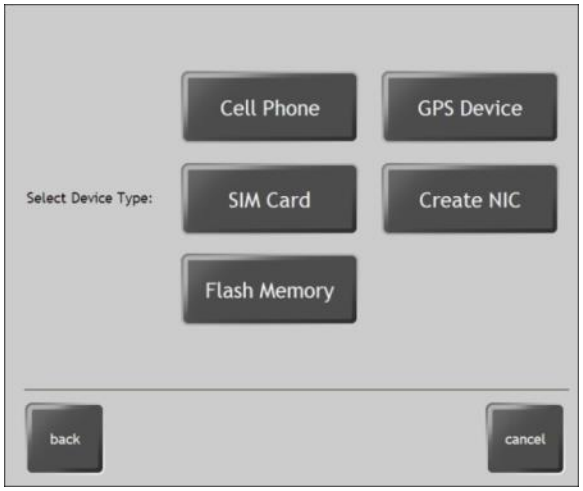
Target devices can be difficult to identify. Many show the manufacturer's name or logo, but not the model name or number. This information is usually displayed behind the battery of the target device. To view the label, the target device would be powered down and the battery removed.

On power-up a PIN or PUK number may be required to unlock the target device. This number can be obtained from the device's network service provider by authorized law enforcement personnel.

Identification of the target device is required to determine which connection methods are available (e.g. cable, infrared or Bluetooth) and for data cables, the specific cable connector.

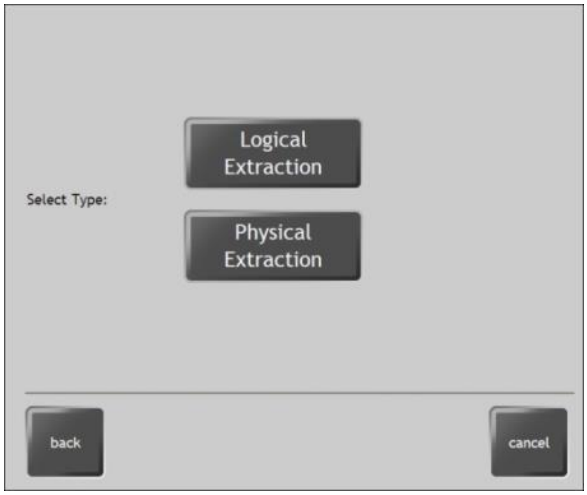
### Attaching a Cellular Phone

Begin by tapping the ***Read New Device*** button on the Main Application Screen. The Device Type Selection screen will appear.




**Device Type Selection**

Tap the ***Cell Phone*** button. The next screen prompts the user to choose either logical or physical extraction.




**Extraction Type**

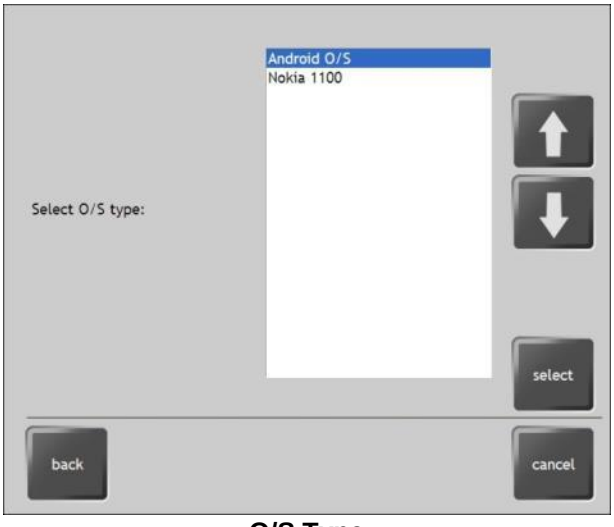
Select Logical Extraction for most phones. Physical Extraction is available for Android devices and the Nokia 1100 only.

### Physical Extraction

If Physical Extraction is selected, the following screen will appear:

**O/S or Chipset screen**

Select ***By O/S***. This is the only option that is selectable. 'By Chipset' is only available with the Logicube CellXtract-TNT. Visit http://www.logicube.com/shop/cellxtract-tnt/ for more information on the CellXtract-TNT.




**O/S Type**

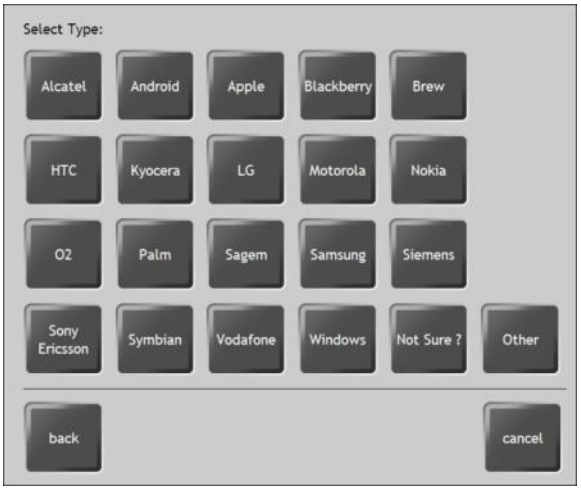
Select either Android O/S or Nokia 1100. If Android O/S is selected, follow the on-screen instructions on an Android O/S physical extraction.

## Logical Extraction

If Logical Extraction is selected, the manufacturer list will appear. If the manufacturer is unknown, the search is carried out on all manufacturers.

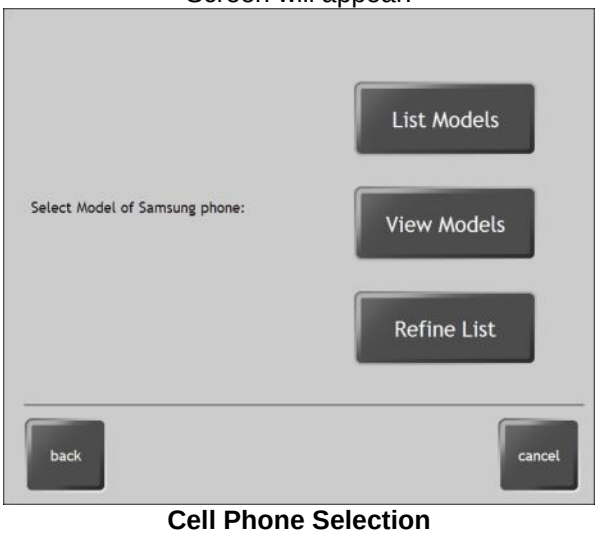
For a given manufacturer, CellDEK helps to identify the target cellular phone as follows:

- Selection from a model list
- Selection from model images
- Selection from a “short list” of model images based on entered dimensions.



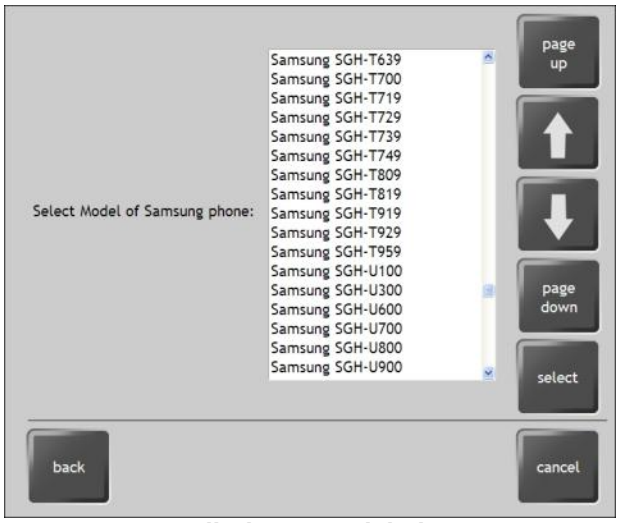

**Cell Phone Manufacturer**

Once the manufacturer is chosen, the Cell Phone Selection Screen will appear.




**Cell Phone Selection**

If the user knows the model of the cell phone, then the ***List Models*** option should be selected. A list will come up of all known models.




**Cell Phone Model List**

Scroll down the list and select the model number of the cell phone.

If the model is unknown, images of all models for the chosen manufacturer are obtained by selecting ***View Models***.

**Cell Phone Models**

**NOTE:** Fully verified and supported handsets are indicated by green “check marks”. Handsets that are not supported but are expected to work are indicated by amber check marks. Unverified handsets have no check mark; so treat extractions from these handsets as a minimum data extraction.

**NOTE:** Some handsets can use a Network Isolation card (NIC) during capture. This feature is further explained in the ***Network Isolation Card (NIC)*** section later in this chapter.

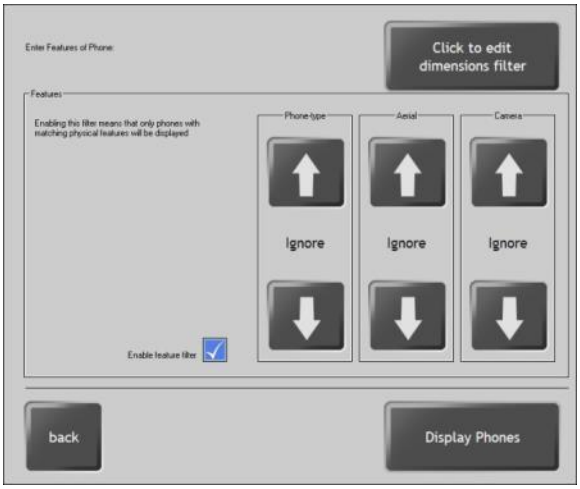
Scroll down the list and choose the image that looks like the target cell phone.

You may be faced with a large list of cell phones. To narrow down the search, tap the ***Back*** button.

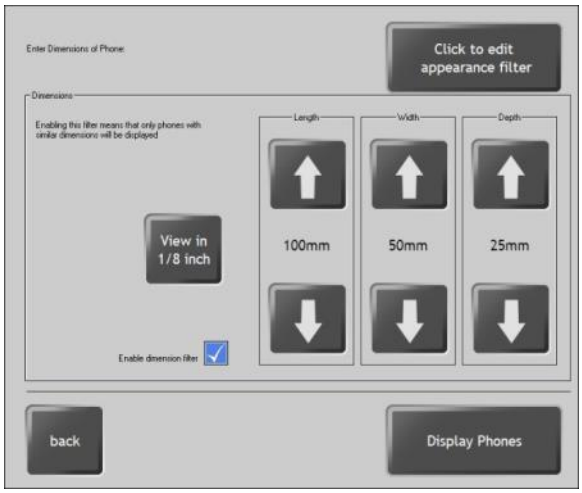
Select ***Refine List***. The user has the option to apply two filters. The user can choose to apply either or both of these filters.

The first will narrow down the images shown using physical features of the phone (e.g. Does the phone have an antenna or camera and what type of phone is it? Clamshell, swivel, slide or bar).

The second or Input Dimensions filter is used to enter the physical dimensions of the target device (length, width, depth) using mm or inches. CellDEK TEK will display the models matching those dimensions or features (within a given tolerance and depending on which filter is used).




**Enter Features**




**Enter Dimensions**

**NOTE:** There is a measuring ruler printed on the CellDEK TEK in inches and mm.

**NOTE:** This screen will allow the user to enter the dimensions in mm, 1/8 inch or 1/16 inch increments.

Tap the Up and Down Arrows to change each filter. If the handset does not have one of the features, such as a camera, set the filter to “Ignore”.

When finished, tap the ***Display Phones*** button. CellDEK will display models matching those features.

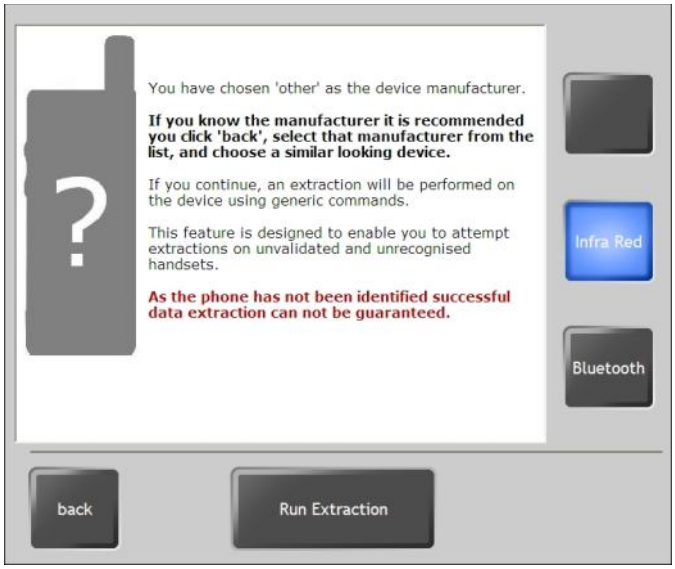
Tap the model number or image to highlight it, and then tap the Select button. Refer to the “**Connection Options”** section later in this chapter.

### Generic Extraction Module

If the ***Other*** Button is chosen on the Cellphone Extraction Screen, the Generic Extraction Module appears. This is used to extract from handsets that have not been identified or verified with CellDEK. This includes handsets where data could not be obtained from the known manufacturers as well as from unknown manufacturers.

The time taken for data extraction can take up to 30 minutes, depending on the amount of data.

The Generic Extraction Module only supports Bluetooth and Infrared connections.

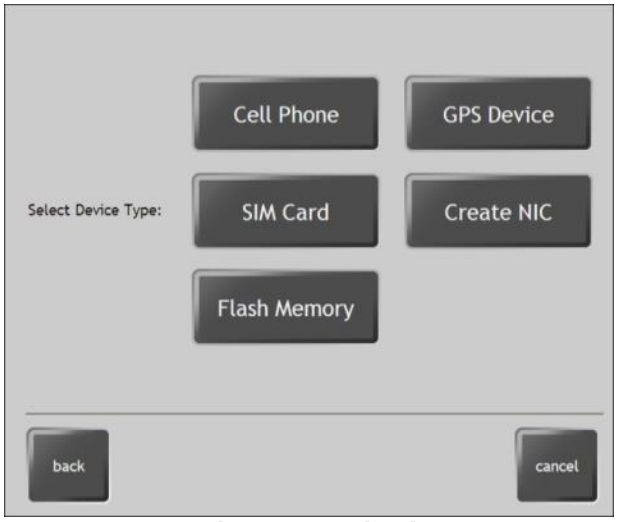



**Generic Extraction Module**

**NOTE:** Users should be aware that data extracted with the Generic Extraction Module is NOT validated. It is recommended that any data extracted using this method is visually verified by the User to ensure that no data is missed or misrepresented.

## Attaching a PDA

Begin by tapping the ***Read New Device*** button on the Main Application Screen. The Device Type Selection screen will appear.




**Device Type Selection**

Tap the “Cell Phone” button. The list of handsets and Operating Systems will appear. Select the proper Operating System (Android, Blackberry, Palm OS, or Windows Mobile.

**Select PDA Type**

Palm-based PDA’s are supported by software version 1.9.0.0. and higher with the following caveats:

Extraction of SMS messages is currently not supported.

Extraction of user files is currently not supported.

CellDEK is able to collect the following information from Palm devices: Contact Details, Call Logs (if available),

Calendars, Tasks, Notes and Palm Database (PDB) files. PDB files are where Palm OS keeps data stored in RAM. The data is kept in database format. These files can contain user data.

Windows-based PDA's need to have Active Sync enabled before they can be set to Infrared mode. Please refer to the "**Connecting via Infrared"** section later in this chapter.

Blackberry devices can only connect via Cable. Please refer to the "**Cable Connection"** section later in this chapter.

**NOTE:** Blackberry devices that are password-protected will need to be unlocked before data can be extracted. Please refer to the "**Unlocking a Blackberry Device"** section later in this chapter.

Most PDA's will need to connect to CellDEK via Bluetooth instead of the other way around. Please refer to the "**Connecting via Bluetooth"** section later in this chapter.

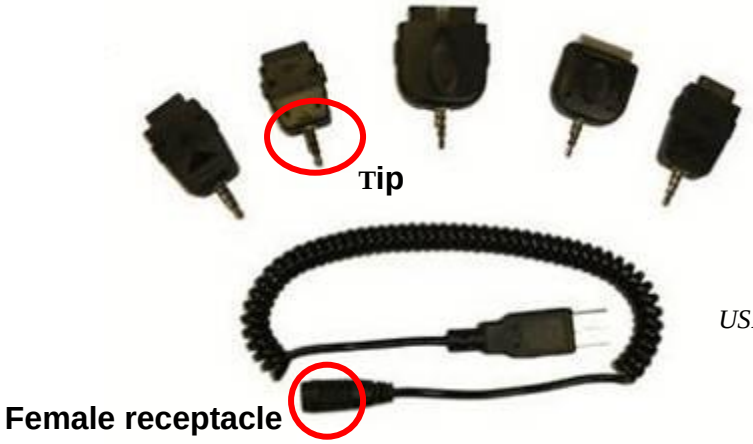
Additional Cable Support for PDA's:

A set of 5 new PDA cable tips and a USB cable are available from:

**http://www.gomadic.com/celldek.html**

These tips will enable the User to connect to a number of PDAs that are not supported by the current CellDEK cables. However, it must be noted that, although many of these PDAs are already supported by CellDEK via Infrared, an extraction using a cable will provide a faster extraction. Appendix C lists the 150 PDAs that are supported by these cable tips.

Each **tip** can be placed into the **female receptacle** thus allowing a large range of tips to be connected to the same USB cable.




*PDA Cable Tips*

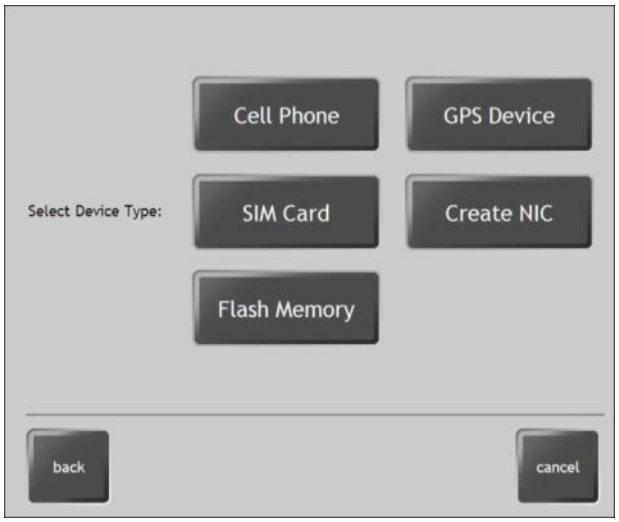
*USB Cable*

### SIM Card Extraction

**NOTE:** CellDEK supports, with software release 1.20.0.0 and above, the ability to clone an existing SIM card. This and other features using the Network Isolation Card (NIC) are described in detail in the Network Isolation (NIC) Cards section titled: **Network Isolation (NIC) Cards and SIM Card ID Cloning.**

SIM Card extraction supports both SIM and USIM cards.

1. Begin by tapping the ***Read New Device*** button on the Main Application Screen. The Device Type Selection screen will appear.




**Device Type Selection**

2. Tap the ***SIM Card*** button.
3. Remove the SIM Card from the target cell phone. It is usually located underneath the battery.

**Removing SIM card from cell phone**

4. Slide the SIM card into the adapter with the gold contacts facing out.
5. Place the adapter in the SIM card reader, which is located on the right hand side of the control panel.
6. As the card is read, the green LED light will behave in one of two ways:

a. On older CellDEK units, the LED will constantly stay lit, and blink when the SIM is accessed.
b. On newer CellDEK units, the LED stays off, then blinks when the SIM is accessed.

**Inserting SIM Card in Slot**

**SIM Card in Slot**

### SIM PIN and PUK Codes

CellDEK enables an investigator to unlock SIM cards via the PIN code and the PUK code, if they are known.

When CellDEK is used to unlock a SIM card via the PIN code it does not relock the card afterwards.

When unlocking the SIM card via the PUK code CellDEK will reset the PIN number to “0000”. To enable the feature to enter the PUK code, the PIN code needs to be entered incorrectly several times. The PIN-input screen displays the number of attempts remaining before the PUK code is required.

### Dual SIM Extracted Data

Dual SIM handsets can contain two SIM cards; however the handsets are fully operational with only one SIM. Dual SIM handsets will have the following data:

- 2 IMEI Numbers
- Up to 2 IMSI Numbers

- Up to two lots of SIM Contacts
- Up to two lots of SIM Messages

These handsets make use of two SIM card slots and are referred to as Slot 1 and Slot 2. Either slot can be used if only one SIM card is present.

There are a number of ways the user can switch between SIM cards including a software menu option or a hardware button.

The handsets also have the functionality to set which SIM card is initially used on start-up irrespective of the Slot it is in. Therefore the SIM card in Slot 2 can be set to be used before that in Slot 1.

The SIM cards will be referred to as Primary SIM and Secondary SIM, where the Primary SIM is the one set to be used first.

The following data has been tested and can be extracted from these handsets:

**IMEI** – Each Dual SIM handset has two IMEI numbers, one for each SIM card Slot. The IMEI numbers are associated to the SIM card slots on the handset NOT the SIM Cards. CellDEK will only extract the IMEI number of Slot 1 regardless of how many SIM cards are present or which card is set as the Primary SIM.

**IMSI** – Each Dual SIM handset can have up to two IMSI numbers, one for each SIM card inserted. CellDEK will only extract the IMSI of the Primary SIM card, regardless of which slot it is inserted into.

**SIM Contacts –** Dual SIM handsets can store contacts to either SIM card. CellDEK can retrieve contacts from both SIM cards and identify which card they were stored on. Contacts stored on the Primary SIM will be labelled “[Primary SIM]”. Contacts stored on the Secondary SIM will be labelled “[Secondary SIM]”.

**SMS Messages** – Dual SIM handsets can store SMS messages on either SIM card. CellDEK will only extract messages stored on the Primary SIM card, regardless of which slot it is inserted into. CellDEK will extract all handset SMS messages but cannot determine which SIM card they were sent to/from, this can be determined by viewing the SMS on the handset.

**Call Logs** – Dual SIM handsets store all call logs on the handset and can be dialled or received from either SIM card. CellDEK will extract all call log entries but cannot determine which SIM card was used to dial or receive the call, this can be determined by viewing the call logs on the handset. Any LDN’s stored on the SIM cards will

not be extracted, a separate SIM card extraction will obtain this data.

**NIC Card Functionality** – Where NIC card support is verified, a NIC card will need to be created for each SIM card used in a Dual SIM handset. The NIC card will need to be returned to the same Slot from which the SIM card taken from. Placing a NIC card in the wrong slot will result in a loss of data.

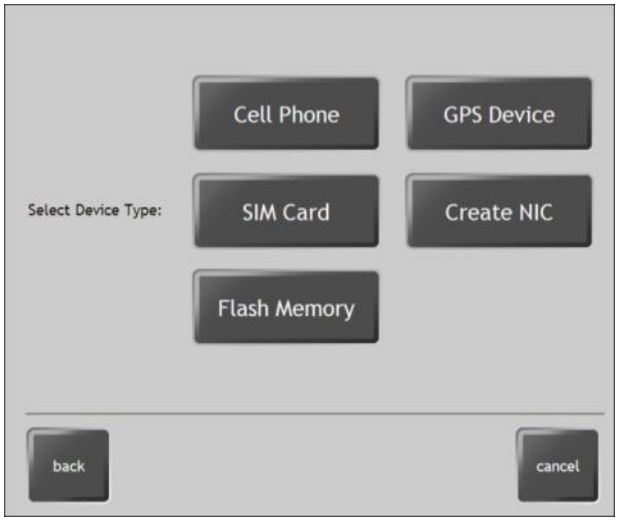
**NOTE:** A separate extraction should always be performed on all SIM cards.

### Attaching a Memory Flash Card

The Memory Card Reader is also located on the right hand side of the control panel. The CellDEK software application does not allow data to be written to the Memory Card Reader slots.

**IMPORTANT NOTE:** CellDEK can only support Memory Cards up to 2GB in size and will not work with SDHC cards. Users may attach a card reader that can read larger flash media such as SDHC to the USB port on the CellDEK.

1. Begin by tapping the ***Read New Device*** button on the Main Application Screen. The Device Type Selection screen will appear.

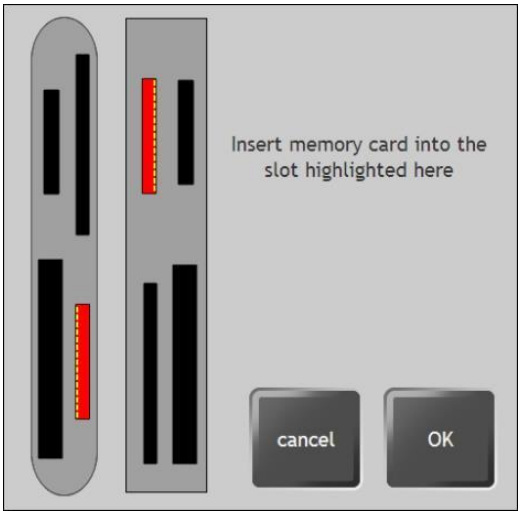



**Device Type Selection**

2. Tap the ***Flash Memory*** button. The next screen will prompt the user to choose the correct memory card.

**Memory Card Selection Screen**

3. Once the correct Memory Card image is selected, the next screen will prompt the user to insert the card in the indicated slot.




**Orientation Guide**

4. Place the card into the correct slot of the reader as indicated by the on screen graphics.

**CF Memory Card in Slot**

**NOTE:** If the suspect Memory Card is not represented on the Selection Screen, a card adapter may be required. (e.g. Transflash, Mini SD, Memory Stick Duo, etc.)

### Imaging Flash Media

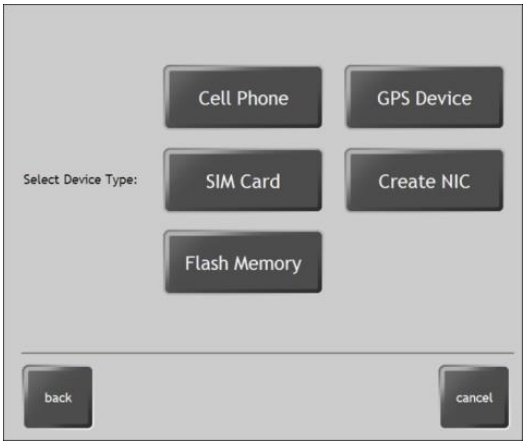
After capturing data, CellDEK will ask the user if it should perform a complete image capture of the flash memory card. If the user chooses to do this, CellDEK will run the following procedure:

1. CellDEK will make a sector-by-sector copy of the entire flash media drive.
2. The copy will be stored as an image file in the "_resource" folder of the extraction directory.
3. CellDEK will then scan the image file for the following types of JPEG files:
    - Extant JPEG: Normal, readable JPEG files.
    - Deleted JPEG
    - Embedded JPEG: JPEG files embedded in emails or other files.
4. Any found JPEG files will be displayed by CellDEK in the Extended Data screen.
5. The image file can be copied to a thumb drive and investigated further with hex-editing or forensic software.

**NOTE:** CellDEK cannot distinguish between Extant, deleted or embedded JPEG files. The image file should be further investigated to determine the status of any found files, and whether similar files exist in other formats.

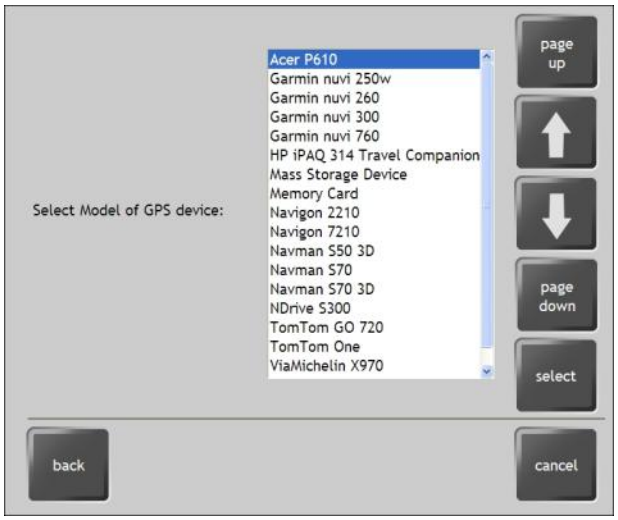
### Attaching a GPS Device

1. Begin by tapping the ***Read New Device*** button on the Main Application Screen. The Device Type Selection screen will appear.




**Device Type Selection**

2. Tap the ***GPS Device*** button. The next screen prompts the user to choose the type of GPS.




**Select GPS Type**

If a TomTom GO 720 is to be selected, choose “TomTom GO 720”. After capture, you will get an opportunity to capture the memory card separately.

If present, remove the memory card from the GPS device. This will be captured later.

**WARNING:** ALWAYS remove the Memory Card from a TomTom device prior to capture.

**NOTE:** TomTom can store the same information in the device and on the Memory Card. For that reason, the device and card may contain different sets of the same type of data (i.e. application info, favorite destinations, etc.)

Connect Cable 9 to the GPS Device and follow the prompts to extract data. The following information can be extracted from the supported TomTom Devices:

**Device information**
Manufacturer, Model, Serial Number

**Owner information**
Owner’s Name, Owner’s Street, Owner’s Town, Owner’s City

**GPS location information**
‘Home’ address with GPS coordinate, ‘Favorite’ addresses with GPS coordinates, ‘Destination’ addresses with GPS coordinates, ‘Recent’ addresses with GPS coordinate, ‘Miscellaneous’ addresses with GPS coordinates

**Telecommunication information ***
Telephone contact information stored on TomTom, Telephone numbers called via the TomTom, Telephone numbers of calls received via the TomTom, SMS messages received via the TomTom, SMS messages sent via the TomTom

**Files ***
MP3 files, JPEG files

*Only on supported devices.

The following information can be extracted from Garmin devices: manufacturer, model, serial number, “favorite” addresses with GPS coordinates.

3. After the GPS Device is extracted, press “Memory Card” on the screen that appears. Follow the directions for Connecting a Memory Flash Card earlier in this chapter.
4. The following information can be extracted from HP satellite navigation devices

**GPS location information**
‘Favorite’ addresses with GPS coordinates,

Route ‘Waypoint’ addresses with GPS coordinates.

‘Search History’ addresses with GPS coordinates.

**Telecommunication information**
Contact information.

Call Registers.

**Files**
User files can also be retrieved from the device by performing a separate Flash Media extraction.

### Generic GPS Extraction

CellDEK can now search certain devices for GPS data generated by any of the following GPS Software:

- CoPilot 6
- Garmin
- Navman Smart ST
- NavNGo
- NDrive
- TomTom

The data files generated by this software can be stored on devices without any GPS software installed. This data can still be extracted using CellDEK.

Devices which GPS Data can be extracted from are:

1. Sat-Nav GPS Devices
2. Windows Mobile Devices
3. Flash Media Cards
4. Mass Storage Devices

**NOTE:** GPS Devices can be used to store data generated from other devices. Therefore, care must be taken when linking data to a specific device.

The following GPS Data can be extracted:

1. ‘Favourite Locations’ - These are a list of addresses and/or coordinates which a user has

chosen to store on the device. They can contain Home and Work locations.

2. 'Recent Destinations' – These are a list of previous destinations the owner has selected to navigate to.
3. 'Route Waypoint Data' – These are a list of addresses and/or coordinates which form set locations along a route that the user has created.
4. 'History' - This is a list of addresses and/or coordinates that the owner has previously searched for or viewed. This list may also contain Favourite and Route Waypoint Locations. This list differs from Recent Destinations in that the owner may not have selected to navigate to the location.

**NOTE:** The presence of any of the above data on a device does not indicate that the owner has been to that location. Only that the owner chose to view and/or save that location on the device.

CellDEK will also extract Telecommunications data from some Sat-Nav GPS Devices.

The following Telecommunications data can be extracted:

- Contact information
- Telephone numbers called via the GPS Device
- Telephone numbers of calls received via the GPS Device
- SMS sent and received via the GPS device

This information is extracted from the data files created by the above software only. Mobile communication devices may have a separate store for this information.

**NOTE:** It is recommended that a separate PDA extraction be performed on all WinMobile devices to obtain Telecommunication Data

### GPS Track Logs

CellDEK can extract GPS track logs from devices manufactured by:

- Garmin
- Navman
- HP

Track logs record the GPS coordinates of the device every 1-2 seconds giving an accurate description of where the device has been and when.

The CellDEK report shows only the start point of each stored track log, as each track can potentially store thousands of points.

Track log data is best viewed by importing the GPSData.gpx into Google Earth.

**NOTE: Some devices start logging as soon as they are turned on, however other devices require the user to initiate logging to record track log data.**

## Opening GPSData.gpx Output Files in Google Earth

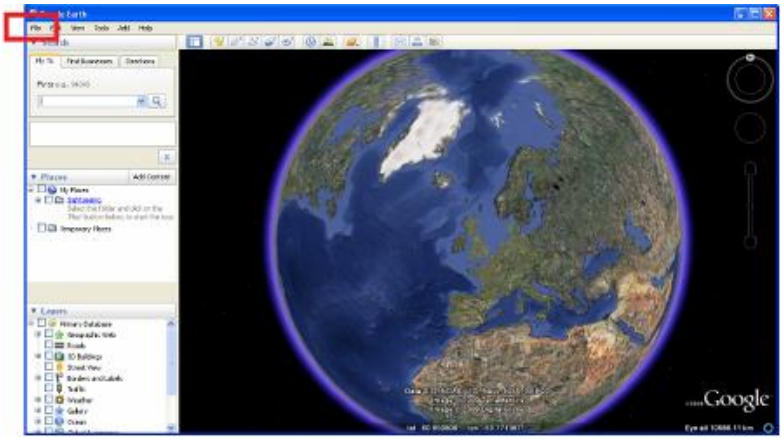
CellDEK generates an additional data file when extracting GPS Data. This file contains GPS data and can be imported into Google Earth to display the data.

The data file GPSData.gpx is created within the extraction folder automatically when a GPS extraction is performed.

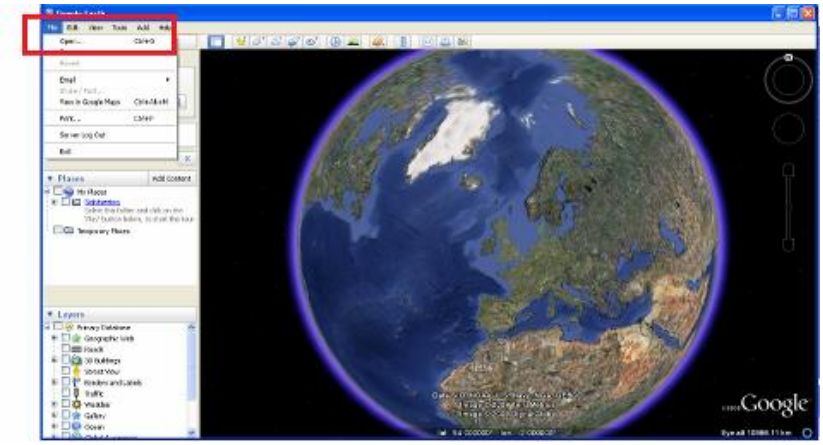
The data file stores all waypoints, routes and track log data in a format which can be used by Google Earth to display all of the GPS data in the report.

**NOTE:** Google Earth 5.0 will need to be installed on a PC to view the GPSData.gpx file. This can be downloaded from: http://earth.google.com

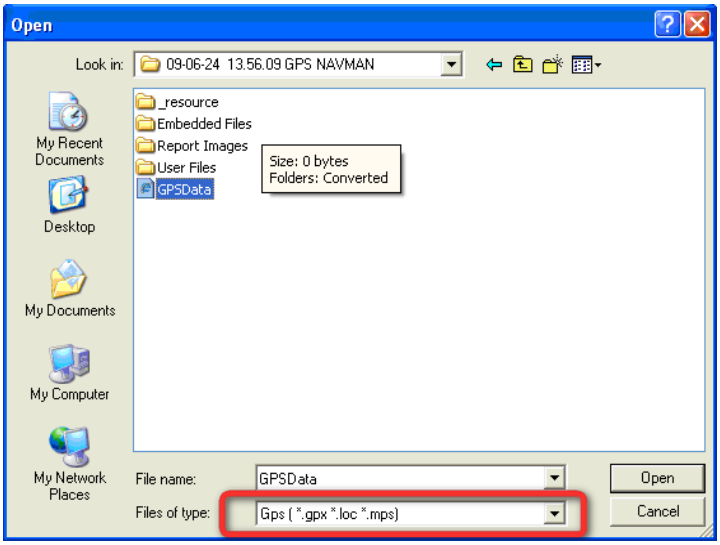
Open Google Earth and tap the File menu.




Then select Open.



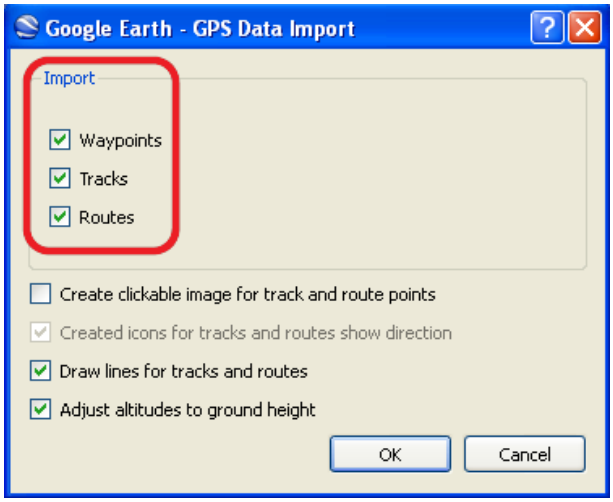

Navigate to the location where the extracted data files are stored.



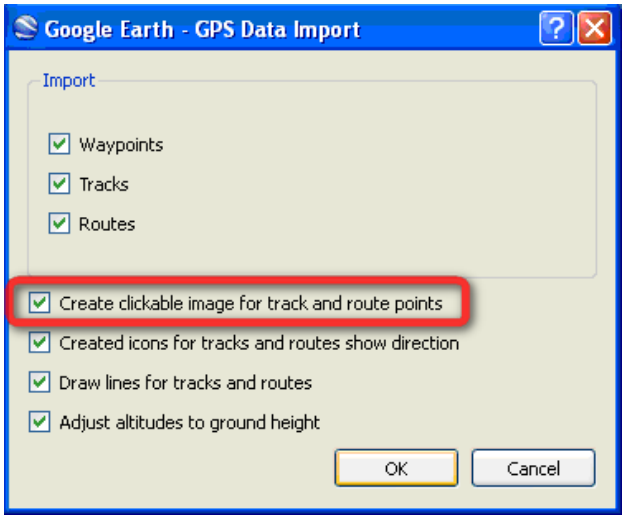

In the Files of type drop down box select Gps (*.gpx *.loc *.mps) and then select the GPSData file and tap open.

Alternatively you can drag the GPSData.gpx file into Google Earth

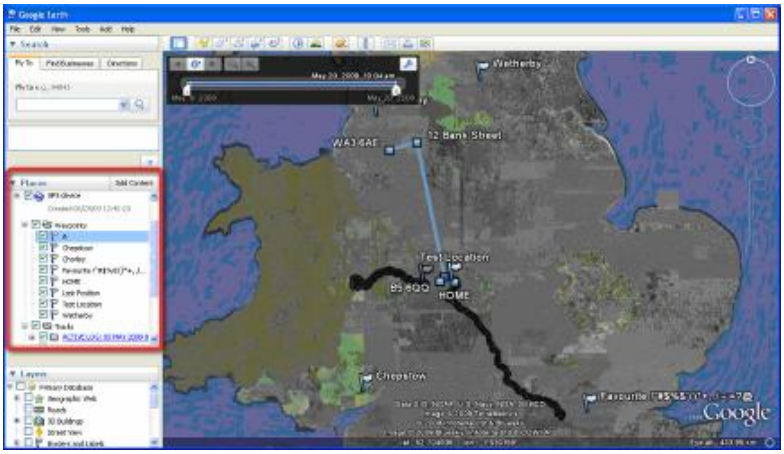
The GPS Data Import window appears allowing you to choose what types of data you want to import.




To display all GPS fixes along a saved track log make sure you check the Create clickable image for track and route points.




The data is then displayed on the map and can be selected using the Places navigation panel.



A full Google Earth User Guide can be viewed at: http://earth.google.com/intl/en/userguide/v5/

**NOTE:** Google Earth imports GPS coordinates, Time and Date, Altitude and waypoint name data only. Any other information displayed in Google Earth has been inferred by the Google Earth software.

## Geo-Tag Data from Images

CellDEK will now display Geo-Tag data for images that have been captured using a device with a GPS receiver. A Geo-Tag consists of latitude and longitude coordinates and adds geographical identification to an image.

Geo-Tag information is automatically extracted and appears in the metadata section associated with an image.

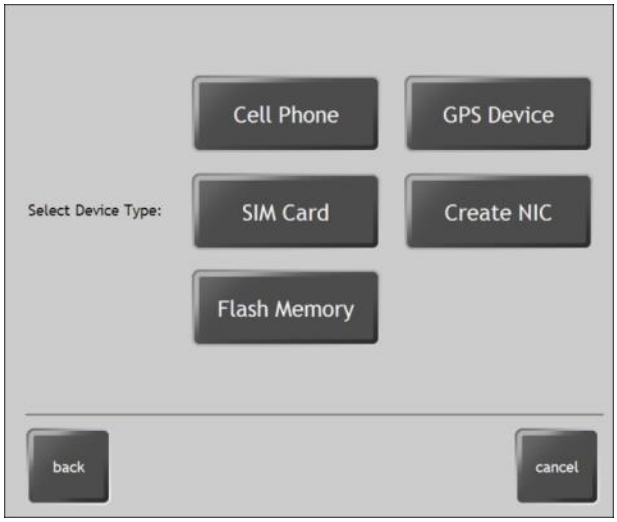
**Geo-Tag**

**NOTE:** Geo-Tagging is only displayed if the image has been captured using a device that supports geo-tagging.

### Attaching an Apple Device

CellDEK software ver. 1.12.0.0. and newer is able to capture data from Apple devices such as the iPhone and iPod Touch.

Begin by tapping the "Read New Device" button on the Main Application Screen. The Device Type Selection screen will appear.




**Device Type Selection**

Tap the ***Cell Phone*** button then select ***Apple*** from the list of handset manufacturers.

CellDEK will illuminate the correct data cable with a green light. A prompt will appear on the screen asking the user to attach the cable to the Phone Cable Jack.

**NOTE:** DO NOT attach the Apple device until prompted by CellDEK.

Remove the cable from the rack and insert it into the Phone Cable Jack. The cable's LED will turn red. Tap ***OK*** on the screen.

The cable's LED will turn green and a new prompt will appear. Attach the target cell phone at this time. Tap the ***OK*** button once the phone is connected.

## Connection Options

Once the correct target device has been chosen, the next screen will show the different connection options that are available. The three different methods of connection are **Cable**, **Infrared** or **Bluetooth**.

The Connectivity Option screen also shows the type of data that can be extracted from the target device. This information is shown as a series of icons that are

listed at the end of this chapter. Any data types that cannot be extracted have a red “X” through the icon.

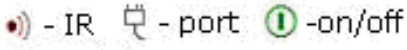
The Connectivity option Screen will also alert the user if the target device supports memory cards.

**NOTE:** The Connectivity Option screen will show items that can be downloaded from the SIM card if the chosen handset is a GSM phone.

**Connectivity Option Screen**

### Helper Icons

The Connectivity Option Screen also has three “Helper Icons” that indicate the location of the handset’s On/Off switch, Cable Port and IR Port (if available).




### Cable Connection

1. Select “Cable” from the Connectivity Option Screen. CellDEK will access the Cable Adapters that are stored in the case lid.
2. Tap the “Run Extraction” button.
3. CellDEK will illuminate the correct data cable with a green light. A prompt will appear on the screen asking the user to attach the cable to the Phone Cable Jack.

   **NOTE:** DO NOT attach the cell phone until prompted by CellDEK.

4. Remove the cable from the rack and insert it into the Phone Cable Jack. The cable's LED will turn red. Tap "OK" on the screen.
5. The cable's LED will turn green and a new prompt will appear. Attach the target cell phone at this time. Tap the "OK" button once the phone is connected.

**Data Cable Connected to Device**

On completion of data extraction, the data cable must be replaced into any of the forty storage sockets. It does not matter which socket the cable is attached to.

## Infrared (IR) Connection (Cell Phones and PDAs)

**PDA Connected via Infrared**

Some Cell Phones have a built-in infrared (IR) port, which can be used to transfer data from the target device.

1. Select ***Infrared*** from the Connectivity Option Screen and tap the "Run Extraction" button.

2. A prompt will appear on the screen asking the user to set the target device to infrared. If the device is a recognized cell phone, CellDEK will display instructions to set it to infrared mode.

**Instructions for Infrared Mode**

3. Once the device is in infrared mode, place it next to the Infrared emitter on the control panel. Make sure that the device's IR port is facing the emitter.
4. After 5 – 20 seconds, the CellDEK will emit a tone to indicate that the IR connection has been made.

### Bluetooth Connection

Most Cell Phones have Bluetooth capability, which can be used to transfer data from the target device. CellDEK has a range of 60 feet for Bluetooth connectivity.

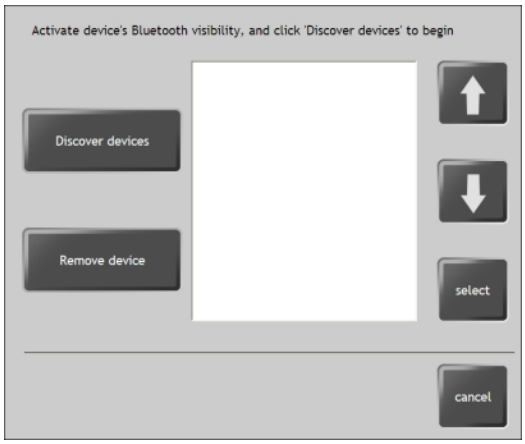
Bluetooth extraction is a wireless communication link. On initiation, CellDEK will produce a list of all Bluetooth enabled devices. Caution is therefore required when selecting the correct device name list, particularly if two devices in the area have the same name. Any connection will require confirmation/acceptance on the handset in question before the extraction process can commence. This prevents accidental connection to other devices.

Bluetooth capability can only extract data once the handset has been 'paired' with the CellDEK unit. Pairing is when you enter a 4-digit code into the phone/handset to accept the connection. If the 4-digit code is incorrectly entered you cannot access any data from the device. Data can only be extracted covertly over Bluetooth if the device is PAIRED FIRST, before returning it to the target owner. The data could then be extracted remotely without the target owner's knowledge (depending on phone type).

#### Connecting to a Cell Phone via Bluetooth

1. Set the target device to Bluetooth mode. If the device is a recognized cell phone, CellDEK will display instructions to set it to Bluetooth mode.

2. Select “Bluetooth” from the Connectivity Option Screen and tap the “Run Extraction” button. A prompt will appear asking the User to “Tap Discover Devices to Begin”.




**Discover Device List Screen**

3. Once the target device has Bluetooth enabled, tap the “Discover Devices” button.
4. A Bluetooth Activity screen will appear as CellDEK searches for Bluetooth devices.
5. After 20-30 seconds, CellDEK will display a list of found devices. Select the name of the target device and tap the Select button.

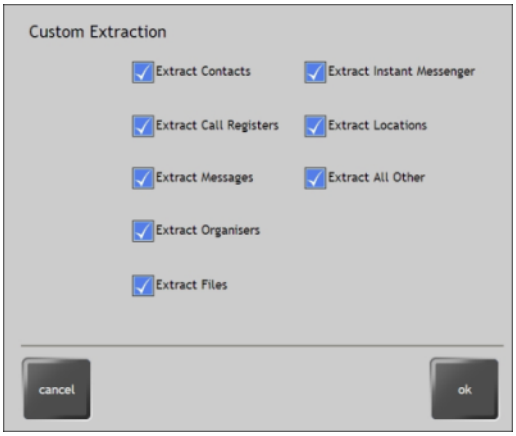
   **NOTE:** If the target device does not appear in the list, tap the “Discover Devices” button again. It may take more than one attempt to access the device.
6. Once connected, the Target device will prompt the user to allow connection. When requested, enter the 4-digit code as **1234** on the target device. Once the pairing process is complete, data extraction will commence automatically.

   **NOTE:** The target device screen must be monitored during this stage of the process. Some target devices require confirmation at various stages to continue extracting.

After data extraction, a reminder will appear for the user to remove the CellDEK from the Device’s Bluetooth History list.

### Custom Extraction

Pressing the “Custom Extraction” instead of the “Run Extraction” button allows the user to decide what data is downloaded from a handset. This is handy when the user only needs the call log from a handset, for example.




**Custom Extraction Screen**

Tap the radio buttons to download or skip different data types. Press ***OK*** when finished.

Any data not read will appear in the capture report as “User chose not to extract _____”.

**NOTE:** “Extract Files” refers to all image, movie, sound and other files found in the Extended Data portion of a capture.

## SIM Cards and Flash Memory Card Connection

SIM Cards and Flash Memory Cards require no special Connection procedures. Once the card is connected, data will begin to extract as outlined in **Chapter 3 – Capturing Data**.

## Main Connectivity Icons

The Connectivity Option Screen uses distinct icons to show what data can be pulled from supported phones with different connection options.

| ICON | DESCRIPTION | ICON | DESCRIPTION |
|---|---|---|---|
| | IMEI Number | | Sent SMS Message |
| | Time | | Saved SMS Message |
| | Date | | Calendar Entries |
| | Contact List (ADN) | | Tasks |
| | Dialed Calls | | Audio Files |
| | Received Calls | | Image Files |
| | Missed Calls | | Video Files |
| | Read SMS Message | | Other Files |
| | Unread SMS Message | | **NOTE:** Presence of this symbol next to the icon denotes that the data is extracted with relevant timestamps. |
| | Multimedia Message – SMS messages that can include attachments. | | Other Files |
| | | | |

**Connectivity Icon Table**

## Other connectivity Icons

The Connectivity Option Screen also tells whether a handset supports extraction through a NIC card or if the handset can be accessed without its SIM card.

## Network Isolation (NIC) Cards and SIM Card ID Cloning

CellDEK has the ability to isolate many handsets from the mobile network by using a Network Isolation Card (NIC). NIC cards are placed in the SIM card slot of the handset.

There are three categories of support for this feature.

- Handsets that support this feature are displayed with a blue NIC icon.
- Handsets that do not support this feature are displayed with a blue NIC icon crossed with a red line.
- Handsets that are untested for this feature are displayed with no NIC icon.

**Phone Model Selection Screen**

**Connectivity Option Screen**

A NIC card is included with each CellDEK. Additional Network Isolation Cards can be purchased from your CellDEK supplier.

Any CellDEK unit running software ver. 1.7.0.0 or later is able to support Network Isolation Cards (NIC). These cards replace the handsets SIM card and isolate the handset from its network while allowing a normal examination to take place.

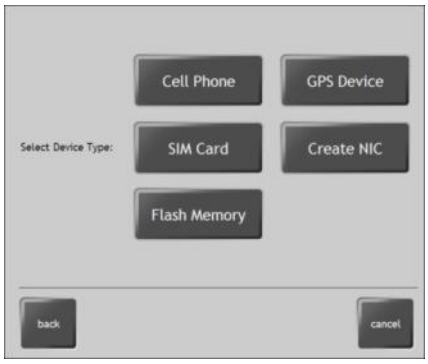
CellDEK ver. 1.20.0 and higher include the following features:

- Create from Existing SIM
- Manually enter NIC data
- Create Test NIC

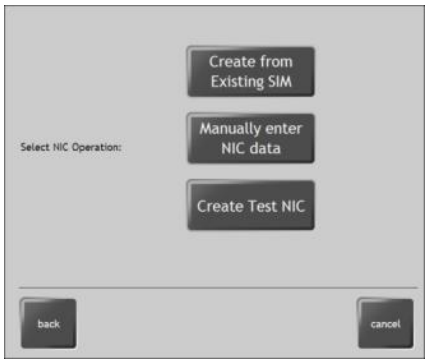
An explanation and summary for each method is included in the step-by-step instructions below.

### SIM Card ID Cloning Step-by-step

To perform SIM Card ID cloning, tap ***Read New Device*** from the main menu. The device type selection screen will appear.




Tap ***Create NIC***. The NIC Operation screen will appear.

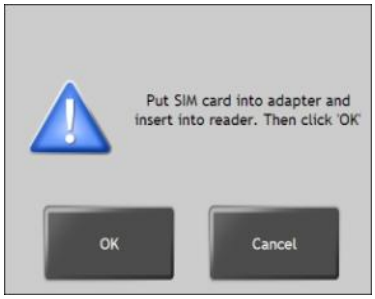



### Create from Existing SIM

CellDEK will clone the original SIM card ID. It will copy the ICCID and IMSI from original SIM card onto a NIC (SIM ID Card). The ICCID and IMSI on NIC must be identical to original SIM. NIC (SIM ID Card) ICCID and IMSI values can be checked by performing a SIM Card Extraction of NIC.

This method is useful when the original SIM card is available.

1. From the NIC Operation screen, tap ***Create from Existing SIM***.
2. Place the SIM card into the SIM card adapter then insert the adapter into the reader. Tap ***OK***.




3. CellDEK will read the inserted SIM card. After this process, the following screen will appear:

4. Remove the SIM card from the adapter and place the NIC (SIM ID Card) into the same adapter. Insert the adapter into the reader then tap ***OK***. CellDEK will now create the NIC (SIMID Card). When this process finishes, the screen below will appear. Tap ***OK***.

5. CellDEK will prompt whether a phone is compatible with Network Isolation Cards. Selecting ***No*** will finish the process and bring the user back to the CellDEK main screen. Selecting ***YES*** to the screen below will prompt the user to identify the phone to be used with the NIC (SIM ID Card). After selecting the phone, one of the following two screens will appear. Tap ***OK*** to finish he process and go back to the CellDEK main screen.

**Manually enter NIC data**

CellDEK will create a NIC (SIM ID Card) by writing valid ICCID and IMSI values entered by the user.

This method is useful when the original SIM card is not available. To find out the correct ICCID or IMSI numbers, please contact the handset's network provider.

Valid ICCID numbers are 19 or 20 digits long and include the following:

- The first 2 digits represent the Major industry identifier (89 for telecommunications)
- 1-3 digit Country Code
- 1-4 digit Issuer ID
- Variable length individual Account ID

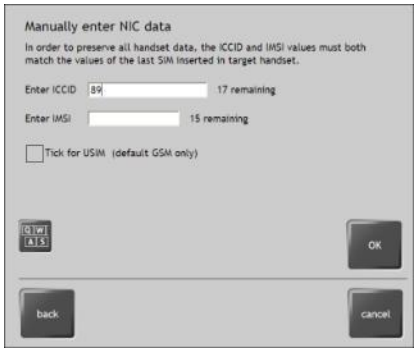
Valid IMSI numbers are 15 digits long and include the following:

- The first 3 digits represent the Mobile Country Code (MCC).
- The next 2 or 3 digits represent the Mobile Network Code (MNC).
- The next digits represent the mobile station identification number. Normally there will be 10 digits but would be fewer in the case of a 3-digit MNC or if national regulations indicate that the total length of the IMSI should be less than 15 digits.

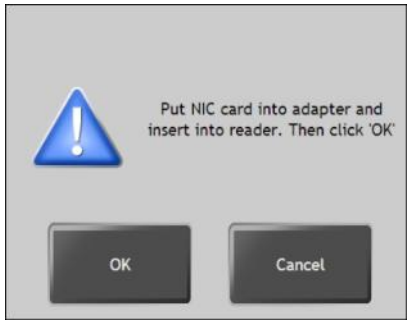
NIC (SIM ID Card) ICCID and IMSI values can be checked by performing a SIM Card Extraction of NIC.

1. From the NIC Operation screen, tap ***Manually enter NIC data***.

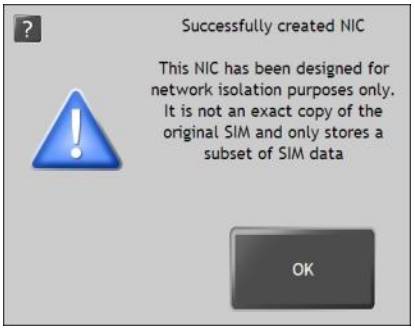
   Use the virtual keyboard (or an attached USB keyboard) and enter the ICCID and IMSI values. When finished, tap ***OK***.




2. Place the NIC (SIM ID Card) into the adapter and insert the adapter into the reader. Tap ***OK***.




3. CellDEK will now create the NIC (SIM ID Card). When this process finishes, the screen below will appear. Tap ***OK***.




4. CellDEK will prompt whether a phone is compatible with Network Isolation Cards. Selecting ***No*** will finish the process and bring the user back to the CellDEK main screen. Selecting ***YES*** to the screen below will prompt the user to identify the phone to be used with the NIC (SIM

ID Card). After selecting the phone, one of the following three screens will appear.

5. Tap ***OK*** to finish he process and go back to the CellDEK main screen.

**Create a test NIC**

CellDEK will attempt to write default ICCID and IMSI onto a NIC (SIM ID Card). The default values are:

ICCID = 894900050701001429

IMSI = 001010123456789

A warning will appear after creating a test NIC:

“A Test NIC can be used to access handset data but should only be used as a last resort. Inserting into a handset may cause data to be lost or changed”

NIC ICCID and IMSI values can be checked by performing a SIM Card Extraction of NIC.

This method should be used as a last resort if none of the previous methods work. It is important to understand

that incorrect ICCID or IMSI data may cause data on the handset to be lost or changed.

1. From the NIC Operation screen, tap ***Create Test NIC***.
2. Place the NIC into the adapter and insert the adapter into the reader. Tap ***OK***

3. CellDEK will now create the NIC (SIM ID Card). When this process finishes, the screen below will appear. Tap ***OK*** to finish the process.

## Extraction without a SIM Card

CellDEK can extract data from many handsets with the SIM card removed. If a handset's SIM is PIN locked this feature allows an extraction of the handset with the SIM removed. If supported, this feature is displayed in the Connectivity Screen.

**Connectivity Option Screen**

## Capturing Nokia Handsets

Certain Nokia Handsets require special adapters in order to extract data. This section deals with two major topics: Installing the CA-42 Cable and using Nokia Flash adapters to connect to a handset.

### Nokia CA-42 Cable Installation

The Nokia CA-42 Cable that is provided with CellDEK is different than the other cables. It resides in the storage compartment and not in the connector rack. As such it needs to be installed on the CellDEK prior to use. To install the cable:

1. Boot the CellDEK to the Main Application Screen.
2. Attach the CA-42 Cable to the USB port. Wait for the USB connection tone. (It may take over a minute for the tone to be heard).
3. Remove the cable. It is now ready to be used for extractions!

### Nokia Flash Adapters

The CellDEK is able to connect to certain Nokia handsets through the use of specialized adapters from Nokia. Refer to chapter 7 for a list of Nokia handsets that are supported and the corresponding adapters.

#### Attaching Nokia Flash Adapters

Follow these steps to attach a flash adapter to a Nokia handset:

**NOTE:** This demonstration uses a Nokia 1100, but the procedure is similar for other models.

**Nokia 1100 Handset**

1. Power the handset off.
2. Remove the back cover and the battery. Leave the SIM card in place.

**Handset Battery Removed**

**NOTE:** The time and date on the handset may be changed when the battery is removed.

3. Locate the data pins in the battery compartment of the handset. You may need to remove a small, black plastic cover.

**Data Pins**

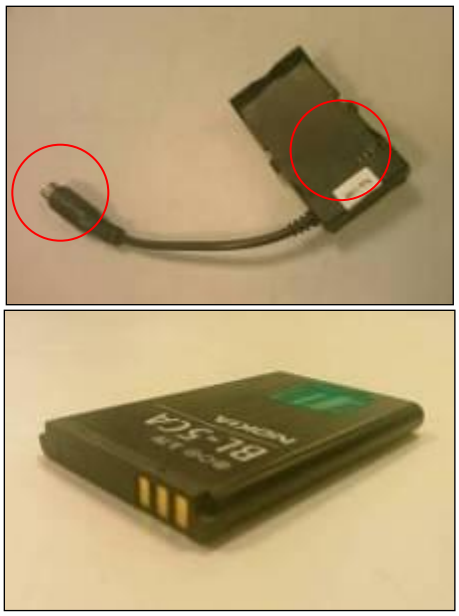
4. Place the appropriate adapter inside the handset so that the adapter's data pins touch the pins of the handset.

**Adapter Data Pins (circled)**

5. Insert the lower part of the adapter first, then snap the upper part of the adapter into place.

**Adapter in Handset**

6. Insert the handset's battery into the adapter by aligning the battery pins. Push the battery in and down until it snaps into place.



**Battery Pins on Adapter and Battery (circled)**

7. When properly assembled, the handset should look like the picture below:

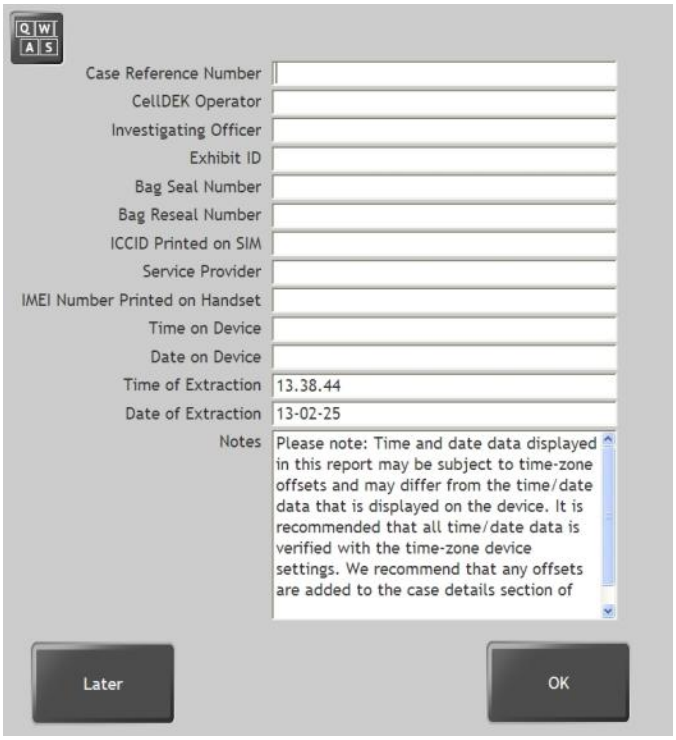
**Installed Flash Adapter**

8. Power the handset on, and perform the data extraction with Cable 25 as outlined in the “Cable Connection” section earlier in this chapter.

**Connected to Cable 25**

## Case Details

Once the target device has been successfully connected, the Case Details input form appears:




**Case Details Input Form**

1. If the report will be filled out later, tap the ***Later*** button to continue on to data extraction.
2. If the report is to be filled out now, tap the first line that needs to be filled out.
3. The CellDEK keyboard will automatically open. The keyboard allows the use of upper/lower case letters, numerals and other characters, however not all characters have been validated. The CellDEK will display one of two types of keyboards.

**NOTE:** The keyboard is also accessible from any screen that displays the button to the left.

**Alphanumeric Keyboard**

**Alphanumeric Keyboard**

**NOTE:** Alternatively, a USB Keyboard can be attached to the CellDEK through the USB port.

4. Enter the information and tap the ***Enter*** key when finished.
5. Repeat steps 2 – 4 for each line that needs to be filled out.
6. Tap the ***OK*** button once all of the information is filled out. The fields entered will be built into the final report, which is generated on completion of the extraction.

### Other Notes

Certain fields will show users a list of previous entries. These entries can be dropped into the field without retyping them. The Case Details form will remember the last 20 entries for the following fields:

- Case Reference Number
- CellDEK Operator
- Investigating Officer
- Exhibit ID
- Service Provider
- The Case Details Form can be opened and edited for previous extractions.

## Data Extraction

### Searching for Drivers

Sometimes, CellDEK may need to load new drivers for a handset that has never been attached before. A progress bar will appear briefly that

indicates drivers are being loaded. The capture session will continue once the drivers are loaded.

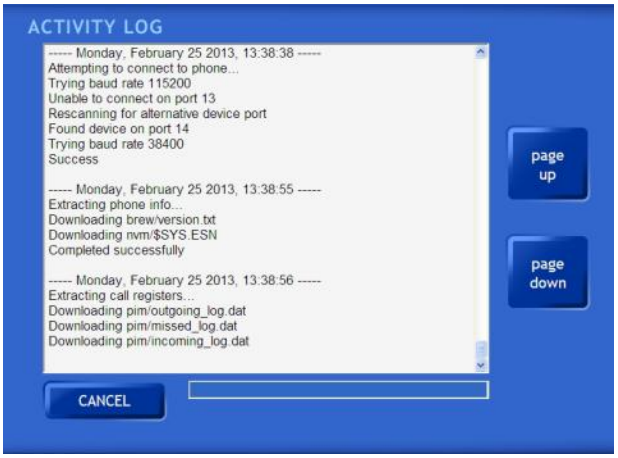
**Note:** Allow sufficient time for the driver to load.

### Standard Data Extraction

Once a target device has been identified and connected, the CellDEK software will prompt the user to continue. Doing so starts the extraction process for “standard data”.

Standard data includes such information as Contacts, Call Logs, SMS Text Messages and Organizer data.

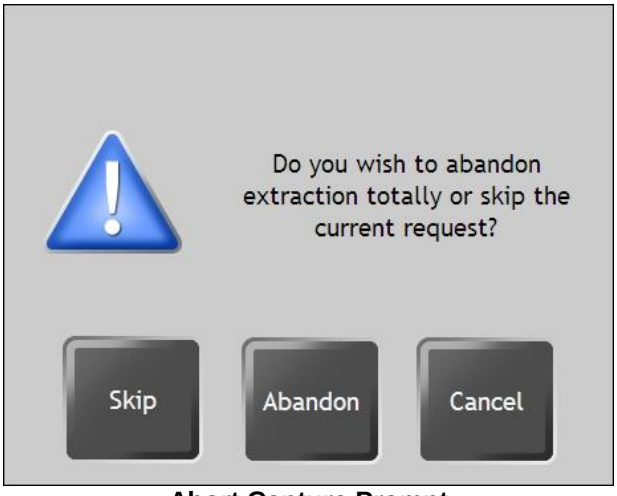
As the data is being extracted, CellDEK will show the progress in the Activity Log on the screen:




**Activity Log**

### Abort Capture

The capture process can always be aborted by tapping the ***Abort*** button during the capture operation. This button is located underneath the Activity Log. If the button is pressed a prompt will appear:



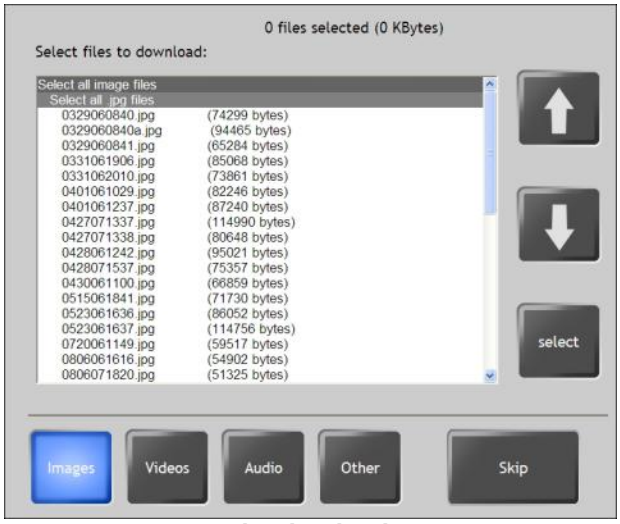

**Abort Capture Prompt**

This prompt will allow the user to skip the current capture operation (i.e. downloading contacts) or abandon the whole capture session. Pressing the Abandon button will go back to the Main Application Screen.

### Extended Data Extraction

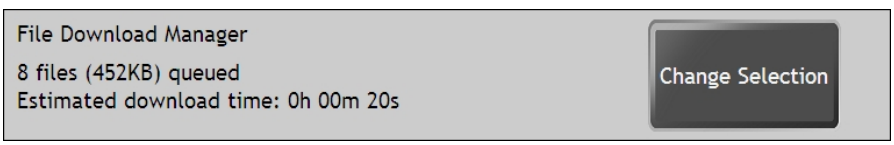
"Extended Data" refers to such items as Image files, Video files, Audio files and any other files such as themes, screensavers, etc.

When the standard data has been extracted, the user is given the option to select and download other files from the target device.



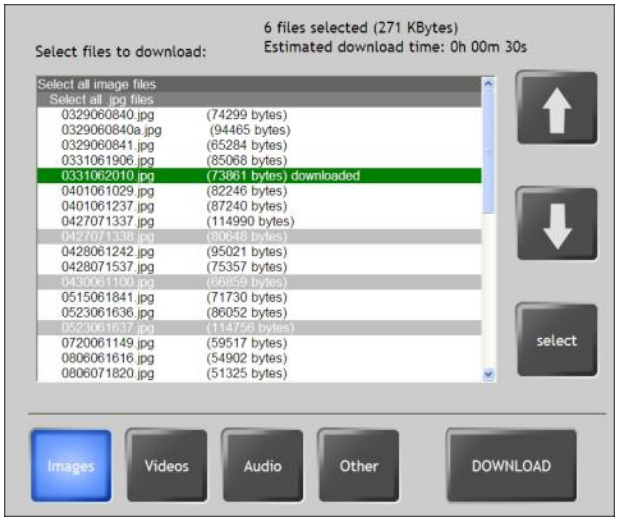

**Data Download Selection Screen**

1. Tap the ***Images*** Button at the bottom of the screen, CellDEK will display all supported Image files that were found in the target device's memory.
2. Select an Image file for download by tapping once on it. Tap a second time to deselect the file. Scroll through the list and tap any other files that are desired.
3. Repeat Steps 1 – 2 for the "Video", "Audio" and "Other" buttons.
4. **NOTE:** Select all files of a particular type by tapping the "Select all <.ext> files" bar.
5. As files are selected, CellDEK shows the number and size of total files at the top of the screen.
6. Once all needed files have been selected, tap the Download button. The Download Manager will show progress as the files are downloaded to CellDEK.




**Download Manager**

7. At any time, press the ***Change Selection*** button to stop downloading and re-select the files to download.
8. As the files download, the Activity Log will indicate downloaded files in green, selected files not downloaded in gray and unselected files in white.




**Activity Log During Download**

On completion of the download, a summary of all files, including listings for files not selected for download, will be displayed. The data received from the target device is written into an .XML and a .CSV file, then stored in the case unique folder.

**NOTE:** The csv data file only contains data for Device Info, Call Logs, Contacts, and Messages.

### Support for Non-Latin Languages

All handsets supported by CellDEK have had full validation of each feature carried out for the full range of Latin character sets (ASCII programming language).

CellDEK has also been further developed to extract information from Unicode languages that provide non-Latin character sets such as Greek and Arabic characters.

These extractions have not been verified although tests indicate the following:

- SIM cards (supported natively)
- Windows (supported natively)
- Nokia (supported natively)
- Sony Ericsson (full support, Unicode development implemented: an option has been implemented to allow the user to extract in ASCII if required)
- Samsung (partial validated Unicode support - for messages only)
- Motorola (partial support, Unicode development implemented: an option has been implemented to allow the user to extract in ASCII if required)

- Siemens (partial i.e. validated Unicode support for handsets contacts and notes)

If CellDEK does not extract a character; it will appear as a square on the screen.

### Special Note for Motorola and Sony Ericsson

The extraction of Unicode characters for all data sets has not been verified for Motorola and Sony Ericsson devices.

Before an extraction begins with one of these devices the CellDEK will offer the user a choice:

1. Extract validated data set only. This means that some Unicode data will not be extracted.
2. Attempt to extract all Unicode data. Software will try to extract Unicode characters for all data sets on the device. At this time the output in this case is not guaranteed by validation testing.

## Other Data Extraction Notes

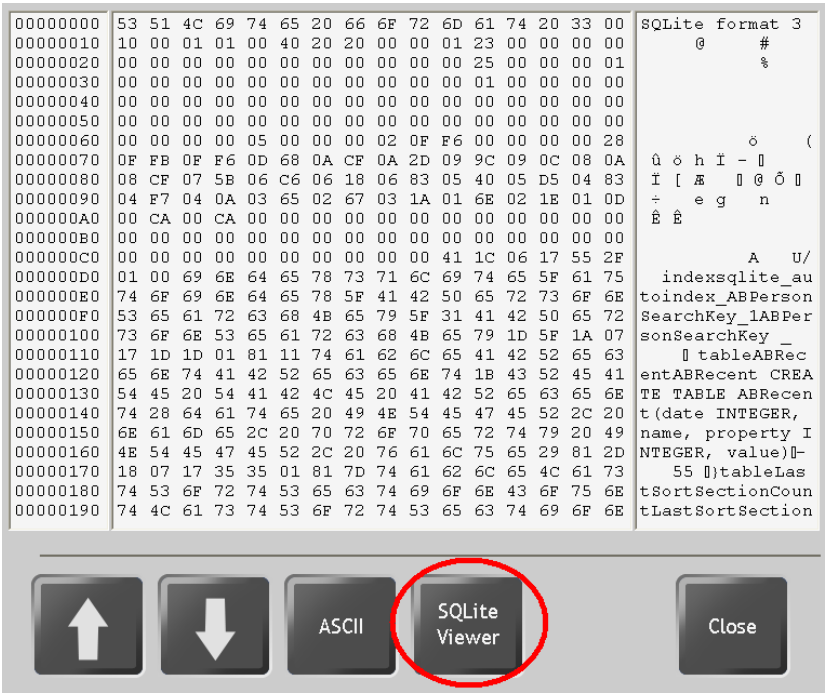
This section contains extraction information and notes regarding specific handsets, phone Operating Systems, or devices.

### SQLite Viewer

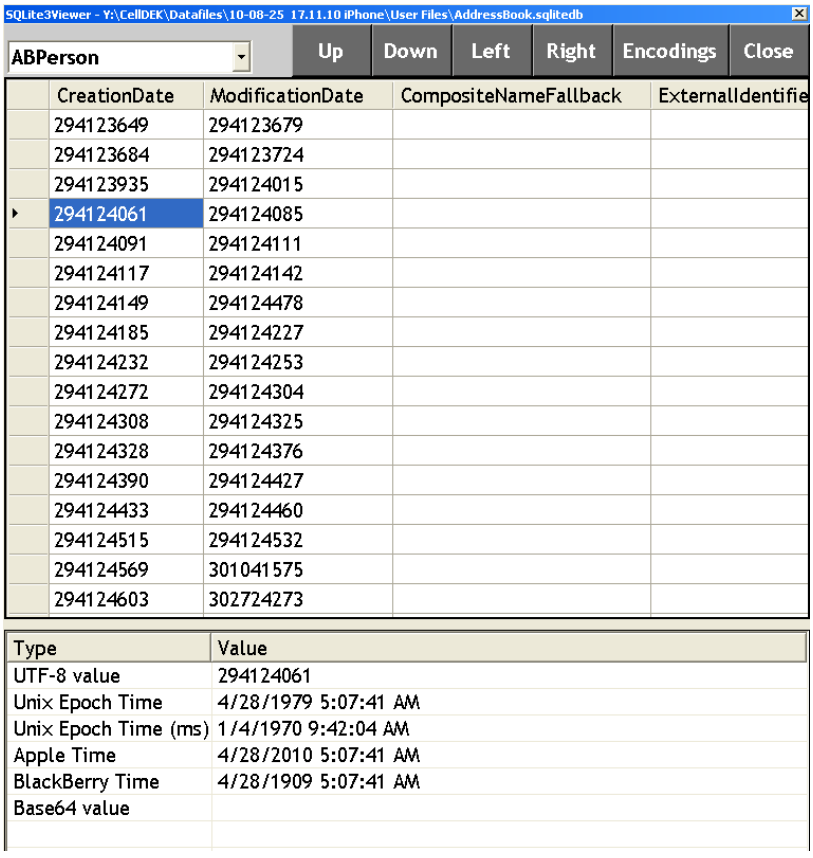
CellDEK now includes an SQLite Viewer which allows SQLite databases to be explored – SQLite databases can be found in Apple, Android OS devices, BlackBerry and Symbian OS Series 60 smartphones. Apps such as Apple Safari and Opera store data in SQLite databases.

An SQLite database looks like the following screen when viewing extracted data.

Tap the link in the extracted data entry (in this example, tap “view file content as HEX/ASCII”. The following screen will appear:




Tap the ***SQLite Viewer*** button to open the SQLite Viewer.



### Android Devices

CellDEK has the capacity to extract information from mobile devices that use Google's Android operating system. Extracted data includes: Contact details, Call Logs, SMS messages, Calendar/Tasks and Files. CellDEK supports extraction of contacts database on handsets running on Android 2.2 operating system.

Before an extraction can be performed, users must:

1. Tick "Unknown Sources" and "USB debugging" in the target devices application settings.
2. Ensure the target device has a formatted SD Card inserted.

The Android extraction process requires the use of an application (Agent) which is automatically installed onto the target device and executed. The Agent extracts data from the device and stores in a temporary file called ANDDAT on the devices SD Card. (**\sdcard\ANDDAT**). At the end of the extraction, the ANDDAT file is deleted from the card and the Agent is automatically uninstalled.

- Supports physical extraction and decoding of Android phones
- Supports Android O/S 1.6 through 2.3.4
- Supports Android file systems EXT3, EXT4 and RFS, and provides limited support for YAFFS2. YAFFS2 is expected to be fully supported in a future release
- Supports dumping and decoding of contacts, call logs, SMS, emails and user files
- Can extract deleted file items such as databases, images, video, audio and documents

It is expected that most Android phones using the above mentioned Android O/S and/or file systems will be supported.

#### Samsung Galaxy S3

The following Samsung Galaxy S3 devices can be rooted. To root a Samsung Galaxy S3, you must select Android Generic from the Android model list, and use an original Samsung USB data cable. Connect the cable into the USB port located on the top of the unit CellDEK. **Using the CellDEK adapter 26 will NOT work.**

**NOTE:** Rooting Samsung Galaxy S3 requires permanently flashing a new insecure bootloader image onto the device. The device will remain permanently rooted.

NOTE: 100% successful rooting is not guaranteed. In rare instances rooting can render the handset inoperable. Proceed with caution.

- SAMSUNG I9300 4.0.4 build IMM76D
- SAMSUNG I9300 4.0.4 build IMM76D
- SAMSUNG I9300 4.0.4 build IMM76D
- SAMSUNG I9300 4.1.1 build JRO03C
- SAMSUNG I9300 4.1.1 build JRO03C
- SAMSUNG I9300 4.1.2 build JZO54K
- SAMSUNG I9300T 4.1.2
- SAMSUNG I9305 4.1.1 build JRO03C
- SAMSUNG I9305 4.1.1 build JRO03C
- SAMSUNG I9305 4.1.1 build JRO03C
- SAMSUNG I9305 4.1.1 build JRO03C
- SAMSUNG I9305 4.1.2 build JZO54K
- SAMSUNG I9305 4.1.2 build JZO54K
- SAMSUNG I9305N 4.1.1 build JRO03C
- SAMSUNG I9305N 4.1.2
- SAMSUNG I9305T 4.1.2
- SAMSUNG SPH-L710 4.0.4 build IMM76D
- SAMSUNG SPH-L710 4.1.1 build JRO03C
- SAMSUNG SPH-L710 4.1.2
- SAMSUNG SGH-I747 4.0.4 build IMM76D
- SAMSUNG SGH-I747 4.1.1 build JRO03C
- SAMSUNG SGH-I747 4.1.1 build JRO03L
- SAMSUNG SGH-I747M 4.0.4 build IMM76D
- SAMSUNG SGH-I747M 4.0.4 build IMM76D
- SAMSUNG SGH-I747M 4.1.1 build JRO03C
- SAMSUNG SGH-I747M 4.1.2
- SAMSUNG SGH-T999 4.0.4 build IMM76D
- SAMSUNG SGH-T999 4.1.1 build JRO03C
- SAMSUNG SGH-T999 4.1.2
- SAMSUNG SGH-T999V 4.0.4 build IMM76D
- SAMSUNG SGH-T999V 4.1.1 build JRO03C
- SAMSUNG SCH-R530 4.0.4 build IMM76D
- SAMSUNG SCH-R530 4.1.1 build JRO03C
- SAMSUNG SCH-R530 4.1.2
- SAMSUNG SCH-R530M 4.0.4 build IMM76D
- SAMSUNG SCH-I535 4.0.4 build IMM76D
- SAMSUNG SCH-I535 4.1.2
- SAMSUNG SCH-I535 4.1.1 build JRO03C
- SAMSUNG SCH-I939 4.1.2

**Android Ad-hoc device rooting**

CellDEK software version 1.21.x.x and newer can temporarily root Android OS devices. This allows access

to all user data stored on the device. Ad-hoc rooting does not work with all Android devices. Rooting is removed after the device is restarted. Please check with local laws governing rooting prior to using.

- Compatible with the majority of Android OS devices
- Android OS versions 1.6-2.3 are supported
- Gives access to the whole file system. After rooting/data/data and/data/misc folders of Android device internal memory are available for analysis. Without root permissions these folders are inaccessible.
- 100% successful rooting is not guaranteed

NOTE: 100% successful rooting is not guaranteed. In rare instances rooting can render the handset inoperable. Proceed with caution.

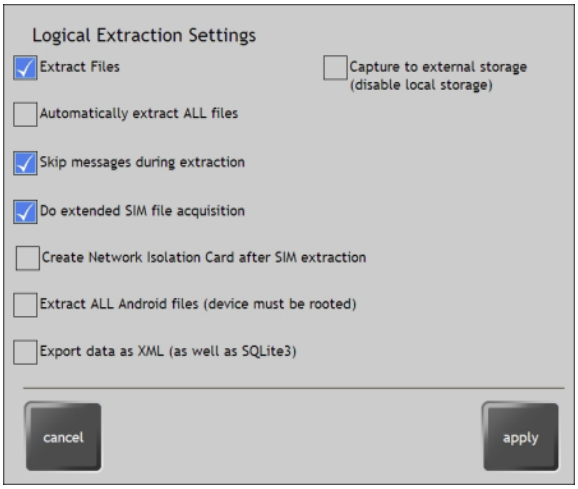
Ad-hoc rooting will provide the following features:

- Allows user to access the whole device file system
- Deleted data in database tables (deleted contacts, messages, etc.)
- Pre-installed and custom applications with user data
- Application data mentioned in this section

Ad-hoc device rooting is not required for the data extraction of Call Logs, Phonebook and Messages.

When performing an Android extraction, CellDEK will ask if you want to temporarily “Root” the Android device. If successful, the device will remain rooted until turned off.

In the ***Logical Extraction Settings*** there is a option called ***“Extract ALL Android Files (device must be rooted”***. When checked, and the Android device is rooted, ALL file locations will be extracted. Please note this may take a long time to complete the extraction.




If the device is not rooted, only the following file locations will be extracted:

/sdcard/

If the device is rooted and the checkbox for 'Extract ALL Android files' is not checked, only the following file locations will be extracted:

/sdcard/
/data/data/
/data/misc/

### Android Email

CellDEK can extract data from the default email and Gmail databases.

- Device must be temporarily rooted
- Email attachments not supported
- Email body preview only

### Android App Data

The Android extraction can extract data from the following apps if the Android device is rooted:

- Dolphin Browser
- eBuddy Messenger
- DropBox application data
- Facebook Messenger
- Firefox Browser
- Google Calendar, Google Hangouts, Google Mail, Google Maps, and Google Talk application data
- Line
- Skype
- Skyfire Browser

- Tumblr
- Viber
- WhatsApp Messenger
- Yahoo! Mail application data
- Yahoo Messenger

**NOTE:** The Android device must be rooted for the above data to be extracted.

- eBuddy Messenger, Facebook Messenger, Google Hangouts, Google Talk, Line, Skype, Tumblr, Viber, WhatsApp Messenger, and Yahoo Messenger are categorized as IM Data and can be found in the following report sections: IM Contacts, IM Calls and IM Chat.
- Dolphin Browser, Firefox Browser, and Skyfire Browser data can be found in the URLs report section.
- Google Maps data can be found in the Locations report section.

### Android Location Information

The Android extraction can extract Cell and WIFI connection location information which includes GPS coordinates and timestamps. This information is shown in the Location Information section of the report. CellDEK also generates a Google Earth .KML file called GPSData.kml which is created in the extracted data files folder. This file can be imported into Google Earth. Note: The device must be rooted to acquire location information.

### Android files of Interest

The Android extraction can extract system files *. Some of these files may contain useful information. These files are described below:

- ***\data\data\com.google.android.location\files\cache.wifi***
  Contains cached WIFI details.
- ***\data\data\com.android.providers.userdictionary\databases\user_dict.db***
  Containing cached user entered text
- ***\data\data\com.google.android.gm\databases\gmail.db***
- ***\data\data\com.google.android.gm\databases\mailstore.*.db***
  Contains Google email account and mailstore databases
- ***\data\data\com.google.android.talk\shared_prefs\BuddyList.xml***
  Contains Google Talk contact details
- ***\data\data\com.android.providers.calendar\databases\calendar.db***
  Contains Google calendar details

- ***\data\data\com.yahoo.mobile.client.android.mail\databases\mail.db***
  Contains Yahoo email details

**NOTE:** Device must be rooted to acquire some of these files.

### Data Capture from Apple iPhone

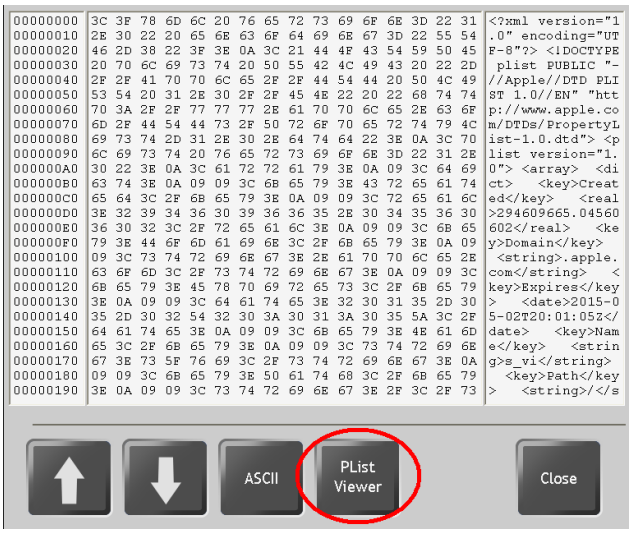
Apple iOS 7 is supported with CellDEK software 1.27.x.x. iTunes will automatically be updated during the CellDEK 1.2.7.x.x software installation.

#### PList Viewer

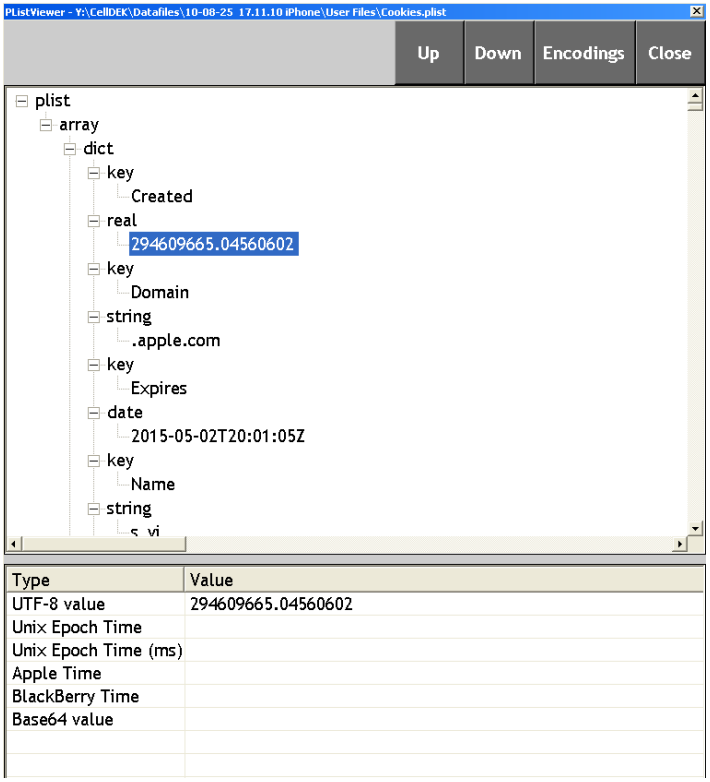
CellDEK now includes a PList Viewer which allows Apple Property List binary XML files to be viewed. Plist files may contain a lot of valuable forensic information such as browser history, Wi-Fi access points, speed dials, Bluetooth settings, global applications settings, Apple Store settings etc.

A PList database looks like the following screen when viewing extracted data.

Tap the link in the extracted data entry (in this example, tap “view file content as HEX/ASCII”. The following screen will appear:




Tap the ***PList Viewer*** button to open the PList Viewer.




## iPhone Passcode Bypass

CellDEK can extract data from a passcode locked iPhone if specific iTunes .plist files from a PC or Mac are available. The iPhone's passcode must have been enabled then synced with the PC or Mac after the passcode was enabled. The PList files will need to be copied from the PC or Mac to a specific folder/directory on a USB drive.

1. Locate iTunes .plist files from synced PC or Mac. These can be found in the following locations:

   - Windows 98/ME/2000/XP iTunes Users:
     **C:\Documents and Settings\All Users\Application Data\Apple\Lockdown**

   - Windows Vista iTunes Users:
     **C:\Users\<User Name>\AppData\Roaming\Apple Computer\Lockdown**

   - Windows 7 iTunes Users:
     **C:\ProgramData\Apple\Lockdown**

     **NOTE:** Windows file locations are hidden by the Operating System by default. There are different ways of showing hidden files depending on the Operating System. Please search the Internet or contact Microsoft support for instructions on how to show hidden files.

   - Mac OS X iTunes Users:
     **VolumeName\Users\<User Name>\Library\Lockdown**

     **Or**

     **/var/db/lockdown**

2. Copy all iTunes .plist files to the following directory on a USB drive (It is recommended that the USB drive is formatted before creating \CellDEK\Lockdown directory and copying .plist files):

   - **:\CellDEK\Lockdown**

3. Insert USB drive into CellDEK and perform a regular iPhone extraction. CellDEK will then search the USB drives for any .plist files and import them if found.

### iPhone App Data

The iPhone extraction can extract data from the following apps:

- Apple Maps (iOS 6 and above only)
- eBuddy Messenger
- FaceTime
- Line
- Skype
- Tumblr
- Viber
- WhatsApp Messenger
- Yahoo Messenger

Apple maps report will contain GPS coordinates and Google Maps hyperlinks (added to the "Locations" section of the report). Data is exported in KML format, which can be opened using Google Earth, Google Maps, and Google Maps for mobile.

eBuddy Messenger, Line, Skype, Tumblr, Viber, and WhatsApp Messenger, and Yahoo Messenger data are categorized as IM Data and can be found in the following report sections: IM Contacts, IM Calls and IM Chat.

FaceTime data can be found in the Calls report section.

### iPhone Dictionary Data

CellDEK software version 1.21.x.x and newer reports a list of keywords extracted from the following iPhone file: *dynamic-text.dat.* These keywords are shown in the report under the dictionary heading.

### Apple Location Information

The file GPSData.kml is created when extracting an iPhone. This file can be opened using Google Earth.

### iPhone files of Interest

During the iPhone extraction process a number of 'other' files can be extracted. Some of these files may contain useful information.

A selection of these files is shown below.

**Note:** The content of these files has not been verified.

- ***\private\var\mobile\Library\Cookies\Cookies.plist***
  Contains website cookies saved by the Safari browser.
- ***\private\var\mobile\Library\Safari\Bookmarks.db***
  Contains website bookmarks saved by the Safari browser.

- ***\private\var\mobile\Library\Safari\History.plist***
  Contains website history saved by the Safari browser.
- ***\private\var\mobile\Library\Mail\Accounts.plist***
  Contains email server account details, this does not include actual emails.
- ***\private\var\mobile\Library\maps\History.plist***
  Contains a 'Google Maps' history file which includes addresses, route directions and other useful data.
- ***\private\var\mobile\Library\Keyboard\dynamic-text.dat***
  A keyboard cache containing user entered text.
- ***\private\var\mobile\library\Preferences\com.apple.Maps.plist***
  Contains the last longitude/latitude coordinates viewed in the 'Google maps' application.
- ***\private\var\mobile\library\Preferences\com.apple.mobilesafari.plist***
  Contains a list of recent searches performed using the Safari browser
- ***\private\var\root\library\caches\locationd\consolidated.db***
  Contains a list of web connections and location services
- ***\private\var\mobile\library\Calendar\Calendar.sqlitedb***
- ***\private\var\mobile\library\Preferences\com.apple.mobilecal.plist***
  Contains Google calendar details
- ***\private\var\mobile\library\WebKit\Databases\Databases.db***
- ***\private\var\mobile\Library\WebKit\Databases\http_m.yahoo.com_0*.db***
- ***\private\var\mobile\Library\WebKit\Databases\https_mail.google.com_0*.db***
  Contains email database details
- **\private\var\mobile\Applications\com.yahoo.messenger\Library\Preferences\com.yahoo.messenger.plist**
- **\private\var\mobile\Applications\com.yahoo.messenger\Documents*.db**
  Contains a list of Yahoo Instant Messenger files

### Data Capture from Symbian OS

CellDEK now has the capacity to extract information from mobile handsets that use the Symbian operating system (Series 60 / Nokia Symbian OS V 8.1). Extracted data includes Contact Details, Call Logs, SMS messages, Calendar, Tasks and Files.

This data capture is possible with the following caveats:

- No SIM data is extracted from Symbian handsets.
- "Nicknames" are not extracted.
- Cannot extract any SMS messages stored in 'My Folders' directory or other user created folders.

To extract data, it is necessary for CellDEK to write temporary .dat files to the target phone. These files are removed at the end of capture.

## Capture from Symbian UIQ 2nd & 3rd Edition OS

CellDEK now has the capacity to extract information from mobile handsets that use the Symbian UIQ 2nd and 3rd Edition OS. Extracted data includes Contact Details, Messages, Calendar, Tasks and Files.

Data capture requires a handset Agent and the use of a CellDEK UIQ memory card. This is a specially prepared card by CellDEK to temporarily store and transfer data.

**WARNING:** Do not create the UIQ memory card from the card used inside the handset. Always use a separate blank, formatted card that is not write protected.

Use these memory cards for best results:

**Sony Ericsson**

P800 / P900 Memory Stick Duo, minimum size 16MB

P910i / P990i Memory Stick PRO Duo, minimum size 64MB

M600i / P1i Memory Stick Micro (M2), minimum size 256MB

**Motorola**

Z8 / Z10 Micro SD, minimum size 128 MB

Follow these steps to capture data:

User inserts spare memory card into the memory card reader.

1. CellDEK generates and formats a UIQ card and installs the Agent.
2. User then inserts the UIQ card into handset.
3. User locates the Agent installer on the UIQ card using the file browser application and then installs the agent onto the device.
4. User locates and runs the Agent application, then waits for the data extraction to complete. ***Extracted data is now stored on the UIQ card.***
5. User removes the UIQ card from the handset and inserts it back into the memory card reader.
6. CellDEK automatically copies and decodes all data from the UIQ card.
7. CellDEK formats the UIQ card.
8. CellDEK instructs the user to uninstall the agent from the handset.
9. CellDEK presents the results to the user.

This data capture is possible with the following caveats:

Extraction of Call Logs is not supported.

Extraction of SMS messages stored in user created folders is not supported.

Extraction of MMS / Email messages is not supported.

Memory cards within these phones need to be captured separately. (Please refer to "**Capturing a Flash Memory Card**" earlier in this chapter).

### Symbian Event Logs

Symbian S60 2nd Edition and 3rd Edition handsets have the ability to record events which CellDEK can now extract.

The following information can be extracted:

- Voice Call events – ID, Number, Date, Time, Direction and Duration
- SMS events – ID, Number, Date, Time, Direction, Message Fragment and Status
- MMS events – ID, Name, Date, Time, Direction and Duration

These events are normally accessed by the handset's Log Viewer application. These events have a validity period set in the Log Viewer settings. Once this duration period has expired, events will no longer be accessible.

Points of Interest

- Timestamps extracted by CellDEK are always reported in Greenwich Mean Time (GMT) whereas the timestamps shown in the handset's Log Viewer application are set to the handset's current time zone.

- CellDEK is able to extract message fragments for SMS events. These are not displayed by the Log Viewer application. Only the first 64 characters of a message are reported any messages greater than 64 characters are truncated in the event log, including multipart messages where only the first 64 characters of the first message part are reported.

- Incoming MMS messages are shown as 2 separate events, 1 incoming SMS event and 1 outgoing MMS event. CellDEK extracts both of these events. The SMS event has a body fragment of *Data Message*

The following Symbian S60 handsets are verified on CellDEK:

**NOKIA**: 3230, 3250 5320XpressMusic, 5500 Sport, 5700, 6120, 6220 Classic, 6260, 6290, 6620, 6630, 7610, E50, E51, E61, E63, E65, E66, E70, E71, N70, N71, N72, N73, N76, N77, N79, N80, N81, N82, N85, N90, N91, N93, N93i, N95, N95 8GB

**SAMSUNG**: I8510, SGH-D720, SGH-G810

## Data Capture from Sony Ericsson Phones

If the User runs into trouble capturing data from a Sony Ericsson phone (or any other handset that connects to Cable #18), users should make sure that the "Default Contacts" setting on the target handset is set to "Phone Contact" before an extraction is performed.

This is done by navigating manually on the phone's menus as follows:

**Menu > Contacts > Options > Advanced > Default Contact > Select "Phone Contact".**

Once this setting is enabled, users should have no trouble extracting data from the handset.

## Blackberry PIN Lock

The CellDEK allows the user to input the PIN lock for a Blackberry device directly through the CellDEK interface rather than the device itself. The CellDEK will automatically detect if a PIN lock is enabled and bring up the Enter Password Prompt.

**Enter Password Prompt**

**TIP:** Tap "Hide Password" to turn it on or off. If Hide Password is on, the password will appear.

**Hide Password Turned On**

**NOTE:** The password or the PIN of the Blackberry device will need to be entered. CellDEK cannot unlock the device without it.

### Blackberry PIN Numbers

Each Blackberry device is assigned a unique personal identification number (PIN), which allows identification of each device.

The PIN number of other Blackberry users is stored in the devices phonebook with their contact information and allows direct PIN-to-PIN emailing and messaging.

CellDEK extracts each contact PIN number from the phonebook as well as the PIN numbers associated with messages sent from other Blackberry users.

## Time/Date Stamps from Motorola Phones

Users should note that Motorola timestamps / date stamps are not reported due to current limitations in how file “modified” and file “created” timestamps are reported in the Motorola OS. This may be remedied in a future software update.

## Null Response from Siemens handsets

Occasionally, Siemens handsets have been known to return a NULL response when asked for data of a particular type (i.e. SMS messages). If this happens, the following error message will appear under the relevant data type:

**Handset has been known to occasionally return a null response. Please refer to handset and retry extraction.**

Users should check the affected field(s) on the handset and retry the extraction.

### SMS Attached Content

SMS Messages can contain extra content other than standard text.

CellDEK now notifies the user when any extra content appears within an SMS Message.

**NOTE:** This feature is currently only supported for SMS extracted through handsets supporting AT commands. Reporting of attached content functionality is not supported for Blackberry, Symbian or Windows Mobile handsets.

Notifications appear within the body part of the message and describe the type of attached content.

Notifications appear in the following form:

**[CONTAINS CLIPART REFER TO HANDSET]**

SMS Messages may contain more than one type of attached content. CellDEK will display a notification for each piece of attached content within the message.

VCard and VCalendar Content

VCards and VCalendars are used to exchange information between application.

VCards store address book entries while VCalendars store organiser entries.

VCards and VCalendars can be attached to SMS Messages. CellDEK will now display the raw data of attached VCards and VCalendars within the body of the SMS Message.

VCard and VCalendar data will appear between the tags

**[ATTACHEMENT: CONTACT DATA]**

Or

**[ATTACHMENT: CALENDAR DATA]**

And will end with

**[END ATTACHMENT]**

As SMS Messages have a limited size VCards and VCalendars may span several messages.

In this case each part of the VCard or VCalendar will start with the tag

**[ATTACHMENT CONT..]**

To indicate the content follows from a previous message.

Each message part will also end with the tag below to indicate that more content will follow in the next message:

**[…]**

**NOTE:** VCard and VCalendar content is displayed in its raw format. Where VCards and VCalendars span more than one SMS Message, each part will need to be manually put together to form a valid VCard or VCalendar entry.

More information on VCards and VCalendars can be found at www.imc.org/pdi/

### Various Windows Mobile Devices

The following mobile GPS software has been verified and can be extracted from supported devices using CellDEK:

- Google Maps Mobile (Various Windows Mobile devices)

### Other Extraction Notes

CellDEK can now playback W4A files that have been extracted from devices.

W4A files are audio files that can be created on some mobile handsets.

## Displaying Extracted Data

Once the extraction for standard and extended data is complete, the data is displayed onscreen prior to the generation of the CellDEK report. All data is individually hashed using the MD5 algorithm to ensure that the data can be verified as unchanged.

As of CellDEK software 1.25.x.x, the extracted data is viewable in a new on-screen report:

The on-screen report can have different icons showing depending on the type of device extracted. Each button will have a number showing how much data was extracted. Here is a list of available icons:

--- **Device Information** – Shows information about the device including the Manufacturer, Model, IMEI/ESN, SIM Card information (if a SIM card is included), etc.)

--- **Contacts** – This contains extracted contacts from the device.

--- **Call Logs** – Thiscontains extracted call logs from the device.

--- **Messages** – This contains extracted messages from the device.

--- **Event Logs** – This contains extracted event logs from the device.

--- **Calendars** – This contains extracted calendar entries from the device.

--- **Tasks** – This contains extracted tasks from the device.

--- **Notes** – This contains extracted notes from the device.

--- **URLs** – This contains extracted URLs from the device.

--- **Locations** – This contains extracted locations from the device.

--- **Dictionaries** – This contains extracted dictionaries from the device.

--- **IM Contacts** – This contains extracted contacts from Instant Messengers.

--- **IM Call Logs** – This contains extracted call logs from Instant Messengers.

--- **IM Chat** – This contains extracted chat entries from Instant Messengers.

--- **GPS Data** – This contains extracted GPS data from GPS devices.

--- **Image Files** – This contains extracted image files from the device.

--- **Video Files** – This contains extracted video files from the device.

--- **Audio Files** – This contains extracted audio files from the device.

--- **Other Files** – This contains any other extracted files from the device

**NOTE:** Depending on the device, you may only see some of the icons above. For example:

- SIM cards will only show the following buttons: Device Information, Contacts< Call Logs, and Messages.
- Memory Cards will only show the following buttons: Image Files, Audio Files, Video Files, and Other Files.
- Phones will show all buttons (except GPS Data).
- GPS will show all buttons.

There are also three icons located at the bottom of the screen:

--- **Case Details** – This button opens the Case Details Input Form. Data can be edited or added to the form. Please refer back to **Chapter 3 – Capturing Data** for more information about this form.

--- **Report Preview** – This button allows you to view the Examination Report. Please see the section 'The Examination Report' later in this chapter for more information.

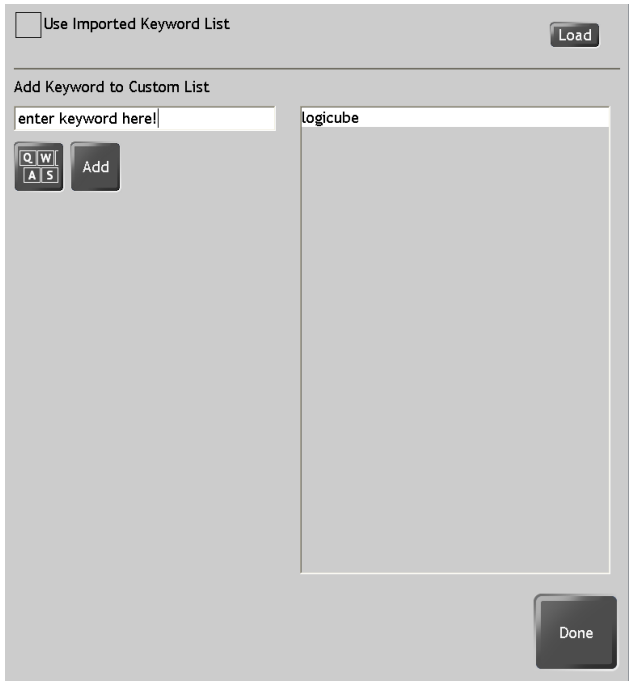
--- **Report Preview** – Search for data from an imported keyword list stored on file called "CellDEK Report Search.txt" located on the root of a USB drive. Keywords can also be added to a custom list.

--- **Finished** – This button closes the data View Screen and goes back to the Main Application menu.

## Keyword Search

To perform a keyword search from the on-screen report, tap the ***Keyword Search*** button. A keyword search window will appear.

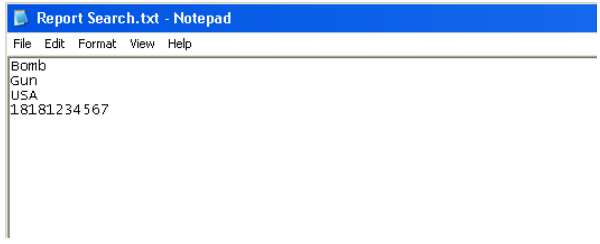
Tap the ***Edit*** button to edit the keyword search. Using the on-screen keyboard or an attached keyboard, add keywords to the custom list. As you tap the ***Add*** button, the keyword entered should appear on the right side. Tap the ***Done*** button when finished.



To use an imported keyword list, a keyword list file must first be created then saved on an external USB location (USB flash drive, USB external drive, etc.). Place a check mark on the ***Use Imported Keyword List*** box then tap ***Load*** button. CellDEK will prompt for the USB drive. When finished, tap the ***Done*** button.

To create the keyword list, on a computer, open Notepad or a similar text editor.

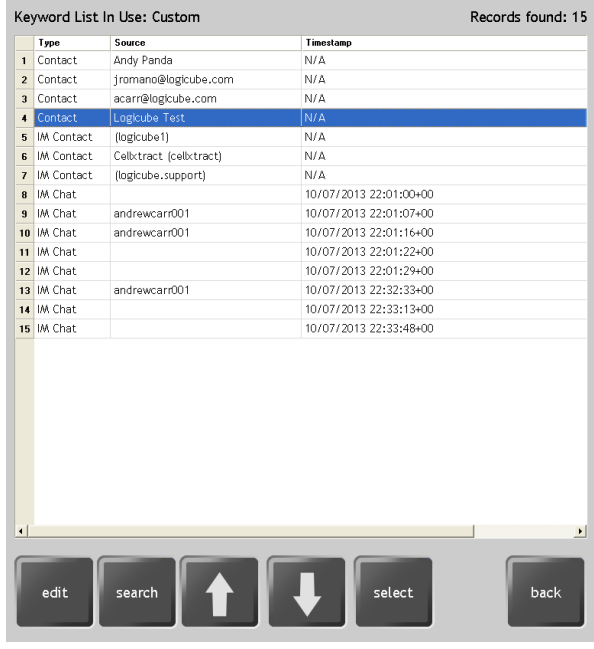
Type a simple list of words as shown in the next screen shot below. Words are not case sensitive so type in all lower-case.




Save the file as “Report Search.txt” (case sensitive) and copy it to the root of a USB storage device.

- If you are currently searching an extraction that was captured to local drive, then a prompt will appear asking for a USB Storage Device to be inserted. Attach the USB storage device and tap the OK button. CellDEK will automatically download the text file.
- If you are currently searching an extraction that was captured to external storage, that same external storage device must have the “CellDEK Report Search.txt” stored on the root directory.

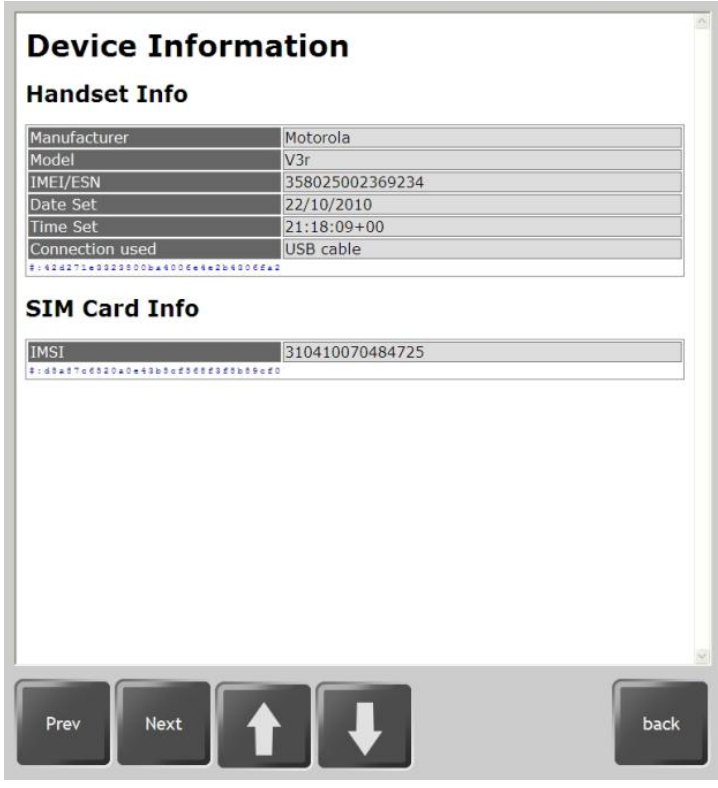
After entering the keywords or selecting the imported keyword list, tap the ***Search*** button. CellDEK will now search all extracted records for the chosen keywords and display the results. To view the each individual record, highlight the record then tap the ***Select*** button.




| | Type | Source | Timestamp |
|---|---|---|---|
| 1 | Contact | Andy Panda | N/A |
| 2 | Contact | jromano@logicube.com | N/A |
| 3 | Contact | acarr@logicube.com | N/A |
| 4 | Contact | Logicube Test | N/A |
| 5 | IM Contact | (logicube1) | N/A |
| 6 | IM Contact | Cellxtract (cellxtract) | N/A |
| 7 | IM Contact | (logicube.support) | N/A |
| 8 | IM Chat | | 10/07/2013 22:01:00+00 |
| 9 | IM Chat | andrewcarr001 | 10/07/2013 22:01:07+00 |
| 10 | IM Chat | andrewcarr001 | 10/07/2013 22:01:16+00 |
| 11 | IM Chat | | 10/07/2013 22:01:22+00 |
| 12 | IM Chat | | 10/07/2013 22:01:29+00 |
| 13 | IM Chat | andrewcarr001 | 10/07/2013 22:32:33+00 |
| 14 | IM Chat | | 10/07/2013 22:33:13+00 |
| 15 | IM Chat | | 10/07/2013 22:33:48+00 |

### Viewing Extracted Data

To view the extracted data, tap one of the icons on the report screen. CellDEK will display all the extracted data based on your selection.



Five buttons are available on each section viewed:

--- Tapping this icon scrolls up one page/entry.

--- Tapping this icon scrolls down one page/entry.

--- Tapping this icon scrolls up within the current page/entry.

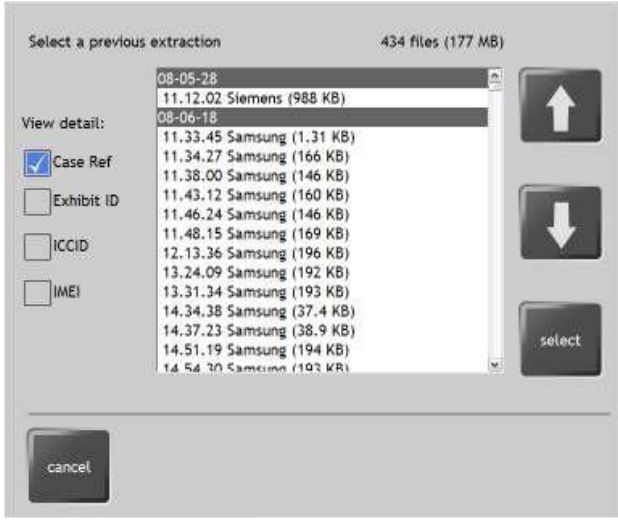
--- Tapping this icon scrolls down within the current page/entry.

--- Brings you back to the previous screen to preview another section.

## Displaying Previous Extractions

Previously extracted data files can be viewed by selecting “View Previous Extractions” from the main CellDEK window. Previous extractions are organized by date. Additionally, the user can search for a particular extraction by one of these choices:

- Case Reference Number
- Exhibit ID
- ICCID Number
- IMEI Number




**Previous Extraction List**

1. From the Main Application Screen, tap the ***View Previous Extractions*** button. A list of all previous capture sessions will appear.
2. Choose the desired search criteria from the ***View Detail*** list on the side of the screen.
3. Scroll to the desired capture session and tap it once to select.
4. Tap the ***Select*** button. The CellDEK will show the report via the on-screen report preview.

## The Audit Trail

The audit trail is a set of two files that are generated along with the capture session.

**Log.dat** records all commands sent to and received from the target device. This includes AT commands.

**Audittrail.txt** records all data received from the target device.

All three files are stored and moved with the extracted data. They can be accessed once the capture session has been backed up to a USB storage device. They cannot be accessed from within CellDEK . Please refer to **Chapter 5 – Other Features** for more information on backing up files.

**NOTE:** Logicube Technical Support may ask the user to send a copy of **log.dat** for troubleshooting purposes.

## The Examination Report

The Examination Report is generated as an SQLite3 file. This SQLite3 file is then translated and converted to an HTML file for easy viewing,

**NOTE:** XML format is available and can be selected in the CellDEK Setup Screen.See the section ‘System Setup’ in Chpater 5: Other Features.

## Printing Reports

CellDEK is able to use a Windows-compatible USB printer to generate hardcopies of reports, print images and other tasks.

### Connecting a Printer to CellDEK

**USB Printer**

1. Power up the printer and insert paper.
2. Attach the printer’s USB cable to the USB port on the CellDEK Control Panel.

3. Tap the “Load Drivers Automatically” button that appears.

Once the USB printer is attached, reports can be printed from the Standard and Extended Data View Screens.

1. From the Standard/Extended Data View Screen, tap the “Case Details” button.
2. Make any changes (if necessary) to the Case Details Input Form and tap the OK button. A report will automatically generate.
3. Tap the “View Report” button to preview the report.
4. Tap the “Print Report” button to print a hardcopy of the report.

The report shows all information about the capture including target device information, standard data lists, extended data downloaded and lists of extended data not downloaded. It also includes a glossary of terms at the end of the report.

The report will also include the user’s company logo if it is added. Please refer to **Chapter 5 – More Features** for more details on adding a logo.

**NOTE:** Some reports can be many pages long. Be sure to review the report before printing.

### Supported Printers

CellDEK supports any USB printer that is natively supported by Windows XP. Check with your printer manufacturer to determine if your printer supports Windows XP.

# 5. Other Features

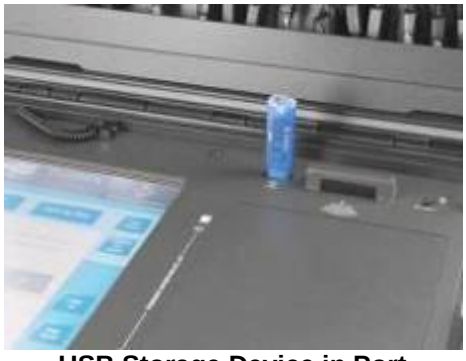
## Main Application Screen

This chapter discusses those features of the CellDEK Application that were not covered in previous chapters.

**Main Application Buttons**

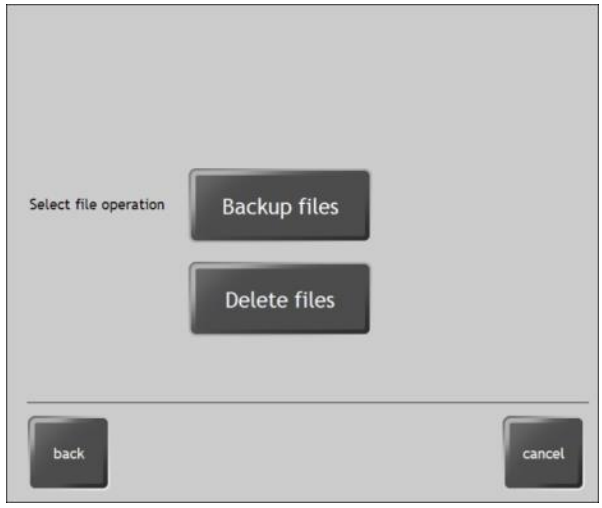
## Manage Files

From time to time, previous capture sessions should be copied to an external storage device. This archives the data and frees up space in the CellDEK memory storage. Note all handsets must be disconnected from CellDEK prior to any file management tasks are performed.



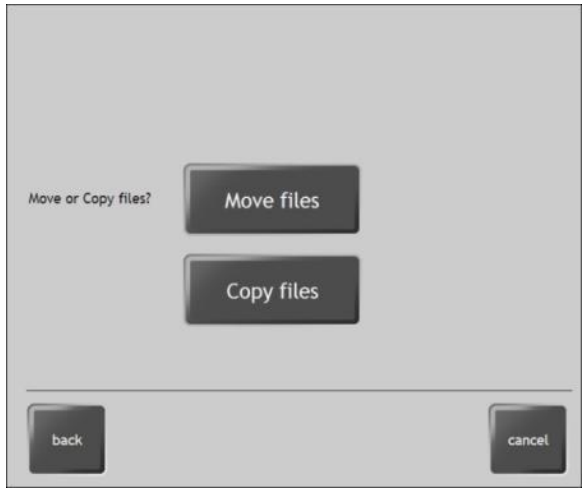
**USB Storage Device in Port**

1. From the Main Application screen, tap the “Manage files” button.
2. The first prompt that appears asks whether the User wishes to Back-Up or Delete Files.




**Back-Up/Delete Files Selection**

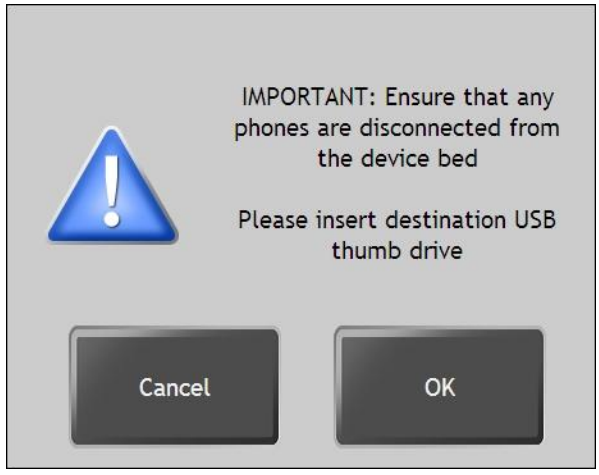
If ‘Backup files’ is chosen, you will see the following selection choices.



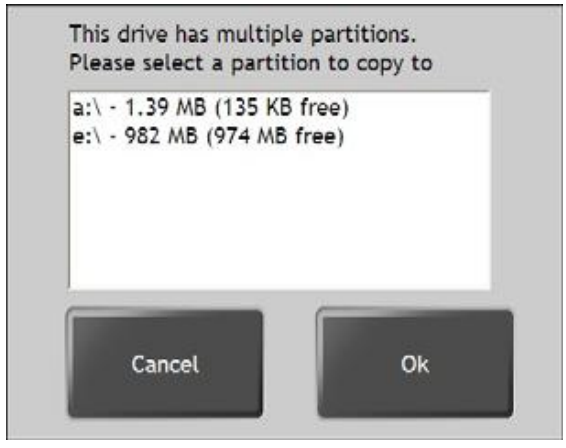

No matter which button is tapped, two buttons will appear, “All files” or One by One”.

**Back-Up Files Selection**

No matter which button is tapped you will be prompted to insert a USB thumb drive.




For Multi-Partition drives the following selection will be displayed. Choose the appropriate storage partition and then tap OK.




If the storage drive has a partition that is not accessible the message shown below will be displayed.

Encrypted drives usually have an active partition that contains the password entry application. Below is an example of this type of application. It is called DTVP_Launcher.exe.

**Warning:** Please ensure that the above named executable application is from a trusted source. By selecting continue the operator accepts full responsibility for running the named executable and its action.

The drives encryption software will then be run and a keyboard will appear automatically for password entry.

**NOTE:** The encryption software on your Thumb drive may appear different to the example shown above.

The following makes of encrypted drives have been tested:

- Hypertec
- Transcend
- Kingston

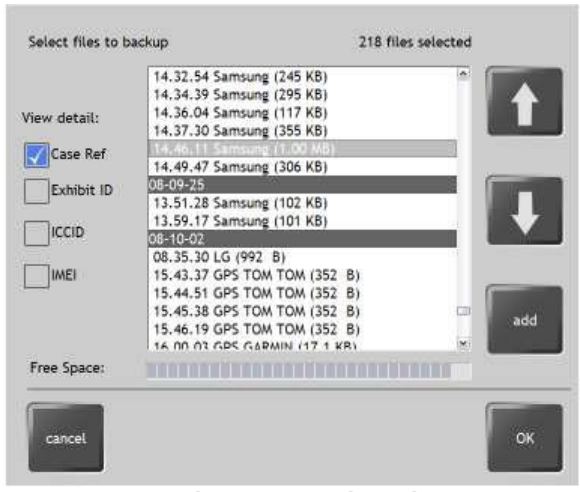
Tap OK on the dialog screen shown in to continue to the file selection screen. Files can then be selected, Moved or Copied to the thumb drive as normal.

If the Erase software is loaded on the CellDEK, the data will be completely erased from the unit's hard drive when 'Delete files' is chosen.

**NOTE:** For more details about Erase, please refer to the "Security Erase" section later in this chapter.

If the “All files” button is tapped, all of the stored data from capture sessions can be moved or copied to a USB storage device or deleted. The activity log will show files copied.

If the “One by One” button is tapped, a list of all previous capture sessions will appear. The list looks similar to the image below:




**Previous Extraction List**

**NOTE:** The “Free Space” bar underneath the file list shows the amount of free space available on the USB Flash Drive where the files are to be backed up.

Whether the user is downloading all files or one at a time, CellDEK will ask to move or copy the selected files.

**Move or Copy Files**

If “Move” is pressed, every selected file will be moved to the USB storage device. The file will then disappear from the list. Repeat this step for every file that needs to be copied.

If the Erase software is loaded on the CellDEK, the data will be completely erased from the unit’s hard drive as it is moved to the USB device.

**NOTE:** For more details about Erase, please refer to the “Security Erase” section later in this chapter.

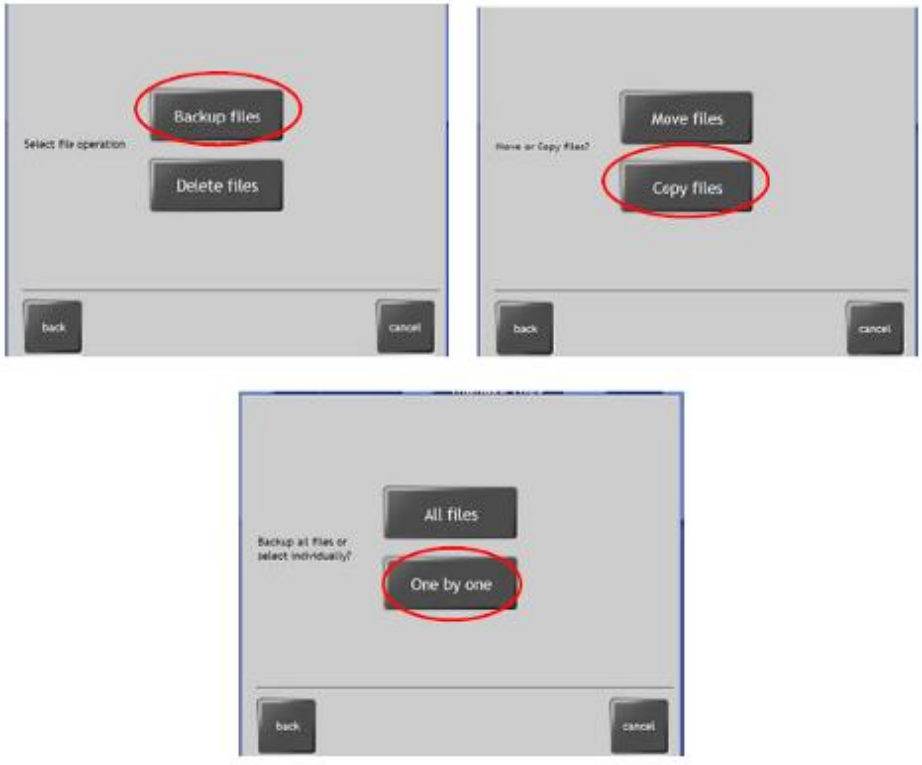
**NOTE:** Keeping many previous extractions on the CellDEK will cause a delay during the boot process. It is recommended to back up old extractions from time to time.

## Extraction File Backup to CD

To be able to backup extracted report files to a writeable CD, a writeable CD drive is required.

Connect the writeable CD drive to the CellDEK through the USB port before selecting the manage files option.

Select manage files and choose Backup files then Copy files and One by one. To ensure data is not lost during the burning process CellDEK will not allow files to be moved onto a CD drive. If move is selected then a message is displayed and the copy option is selected as the default.

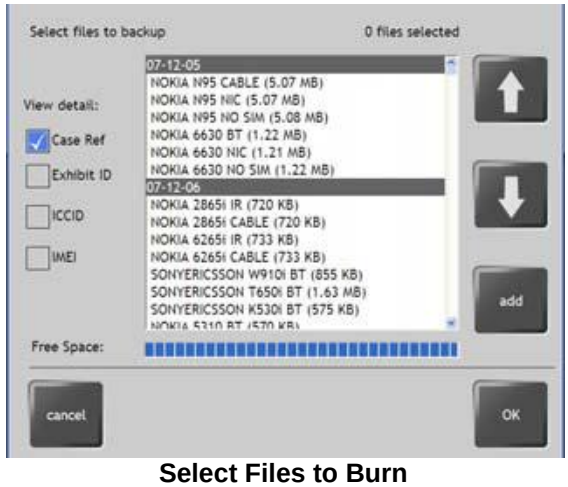



**Move or Copy Files**

A message box will appear requesting the user to select either burning files to the CD or a removable USB pen drive.

**Burn Files to CD**

You will then be prompted to select the files to copy. The free space indicator will show available disk space. Once all required files are selected, tap ok, the requested files are then queued for writing to the CD.




**Select Files to Burn**

A dialog then appears allowing you to name the disk then tap next.

**Name the Disk**

If no disk is inserted in the drive a dialog will appear telling you to insert a disk into the writable CD drive. The burn process will then start. When the files have been copied the following dialog will appear.

**Copy of Files Complete**

Tap Finish to complete the process.

## Software Update Instructions

Software subscriptions are tied to the serial number of your CellDEK device.

These instructions pertain to CellDEK software version 1.23.x.x and above.

The software will automatically verify that your subscription is active and valid. Users will be notified when new software updates are available for download.

Requirements:

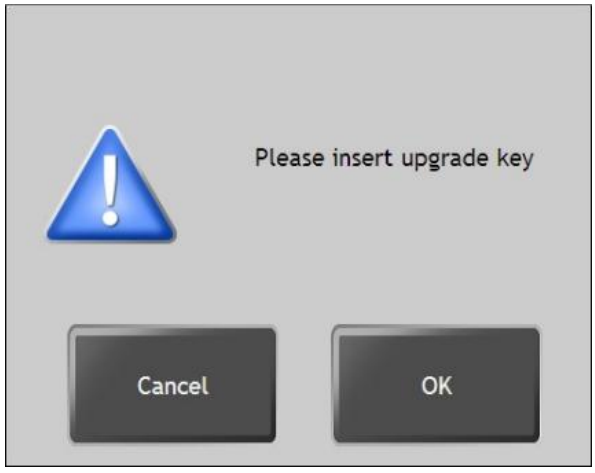
- A computer with Internet access and a working USB port
- A USB flash drive (the recommended format for the USB flash drive is using the exFAT filesystem).
- The CellDEK with the AC adapter.

### CellDEK Software Update Instructions

The instructions below describe how to update the software on CellDEK:

1. Enter the following URL into your browser:
2. http://www.logicube.com/knowledge/celldek
3. Download CellDEK software and extract/unzip the files to the root of a USB flash drive. On the USB storage device, verify there is a folder called “CellDEK Update” (case sensitive, without the quotes) located on the root of the USB flash drive.

4. Connect the AC adapter to the CellDEK and turn the CellDEK on. Log in to Windows and accept the End User License Agreement when it appears on the screen.
5. From the CellDEK Main Application Screen, tap the Upgrade Software button.
6. You will be prompted to insert the upgrade key.




7. Attach the USB flash drive used in step 2 to the USB port on the CellDEK. Wait 5 to 10 seconds then tap the OK button.

**NOTE: The USB storage device must be connected during the entire upgrade process.**

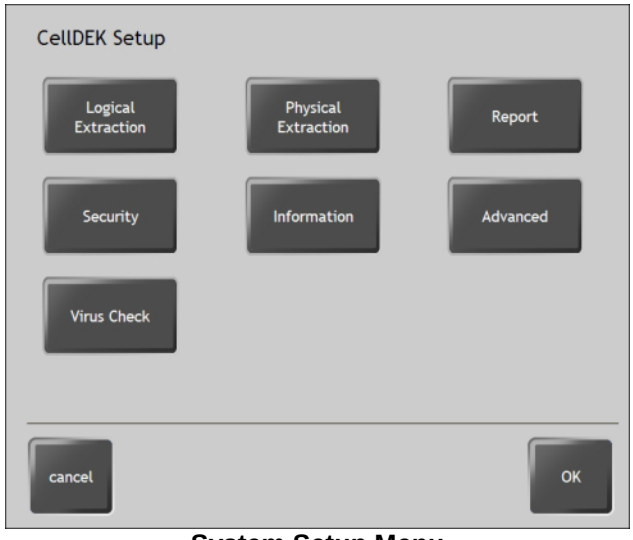
8. The software update files will automatically download from the USB storage device. When this process is finished, a window will appear stating the application needs to be restarted to complete the upgrade.
9. Tap the OK icon. A confirmation window will appear asking to restart the system.
10. Tap the Yes icon to restart the CellDEK. The CellDEK will reboot.
11. After the reboot process, log into Windows. The upgrade process will continue.
12. When the update process completes, the End User License Agreement (EULA) will appear. Tap the OK icon to accept the EULA.
13. The CellDEK software will load and run.
14. Validate the Software version by going to System Setup then Information.

### iTunes Information and Updates

Starting with software 1.25.x.x, iTunes will be automatically updated (if needed) during the CellDEK software update.

## System Setup

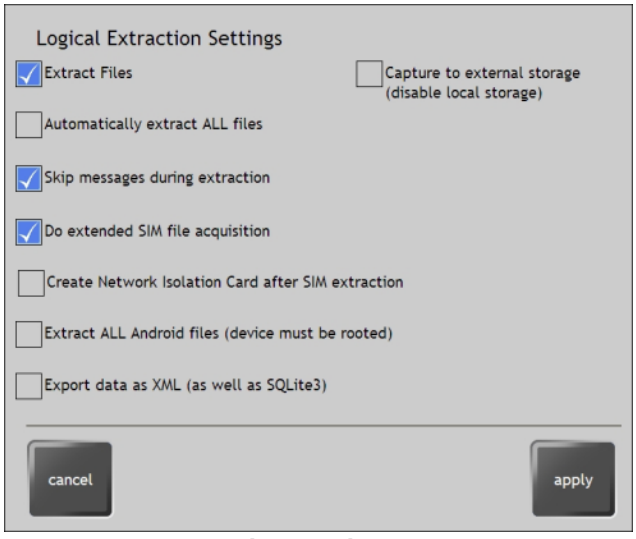
The System Setup brings up a Setup Menu:




**System Setup Menu**

### Logical Extraction

Tapping this button brings up the Logical Extraction settings screen.

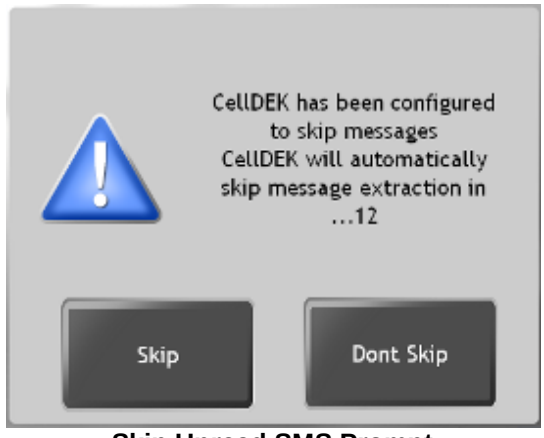



**Extraction Settings Menu**

**Extract Files** – Checking this box will cause CellDEK to extract the target device's file listing.

**Automatically Extract All Files** – Checking this box will automatically download all Extended Data files without prompting the user. This includes all image, video, audio and other files.

**Skip Messages During Extraction** – Checking this box gives the option to skip unread SMS messages during extraction. During a capture session, the following prompt will appear:




**Skip Unread SMS Prompt**

The prompt gives the user 15 seconds to skip or download unread SMS messages. If none of the buttons are pressed, then the messages are skipped.

**Do Extended SIM file acquisition** – This feature will pull all available data off of the SIM card.

**Create Network Isolation Card after SIM Capture** – Checking this box will allow selective SIM data to be copied post SIM extraction to a target Network Isolation Card (NIC). The newly created NIC installed in the handset and contains enough information to appear to be the original SIM card, but it will not have the necessary information to allow the handset to connect to the network. This effectively provides Network Isolation for the phone. For additional information please refer to the supplied NIC v3.0 User Notes.

**Extract ALL Android Files –** When checked, and the Android device is rooted, ALL file locations will be extracted. Please note this may take a long time to complete the extraction.

If the device is not rooted, only the following file locations will be extracted:

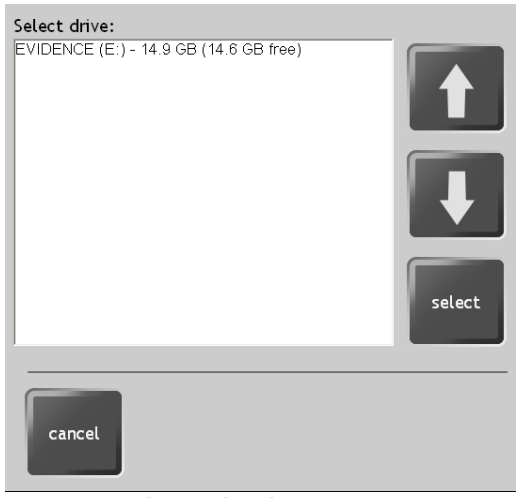
/sdcard/

If the device is rooted and the checkbox for 'Extract ALL Android files' is not checked, only the following file locations will be extracted:

/sdcard/
/data/data/
/data/misc/

**Export data as XML (as well as SQLite3)** – Checking this box will instruct CellDEK to export the data as XML and SQLite3. Check this box if you prefer an XML output file.

**Capture to external storage –** CellDEK 1.18.0.0 and newer versions support capturing data directly to a USB thumb drive. When this selection is checked and you perform a new extraction by tapping ***'Read New Device'***, you will be asked to choose where the extraction files should be stored. A USB thumb drive with a larger capacity than the phone's memory is recommended.




**Drive Selection Screen**

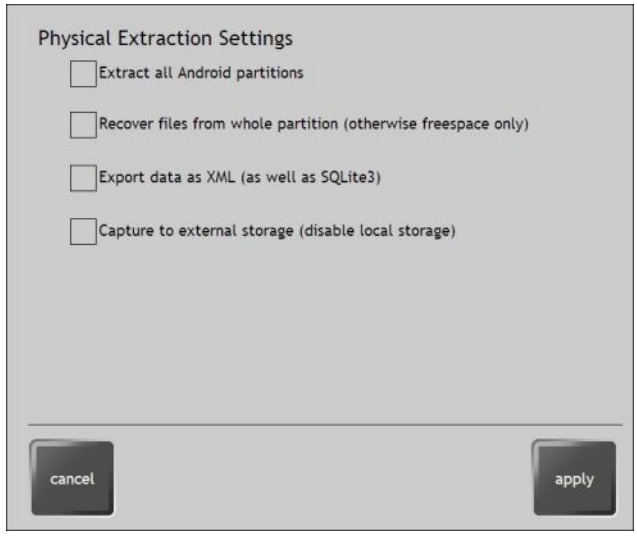
Once a drive is selected, CellDEK will continue with the extraction process as normal. CellDEK will store the extraction files in the following directory: '[DRIVE]:\CellDEK\Datafiles\'.

CellDEK is capable of detecting encrypted thumb drive software which it will execute allowing you to enter the encryption password. Once the password is entered correctly the drive will appear in the list above.

To view previous extractions which were stored directly on a USB thumb drive, enable ***'Capture to external storage'*** in Extraction Settings, and then select 'View previous extractions'. You will be asked to choose where the extraction files are stored (which drive they are on). Once you have done this, CellDEK will list the previous extractions stored on the thumb drive for you to choose from.

### Physical Extraction

Tapping this button brings up the Physical Extraction settings screen.



**Extract all Android partitions –** When checked, and the Android device is rooted, ALL partitions will be extracted.

**Recover files from whole partition –** This option attempts to recover files from the different partitions.

**Export data as XML (as well as SQLite3)** – Checking this box will instruct CellDEK to export the data as XML and SQLite3. Check this box if you prefer an XML output file.

**Capture to external storage –** This option allows you to save the captured data to an external storage device such as a USB flash drive or USB external drive.

### Report Button

Tapping this button brings up the Report Settings screen. Checked items are represented by a blue box.

**Report Settings Menu**

#### On Screen Report Settings

**Show Unread Messages –** Un-checking this box prevents CellDEK from showing any unread SMS messages on screen. This setting can be used for any phones that change extracted unread messages to read status.

**Show Hashes –** Checking this box will display the MD5 Hash Value for all extracted data files.

**Show Error Descriptions –** Checking this box will show detailed error descriptions for any failure to extract data. If unchecked, failure messages will read:"An error occurred during the extraction of this section of data".

**Show Image Metadata –** Checking this box will include metadata information with any downloaded images.

**NOTE:** All metadata may not be retrieved from every image extraction.

**Show Non-downloaded Files –** Un-checking this box replaces the list of non-downloaded files on the screen with a statement that the user has chosen not to show non-downloaded data.

### Output Report Settings

**Show Unread Messages –** Un-checking this box prevents CellDEK from showing any unread SMS messages on the report.

**Show Hashes –** Checking this box will display the MD5 Hash Value for all extracted data files.

**Show Error Descriptions –** Checking this box will show detailed error descriptions for any failure to extract data. If unchecked, failure messages will read:"An error occurred during the extraction of this section of data".

**Show Image Metadata –** Checking this box will include metadata information with any downloaded images on the report.

**Show Image Thumb Nails –** Checking this box will show thumb nail images of any downloaded image files on the report.

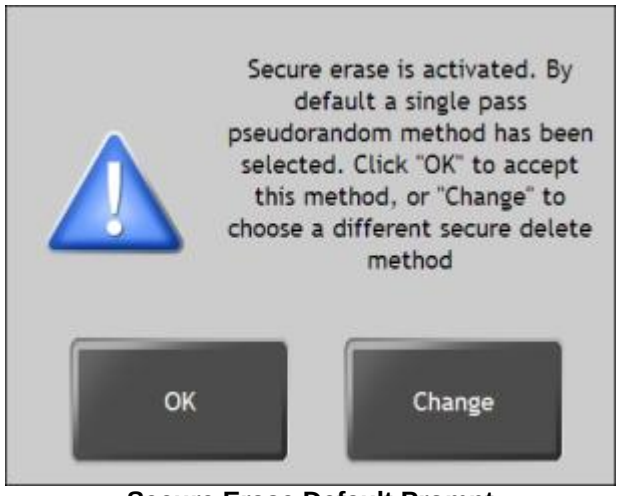
**Show Non-downloaded Files –** Un-checking this box replaces the list of non-downloaded files on the report with a statement that the user has chosen not to show non-downloaded data.

### Security Button

This button is activated if the Erase program is loaded on the CellDEK. A single menu choice will appear that asks if secure erase should be used when deleting case files.

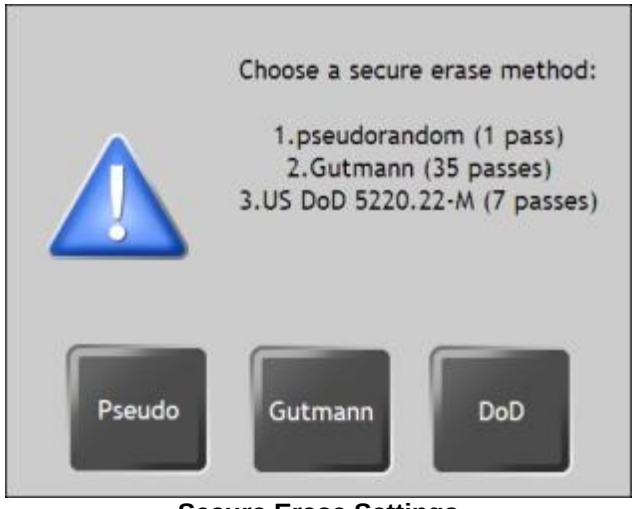
**Security Settings Menu**

If “Use secure erase” is checked, a prompt appears asking the user to change or accept default settings.




**Secure Erase Default Prompt**

If Change is tapped, another prompt appears asking the user which level of security erase should be used.




**Secure Erase Settings**

The settings are:

**Pseudo** – Erase performs a single pass over the data and writes a pattern of random characters over it.

**Gutmann** – Erase copies an alternating random pattern 35 times over the data. This verifies that all magnetic traces of the data is gone.

**US DoD 5220.22-M** – Erase copies an alternating random pattern 7 times over the data. This level of erase conforms to DoD (Department of Defense) specifications.

**Security Erase:**

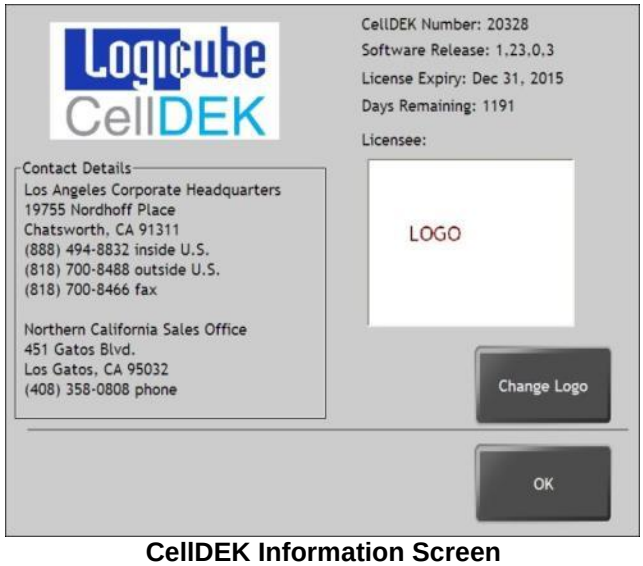
CellDEK utilizes a third party utility called Eraser by Heidi Computers, Ltd. This utility is installed

separately from the CellDEK software and is available as a part of software update 1.8.1.0 and up.

CellDEK automatically detects Erase when it is installed on the unit and activated in the Security Settings Menu.

### Information Button

Tapping this button will bring up a screen that shows Logicube Technical Support contact information.




**CellDEK Information Screen**

It also allows the user to insert his or her company logo into the printed reports.

1. On the user's PC, rename the logo to **LOGO.jpg**. Make sure that it is less than 1MB in size.

**NOTE:** The logo's name is case sensitive, so it needs to be written exactly as LOGO.jpg.

2. Copy the logo to the root directory of a USB storage device.
3. In the "About CellDEK " Screen, tap the "Update Logo" button.
4. Insert the USB storage device into the USB port.
5. Tap the OK button.
6. The logo will be automatically copied to CellDEK and overwrite any existing logo.

### Virus Check

A virus check option has been included within the system setup menu. The user can now run a malware removal tool to check for virus infection.

See the section "Virus Checker" in Chapter 2: Getting Started for more information.

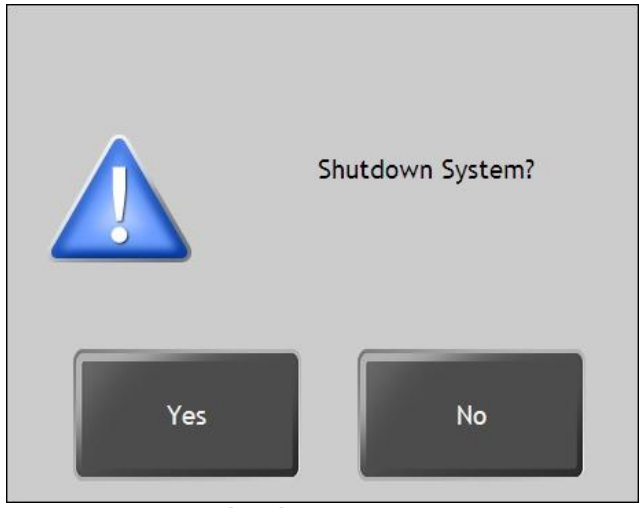
## Auxiliary Power Port

CellDEK has an extra 12VDC power port that is located next to the IR Emitter on the control panel. This port can be used to power such devices as a light source or external jammer.

From the Main Application Screen, tap the “Aux Power” button to turn the port on or off. The button will display the on/off status.

## Shutting Down CellDEK

The system can be shut down directly from the Main Application Screen. Tap the “Shut Down” button and confirm the action. CellDEK will automatically power itself down.




**Shutdown Screen**

### Standby Mode

Additionally, closing the lid of CellDEK while it is powered will send the embedded PC into Standby Mode. When the lid is opened again, the embedded PC will come back up out of standby mode.

**NOTE:** Once the lid is closed, DO NOT re-open the lid until CellDEK emits “USB Logoff” tones. Otherwise, CellDEK will “hang”. If this happens, shut down the unit and wait 30 – 60 seconds before powering it back up.

# 6. Glossary and Troubleshooting Guide

## Supported Manufacturers

CellDEK is able to directly support many different wireless devices. Many of these major brands are supported now or will be in the near future:

- Nokia
- Motorola
- Sony Ericsson
- Samsung
- Siemens
- Audiovox
- Kyocera
- Palm
- LG
- Sanyo
- Blackberry
- Windows
- Apple iPhone
- TomTom Satellite Navigation Devices
- Garmin Satellite Navigation Devices

## Glossary

**SIM (Subscriber Identity Module) -** Essentially a small computer on a card that sits within the mobile phone and controls various functions of call making. It also has enough memory to hold information such as ADN and SMS.

**ADN (Abbreviated Dialing Numbers) -** more commonly known as the phonebook or contacts.

**SMS (Short Message Service) –** SMS is a form of textual conversation permitted by a network carrier. The service allows a user to send and receive textual messages direct to their handsets. The storage capacity depends on the handset and SIM. The date and time of received messages is generated by the network, all other date and time stamps are generated from the handset time. The maximum character length is 160 per SMS. Some handsets allow longer messages to be compiled and therefore are split into relevant parts when sent, these messages are known as concatenated.

**Deleted SMS (Short Message Service) -** These are text messages that have been deleted from the SIM card by the cellphone user. However, most mobile phones do not remove the

message, but mark the message to be overwritten by incoming messages from the network.

**MMS (Multimedia Messaging Service) –** A service which allows Multimedia messages to be sent from one mobile to another via one or more call centres or network providers. A Multimedia message is stored on the handset and can contain a combination of text, video clips, images and sound clips.

**ICCID (Integrated Circuit Card Identifier) -** The serial number of the SIM card stored electronically within the SIM. A similar number or shortened version is often found printed on the SIM card.

**IMEI (International Mobile Equipment Identifier) -** This is a unique number given to each handset. This is usually printed somewhere on the handset, (typically in the battery compartment) and stored electronically in the phone handset memory. It can be viewed typing *#06# on the keypad.

**PIN (Personal Identification Number) -** The SIM card has been locked against unauthorized access using the PIN number. When PIN security is activated, the correct PIN number must be entered in order to use any of the features of the handset (make calls, access ADN etc.) The only calls that can be made without a PIN are calls to the emergency services.

**PUK (Personnel Unblocking Key) -** If the PIN is unknown the PUK is used to unblock the SIM card and enable a new PIN code to be entered.

**MSISDN (Mobile Station ISDN Number) -** This number is the standard international number used to identify a given subscriber. However, the number stored in the MSISDN location on a SIM Card can be changed without affecting the actual telephone number. Therefore, the MSISDN number downloaded from the SIM card can only be used as an indicator.

**IMSI (International Mobile Subscriber Identity) –** This is a unique number allocated to each mobile phone subscriber, stored electronically within the SIM Card. It is used by the network to look up the telephone number associated to the SIM Card.

**GSM (Global System for Mobile Communications) -** a digital mobile telephone system that is widely used in Europe and other parts of the world. GSM uses a variation of time division multiple access (TDMA) and is the most widely used of the three digital wireless telephone technologies (TDMA, GSM, and CDMA).

**CDMA (Code Division Multiple Access) -** refers to any of several protocols used in so-called second-generation (2G) and third-generation (3G) wireless communications. As the term implies, CDMA is a form of multiplexing, which allows numerous signals to occupy a single transmission channel, optimizing the use of available bandwidth. The technology is used in ultra-high-frequency (UHF) cellular telephone systems in the 800-MHz and 1.9-GHz bands.

**TDMA (Time Division Multiple Access) -** is a technology used in digital cellular telephone communication that divides each cellular channel into three time slots in order to increase the amount of data that can be carried.

**Cluster** The smallest block of memory in a drive that can be written to individually by the file system.

**Allocation table** Table that keeps track of the contents of each cluster on the drive. The allocation table is used to combine clusters in the correct order to construct the files in the file system.

**Allocated space** Any cluster that is being used to store a file and has a written entry in the allocation table

**Unallocated Space** Any clusters that have an empty entry in the allocation table (i.e. are not assigned to any file) and are marked as being available for over writing by the file system.

**Extant File** A files that is still active in the file system and has appropriate entries in the allocation table to be reconstructed.

**Contiguous File** A file stored using clusters that are located next to each other in the drive's memory.

## Troubleshooting Guide

| | |
|---|---|
| **CellDEK fails to power up/ no lights on connector rack on power up.** | The CellDEK battery may be flat.<br>Try connecting the charger.<br><br>**NOTE:** the embedded PC may still have power when the internal battery does not. No light on the connectors indicates a flat internal battery. The lights should illuminate when the charger is inserted. |
| **Dimensions entered do not display correct phone** | Re-measure and re-enter dimensions by adjusting them slightly.<br><br>**NOTE:** The phone may not yet be included in the identification module |
| **Cell phone not listed or no image can be found.** | Phone may not yet be supported by the identification module. Select a similar device from the listing and use IR or Bluetooth ONLY. Damage to the handset can occur by selecting the wrong cable for a device and is not recommended.<br><br>**NOTE:** The device make and model reported is obtained from the phone not based on the device selected from the identification module. |
| **Infrared discovery failed** | Ensure infrared is active on target device and IR window is aligned with the CellDEK's pickup sensor. |
| **Bluetooth extraction failed** | Ensure Bluetooth is active on target device and device is in discoverable mode. Also, device may be asking for a 4-digit code number or file acceptance on screen during the extraction. |
| **Connector not lit** | Ensure cable is replaced correctly and retry then reboot the CellDEK if problem persists. |
| **No cable connection method offered** | Ensure all connectors are correctly inserted into the storage rack and reboot the CellDEK. |
| **No battery monitor onscreen** | Connection to hardware com port suspect - reboot CellDEK.<br><br>**NOTE:** Connector lights should go out as the CellDEK software opens thus indicating hardware com port success. |

| | |
|---|---|
| **CellDEK application freezes continuously** | Hold power switch in the 'on' position for a few seconds until shutdown. Wait for unit to emit "beeps" before releasing switch. |
| **SIM card read fail** | Ensure SIM is correctly inserted and in the correct orientation. |
| **'SIM PIN required' message** | Enter PIN code. If entered incorrectly 3 times PUK will be required. |
| **'SIM PUK required' message** | Contact carrier/provider to obtain PUK code. |
| **CellDEK fails to read memory card** | Ensure card is inserted correctly. Reboot CellDEK. |
| **SIM Card LED goes out** | If problems persist, hold power switch in the 'on' position for a few seconds until shutdown. Wait for unit to emit "beeps" before releasing switch. |
| **CellDEK unit freezes or crashes** | Hold power switch in the 'on' position for a few seconds until shutdown. Wait for unit to emit "beeps" before releasing switch. |

## Error Messages

If an error message occurs during CellDEK use, a small "Help" icon appears in the corner of the error.

**Help Icon Location**

Tap the Help Icon to bring up a description of the error message and possible solutions.

# 7. Supported Handsets

## Handsets tested on CellDEK and the results verified

These handsets are assigned a green tick next to their image on CellDEK.

The following handsets have been tested on CellDEK using the standard validation procedures of Logicube. The results below display the data sets that can be extracted from CellDEK for the specific handset. There may be additional data sets available from handsets and these will require further examination.

Key:

| | | | |
|---|---|---|---|
| Phone ID | | SMS | |
| Phone ID w timestamp | | SMS w timestamp | |
| Contacts | | MMS | **MMS** |
| Call Logs | | Files | |
| Call Logs w timestamp | | Organizer | |

- Handsets that appear with no cable number assigned are supported via Infrared or Bluetooth methods.
- Cable Number 999 refers to the external Nokia CA-42 cable

| No. | Manufacturer | Model | Phone ID | Contacts | Call Logs | Messages | Files | Organiser | Mobile Standard | Cable No. | Date Added |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | ACER | beTouch E101 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | GSM | 9 | Jan-10 |
| 2 | ACER | F900 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | GSM | 9 | Jan-10 |
| 3 | ACER | n50 | ✓ | ✓ | | | ✓ | ✓ | GSM | | Jul-06 |
| 4 | ACER | X960 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | GSM | 9 | Oct-09 |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 5 | ALCATEL | OT-C707 | ☎ 🕘 | 🕮 | ◑ | ✉ 🕘 | 🗁 | ☐ | GSM | | Apr-08 |
| 6 | AMOI | WP-S1 | ☎ | 🕮 | ☐ | ✉ 🕘 | 🗁 | 🖹 | GSM | 9 | Apr-09 |
| 7 | ANDROID | G1 | ☎ | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | 🖹 | GSM | 9 | Jul-08 |
| 8 | APPLE | iPhone | ☎ | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | 🖹 | GSM | 31 | Oct-08 |
| 9 | APPLE | iPhone 3G | ☎ | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | 🖹 | GSM | 31 | Oct-09 |
| 10 | APPLE | iPhone 4 | ☎ | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | 🖹 | GSM | 31 | May-11 |
| 11 | APPLE | iPad | ☎ | 🕮 | ☐ | ☐ | ☐ | 🖹 | N/A | 31 | Sep-12 |
| 12 | BENQ | E72 | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | 🖹 | GSM | 9 | Jan-09 |
| 13 | BENQ | P50 | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ | 🗁 | 🖹 | GSM | 9 | Jul-06 |
| 14 | BENQ SIEMENS | EF81 | ☎ 🕘 | ☐ | ◑ | ✉ 🕘 | ☐ | ☐ | GSM | | Apr-07 |
| 15 | BENQ SIEMENS | S68 | ☎ 🕘 | 🕮 | ◑ | ✉ | 🗁 | 🖹 | GSM | | Jul-06 |
| 16 | BENQ SIEMENS | S88 | ☎ | 🕮 | ◑ | ✉ 🕘 | ☐ | ☐ | GSM | | Jul-07 |
| 17 | BLACKBERRY | 7230 | ☐ | 🕮 | ◑ 🕘 | ✉ 🕘 | ☐ | 🖹 | GSM | 9 | Apr-08 |
| 18 | BLACKBERRY | 7250 | ☐ | 🕮 | ◑ 🕘 | ✉ 🕘 | ☐ | 🖹 | GSM | 9 | Jul-07 |
| 19 | BLACKBERRY | 7290 | ☐ | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | 🖹 | GSM | 9 | Jan-07 |
| 20 | BLACKBERRY | 8100 | ☎ | 🕮 | ◑ 🕘 | ✉ 🕘 | ☐ | 🖹 | GSM | 9 | Jul-07 |
| 21 | BLACKBERRY | 8120 | ☎ | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | 🖹 | GSM | 9 | Jan-09 |
| 22 | BLACKBERRY | 8300 | ☎ | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | 🖹 | GSM | 9 | Jan-09 |
| 23 | BLACKBERRY | 8310 | ☐ | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | 🖹 | GSM | 9 | Jul-08 |
| 24 | BLACKBERRY | 8320 | ☐ | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | 🖹 | GSM | 9 | Apr-08 |
| 25 | BLACKBERRY | 8330 | ☎ | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | 🖹 | CDMA | 9 | Jan-09 |
| 26 | BLACKBERRY | 8520 | ☎ | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | 🖹 | GSM | 26 | Jan-10 |
| 27 | BLACKBERRY | 8800 | ☎ | 🕮 | ◑ 🕘 | ✉ 🕘 | ☐ | 🖹 | GSM | 9 | Jan-10 |
| 28 | BLACKBERRY | 8800 | ☎ | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | 🖹 | GSM | 9 | Oct-08 |
| 29 | BLACKBERRY | 8820 | ☐ | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | 🖹 | GSM | 9 | Apr-08 |
| 30 | BLACKBERRY | 8830 | ☎ | 🕮 | ◑ 🕘 | ✉ 🕘 | ☐ | 🖹 | CDMA | 9 | Oct-08 |
| 31 | BLACKBERRY | 8900 | ☎ | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | 🖹 | GSM | 26 | Jul-09 |
| 32 | BLACKBERRY | 9000 | ☎ | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | 🖹 | GSM | 9 | Jan-09 |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 33 | BLACKBERRY | 9500 | ☎ | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | ▤ | GSM | 26 | Jul-09 |
| 34 | BLACKBERRY | 9530 | ☎ | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | ▤ | GSM | 26 | Jul-09 |
| 35 | BLACKBERRY | 9700 | ☎ | 🕮 | ◑ 🕘 | ✉ 🕘 | □ | ▤ | GSM | 26 | Sep-10 |
| 36 | BLACKBERRY | 7100t | □ | 🕮 | ◑ 🕘 | □ | 🗁 | ▤ | GSM | 9 | Apr-06 |
| 37 | BLACKBERRY | 7100v | □ | 🕮 | ◑ 🕘 | ✉ 🕘 | □ | ▤ | GSM | 9 | Apr-06 |
| 38 | BLACKBERRY | 7100x | □ | 🕮 | ◑ 🕘 | ✉ 🕘 | □ | ▤ | GSM | 9 | Apr-06 |
| 39 | BLACKBERRY | 8700f | □ | 🕮 | ◑ 🕘 | ✉ 🕘 | □ | ▤ | GSM | 9 | Jan-07 |
| 40 | BLACKBERRY | 8700g | □ | 🕮 | ◑ 🕘 | ✉ 🕘 | □ | ▤ | GSM | 9 | Jan-07 |
| 41 | BLACKBERRY | 8700v | □ | 🕮 | ◑ 🕘 | ✉ 🕘 | □ | ▤ | GSM | 9 | Oct-07 |
| 42 | BLACKBERRY | 8707g | ☎ | 🕮 | ◑ 🕘 | ✉ 🕘 | □ | ▤ | GSM | 9 | Oct-09 |
| 43 | BLACKBERRY | 8707v | ☎ | 🕮 | ◑ 🕘 | ✉ 🕘 | □ | ▤ | GSM | 9 | Jul-07 |
| 44 | BLACKBERRY | 9780 | □ | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | ▤ | GSM | 26 | Dec-11 |
| 45 | BLACKBERRY | 9800 | □ | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | ▤ | GSM | 26 | Dec-11 |
| 46 | BLACKBERRY | 9650 | □ | 🕮 | ◑ 🕘 | ✉ 🕘 | □ | ▤ | GSM | 26 | Dec-11 |
| 47 | DELL | AXIM X51v | ☎ 🕘 | 🕮 | □ | □ | 🗁 | ▤ | GSM | | Oct-06 |
| 48 | E-TEN | P300B | □ | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | ▤ | GSM | | Oct-07 |
| 49 | GLOFIISH | M810 | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | ▤ | GSM | 9 | Oct-09 |
| 50 | GLOFIISH | X600 | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | ▤ | GSM | 9 | Oct-08 |
| 51 | HP | iPAQ 514 | □ | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | ▤ | GSM | 9 | Oct-07 |
| 52 | HP | iPAQ H5550 | ☎ 🕘 | 🕮 | □ | □ | 🗁 | ▤ | GSM | | Jul-06 |
| 53 | HP | iPAQ HW6915 | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | ▤ | GSM | | Oct-06 |
| 54 | HP | iPAQ rx1950 | ☎ 🕘 | 🕮 | □ | □ | 🗁 | ▤ | GSM | | Jul-07 |
| 55 | HP | iPAQ rz1710 | ☎ 🕘 | 🕮 | □ | □ | 🗁 | ▤ | GSM | | Jul-06 |
| 56 | HTC | Desire | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | □ | GSM | 26 | May-11 |
| 57 | HTC | EVO 4G | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | □ | CDMA | 26 | May-11 |
| 58 | HTC | Hero | □ | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | ▤ | GSM | 9 | Oct-09 |
| 59 | HTC | Incredible | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | ▤ | CDMA | 26 | May-11 |
| 60 | HTC | Kaizer | □ | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | ▤ | GSM | 9 | Jan-08 |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 61 | HTC | Magic | | | | | | | GSM | 9 | Oct-09 |
| 62 | HTC | NEXUS ONE | | | | | | | GSM | 26 | Dec-10 |
| 63 | HTC | P3300 | | | | | | | GSM | 9 | Oct-07 |
| 64 | HTC | P3450 | | | | | | | GSM | 9 | Jul-09 |
| 65 | HTC | P3470 | | | | | | | GSM | 9 | Oct-08 |
| 66 | HTC | P5500 | | | | | | | GSM | 9 | Oct-08 |
| 67 | HTC | S310 | | | | | | | GSM | 9 | Jul-07 |
| 68 | HTC | S620 | | | | | | | GSM | 9 | Oct-08 |
| 69 | HTC | S710 | | | | | | | GSM | 9 | Jul-08 |
| 70 | HTC | S740 | | | | | | | GSM | 9 | Jul-09 |
| 71 | HTC | S743 | | | | | | | GSM | 18 | Dec-10 |
| 72 | HTC | Shadow | | | | | | | GSM | 9 | Oct-08 |
| 73 | HTC | SMT5800 | | | | | | | CDMA | 9 | Sep-10 |
| 74 | HTC | Snap | | | | | | | GSM | 9 | Oct-09 |
| 75 | HTC | Tattoo | | | | | | | GSM | 9 | Jan-10 |
| 76 | HTC | Tornado | | | | | | | GSM | 9 | Jan-08 |
| 77 | HTC | Touch | | | | | | | GSM | 9 | Oct-07 |
| 78 | HTC | TOUCH CRUISE | | | | | | | GSM | 9 | Apr-09 |
| 79 | HTC | TOUCH DIMOND | | | | | | | GSM | 9 | Jul-09 |
| 80 | HTC | Inspire | | | | | | | GSM | 26 | Dec 2011 |
| 81 | HTC | ThunderBolt | | | | | | | CDMA | 26 | Dec 2011 |
| 82 | HTC | Sensation | | | | | | | GSM | 26 | Apr-12 |
| 83 | HTC | Amaze 4G | | | | | | | GSM | 26 | Apr-12 |
| 84 | HTC | Status | | | | | | | GSM | 26 | Apr-12 |
| 85 | HUAWEI | U8150 | | | | | | | GSM | 26 | Dec 2011 |
| 86 | HUAWEI | M735 | | | | | | | CDMA | 26 | Dec 2011 |
| 87 | HUAWEI | U8800 | | | | | | | GSM | 26 | Apr-12 |
| 88 | HUAWEI | M860 | | | | | | | CDMA | 26 | Sep-12 |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | ◴ | | ◴ | | | | | | |
| 89 | IMATE | JAM | □ | 🕮 | ◑ ◴ | ✉ | 🗁 | ▤ | GSM | 9 | Jul-06 |
| 90 | IMATE | JAMin | □ | 🕮 | ◑ ◴ | ✉ | 🗁 | ▤ | GSM | 9 | Jul-06 |
| 91 | IMATE | JASJAR | ☎ ◴ | 🕮 | ◑ ◴ | ✉ | 🗁 | ▤ | GSM | 9 | Oct-06 |
| 92 | IMATE | K-JAM | □ | 🕮 | ◑ ◴ | ✉ | 🗁 | ▤ | GSM | 9 | Jul-06 |
| 93 | IMATE | PDA2K | ☎ ◴ | 🕮 | ◑ ◴ | ✉ ◴ | 🗁 | ▤ | GSM | | Jul-08 |
| 94 | IMATE | SP3i | ☎ ◴ | 🕮 | ◑ ◴ | ✉ | 🗁 | ▤ | GSM | 9 | Jul-06 |
| 95 | IMATE | SP5 | ☎ ◴ | 🕮 | ◑ ◴ | ✉ | 🗁 | ▤ | GSM | 9 | Jul-06 |
| 96 | IMATE | SPL | ☎ ◴ | 🕮 | ◑ ◴ | ✉ ◴ | 🗁 | ▤ | GSM | 9 | Jul-07 |
| 97 | KYOCERA | K323 | ☎ | 🕮 | □ | ✉ | 🗁 | □ | CDMA | | Jan-09 |
| 98 | KYOCERA | K342 | ☎ | 🕮 | □ | ✉ | 🗁 | □ | CDMA | | Jan-09 |
| 99 | KYOCERA | K404 | ☎ | 🕮 | ◑ ◴ | ✉ | □ | □ | CDMA | 3 | Jul-06 |
| 100 | KYOCERA | K9 | ☎ | 🕮 | □ | ✉ | 🗁 | □ | CDMA | 3 | Jan-09 |
| 101 | KYOCERA | KX1 | ☎ | 🕮 | □ | ✉ | 🗁 | □ | CDMA | 3 | Jan-09 |
| 102 | KYOCERA | KX160 | ☎ | 🕮 | □ | ✉ | 🗁 | □ | CDMA | 3 | Jan-09 |
| 103 | KYOCERA | KX5 | ☎ | 🕮 | □ | ✉ | 🗁 | □ | CDMA | | Jan-09 |
| 104 | KYOCERA | KX9a | ☎ | 🕮 | □ | ✉ | 🗁 | □ | CDMA | 3 | Jan-09 |
| 105 | KYOCERA | S1300 | ☎ | 🕮 | □ | ✉ | 🗁 | ▤ | CDMA | 26 | Sep-10 |
| 106 | KYOCERA | S4000 | ☎ | 🕮 | □ | ✉ | 🗁 | ▤ | CDMA | 26 | Sep-10 |
| 107 | KYOCERA | SE47 | ☎ | 🕮 | ◑ ◴ | ✉ | □ | □ | CDMA | 19 | Jul-06 |
| 108 | KYOCERA | M1400 | ☎ | 🕮 | □ | ✉ ◴ | □ | ▤ | CDMA | 26 | Dec 2011 |
| 109 | LG | A7110 | ☎ ◴ | 🕮 | ◑ | □ | □ | ▤ | GSM | 5 | Jul-06 |
| 110 | LG | AX380 | ☎ | 🕮 | ◑ ◴ | ✉ ◴ | 🗁 | □ | CDMA | 27 | Jul-09 |
| 111 | LG | C1300i | ☎ | 🕮 | □ | ✉ ◴ | □ | ▤ | GSM | 19 | Jan-07 |
| 112 | LG | C1500 | ☎ | 🕮 | □ | ✉ ◴ | □ | ▤ | GSM | 19 | Jan-07 |
| 113 | LG | C2000 | ☎ | 🕮 | □ | ✉ ◴ | □ | ▤ | GSM | 19 | Jan-07 |
| 114 | LG | C2500 | ☎ ◴ | □ | ◑ ◴ | ✉ ◴ | □ | □ | GSM | 9 | Jul-10 |
| 115 | LG | CE500 | ☎ ◴ | 🕮 | ◑ | □ | □ | □ | GSM | 5 | Jul-06 |
| 116 | LG | CG225 | ☎ | 🕮 | □ | ✉ ◴ | □ | ▤ | GSM | 19 | Jan-07 |
| 117 | LG | CG300 | ☎ | 🕮 | □ | ✉ ◴ | □ | ▤ | GSM | 19 | Jan-07 |
| 118 | LG | F2500 | ☎ | 🕮 | □ | ✉ | 🗁 | ▤ | GSM | | Apr-08 |

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| 119 | LG | F9100 | | | | | | | GSM | 19 | Jan-07 |
| 120 | LG | F9200 | | | | | | | GSM | 19 | Jan-07 |
| 121 | LG | G4020 | | | | | | | GSM | 19 | Apr-08 |
| 122 | LG | G4050 | | | | | | | GSM | 19 | Jan-07 |
| 123 | LG | GD900 | | | | | | | GSM | 26 | Jan-10 |
| 124 | LG | GS170 | | | | | | | GSM | 26 | Dec-10 |
| 125 | LG | GT365 | | | | | | | GSM | 27 | Sep-10 |
| 126 | LG | GT950 (Arena) | | | | | | | GSM | 26 | May-11 |
| 127 | LG | GW300 | | | | | | | GSM | 26 | Jan-10 |
| 128 | LG | GW520 | | | | | | | GSM | 26 | Jan-10 |
| 129 | LG | GW820 (Expo) | | | | | | | GSM | 26 | May-11 |
| 130 | LG | KC550 | | | | | | | GSM | 27 | Oct-08 |
| 131 | LG | KC780 | | | | | | | GSM | 27 | Oct-09 |
| 132 | LG | KC910 | | | | | | | GSM | 27 | Apr-09 |
| 133 | LG | KE500 | | | | | | | GSM | 27 | Oct-08 |
| 134 | LG | KE770 | | | | | | | GSM | 27 | Apr-08 |
| 135 | LG | KE800 | | | | | | | GSM | 27 | Apr-08 |
| 136 | LG | KE820 | | | | | | | GSM | 27 | Apr-08 |
| 137 | LG | KE850 | | | | | | | GSM | 27 | Apr-08 |
| 138 | LG | KE970 | | | | | | | GSM | 27 | Apr-08 |
| 139 | LG | KF510 | | | | | | | GSM | 27 | Jan-09 |
| 140 | LG | KF600 | | | | | | | GSM | 27 | Jan-09 |
| 141 | LG | KG200 | | | | | | | GSM | 9 | Sep-10 |
| 142 | LG | KG300 | | | | | | | GSM | 9 | Sep-10 |
| 143 | LG | KG320 | | | | | | | GSM | 27 | Jul-07 |
| 144 | LG | KG800 | | | | | | | GSM | 27 | Oct-06 |
| 145 | LG | KG810 | | | | | | | GSM | 27 | Apr-08 |

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| 146 | LG | KG920 | ☎ 🕘 | 🕮 | □ | ✉ 🕘 | 🗁 | ▤ | GSM | 5 | Oct-06 |
| 147 | LG | KM710 | ☎ | 🕮 | □ | ✉ 🕘 | □ | ▤ | GSM | 27 | Oct-08 |
| 148 | LG | KM900 | ☎ | 🕮 | □ | ✉ 🕘 | 🗁 | ▤ | GSM | | Jan-10 |
| 149 | LG | KP170 | ☎ 🕘 | 🕮 | □ | ✉ 🕘 | 🗁 | ▤ | GSM | 27 | Jan-10 |
| 150 | LG | KP500 | ☎ | 🕮 | □ | ✉ 🕘 | 🗁 | ▤ | GSM | 27 | Apr-09 |
| 151 | LG | KU990 | ☎ | 🕮 | □ | ✉ 🕘 | 🗁 | ▤ | GSM | 27 | Apr-09 |
| 152 | LG | L1150 | ☎ | 🕮 | □ | ✉ 🕘 | □ | ▤ | GSM | 19 | Apr-08 |
| 153 | LG | L1200 | ☎ | 🕮 | □ | ✉ 🕘 | □ | ▤ | GSM | 19 | Jan-07 |
| 154 | LG | L1400i | ☎ | 🕮 | □ | ✉ 🕘 | □ | ▤ | GSM | 19 | Jan-07 |
| 155 | LG | LG6190 | ☎ | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | ▤ | CDMA | 6 | Sep-10 |
| 156 | LG | LX150 | ☎ | 🕮 | ◑ 🕘 | ✉ 🕘 | □ | ▤ | CDMA | 27 | Apr-08 |
| 157 | LG | LX160 | ☎ | 🕮 | ◑ 🕘 | ✉ 🕘 | □ | ▤ | CDMA | 27 | Apr-08 |
| 158 | LG | LX550 | ☎ | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | ▤ | CDMA | 6 | Apr-08 |
| 159 | LG | LX5550 | ☎ | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | ▤ | CDMA | 5 | Oct-07 |
| 160 | LG | MM535 | ☎ | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | ▤ | CDMA | 6 | Apr-06 |
| 161 | LG | MN240 (Imprint) | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | ▤ | CDMA | 26 | May-11 |
| 162 | LG | MT310 | ☎ | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | ▤ | CDMA | 26 | Dec-10 |
| 163 | LG | P7200 | ☎ 🕘 | 🕮 | ◑ | □ | 🗁 | ▤ | GSM | 5 | Apr-06 |
| 164 | LG | PM225 | ☎ | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | ▤ | CDMA | 6 | Apr-06 |
| 165 | LG | PM325 | ☎ | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | ▤ | CDMA | 6 | Apr-06 |
| 166 | LG | S5200 | ☎ 🕘 | 🕮 | ◑ | □ | 🗁 | ▤ | GSM | 5 | Apr-06 |
| 167 | LG | U8110 | ☎ | 🕮 | □ | ✉ 🕘 | □ | ▤ | GSM | 5 | Apr-09 |
| 168 | LG | U8120 | ☎ | 🕮 | □ | ✉ 🕘 | 🗁 | ▤ | GSM | 5 | Apr-09 |
| 169 | LG | U8130 | ☎ | 🕮 | □ | ✉ 🕘 | □ | ▤ | GSM | 5 | Apr-09 |
| 170 | LG | U8138 | ☎ | 🕮 | □ | ✉ 🕘 | □ | ▤ | GSM | 5 | Apr-09 |
| 171 | LG | U8360 | ☎ | 🕮 | □ | ✉ 🕘 | 🗁 | ▤ | GSM | 5 | Apr-09 |
| 172 | LG | U8380 | ☎ | 🕮 | □ | ✉ 🕘 | □ | ▤ | GSM | 5 | Apr-09 |
| 173 | LG | UN430 | ☎ | 🕮 | □ | ✉ | 🗁 | □ | CDMA | 26 | Dec-10 |

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| 174 | LG | UX260 | ☎ | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | 🗏 | CDMA | 27 | Oct-09 |
| 175 | LG | UX300 | ☎ | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | 🗏 | CDMA | 26 | Dec-10 |
| 176 | LG | UX355 | ☎ | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | 🗏 | CDMA | 6 | Jul-07 |
| 177 | LG | UX390 | ☎ | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | 🗏 | CDMA | 6 | Jul-07 |
| 178 | LG | UX4750 | ☎ | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | 🗏 | CDMA | 6 | Jan-08 |
| 179 | LG | UX5000 | ☎ | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | 🗏 | CDMA | 6 | Jan-08 |
| 180 | LG | VI125 | ☎ | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | 🗏 | CDMA | 6 | Apr-06 |
| 181 | LG | VX10000 | ☎ | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | 🗏 | CDMA | 27 | Jan-09 |
| 182 | LG | VX4500 | ☎ | 🕮 | ◑ 🕘 | ✉ | 🗁 | 🗏 | CDMA | 19 | Jul-06 |
| 183 | LG | VX4600 | ☎ | 🕮 | ◑ 🕘 | ✉ | 🗁 | 🗏 | CDMA | 19 | Jul-06 |
| 184 | LG | VX4700 | ☎ | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | 🗏 | CDMA | 6 | Apr-06 |
| 185 | LG | VX5200 | ☎ | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | 🗏 | CDMA | 6 | Apr-06 |
| 186 | LG | VX5300 | ☎ | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | 🗏 | GSM | 21 | Oct-06 |
| 187 | LG | VX5400 | ☎ | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | 🗏 | CDMA | 27 | Jan-09 |
| 188 | LG | VX5500 | ☎ | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | 🗏 | CDMA | 26 | Sep-10 |
| 189 | LG | VX5600 | ☎ | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | 🗏 | CDMA | 26 | Dec-10 |
| 190 | LG | VX6000 | ☎ | 🕮 | ◑ 🕘 | ✉ | 🗁 | 🗏 | CDMA | 5 | Jul-06 |
| 191 | LG | VX6100 | ☎ | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | 🗏 | CDMA | 6 | Apr-06 |
| 192 | LG | VX6190 | ☎ | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | 🗏 | CDMA | 6 | Sep-10 |
| 193 | LG | VX7000 | ☎ | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | 🗏 | CDMA | 6 | Jul-06 |
| 194 | LG | VX8000 | ☎ | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | 🗏 | CDMA | 6 | Jul-06 |
| 195 | LG | VX8100 | ☎ | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | 🗏 | CDMA | 6 | Apr-06 |
| 196 | LG | VX8300 | ☎ | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | 🗏 | CDMA | 21 | Oct-06 |
| 197 | LG | VX8350 | ☎ | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | 🗏 | CDMA | 27 | Apr-08 |
| 198 | LG | VX8500 | ☎ | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | 🗏 | CDMA | 27 | Oct-08 |
| 199 | LG | VX8575 | ☎ | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | 🗏 | CDMA | 26 | Sep-10 |
| 200 | LG | VX8610 | ☎ | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | 🗏 | CDMA | 26 | Oct-09 |

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| 201 | LG | VX8700 | ☎ | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | ▤ | CDMA | 27 | Jan-09 |
| 202 | LG | VX8800 | ☎ | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | ▤ | CDMA | 27 | Jan-09 |
| 203 | LG | VX9100 | ☎ | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | ▤ | CDMA | 26 | Jan-09 |
| 204 | LG | VX9200 | ☎ | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | ▤ | CDMA | 26 | Dec-10 |
| 205 | LG | VX9400 | ☎ | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | ▤ | CDMA | 27 | Apr-08 |
| 206 | LG | VX9700 | ☎ | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | ▤ | CDMA | 26 | Dec-10 |
| 207 | LG | VX9800 | ☎ | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | ▤ | CDMA | 6 | Jan-07 |
| 208 | LG | VX9900 | ☎ | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | ▤ | CDMA | 27 | Oct-08 |
| 209 | LG | P509 | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | □ | GSM | 26 | Dec 2011 |
| 210 | LG | KS20 | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ | 🗁 | ▤ | GSM | 27 | Dec 2011 |
| 211 | LG | VS750 | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ | 🗁 | ▤ | CDMA | 26 | Dec 2011 |
| 212 | LG | UX310 | ☎ | 🕮 | ◑ 🕘 | ✉ 🕘 | □ | ▤ | CDMA | 26 | Dec 2011 |
| 213 | LG | MT375 | ☎ | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | ▤ | CDMA | 26 | Dec 2011 |
| 214 | LG | VN530 | ☎ | 🕮 | ◑ 🕘 | □ | 🗁 | ▤ | CDMA | 26 | Dec 2011 |
| 215 | LG | P505 | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | □ | GSM | 26 | Apr-12 |
| 216 | LG | C729 | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | □ | GSM | 26 | Apr-12 |
| 217 | LG | LG670 | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | □ | CDMA | 26 | Apr-12 |
| 218 | LG | AX145 | ☎ | 🕮 | □ | □ | □ | ▤ | CDMA | 19 | Apr-12 |
| 219 | LG | P925 | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | □ | GSM | 26 | Apr-12 |
| 220 | LG | P930 | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | □ | GSM | 26 | Apr-12 |
| 221 | LOBSTER | 700TV | □ | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | ▤ | GSM | 9 | Jan-08 |
| 222 | MIO | A501 | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | ▤ | GSM | 9 | Jul-09 |
| 223 | MIO | A701 | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | ▤ | GSM | 9 | Apr-07 |
| 224 | MOTOROLA | MB810 (DROID X) | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | □ | CDMA | 26 | May-11 |
| 225 | MOTOROLA | A555 (Devour) | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | □ | CDMA | 26 | May-11 |
| 226 | MOTOROLA | A835 | ☎ 🕘 | 🕮 | ◑ | ✉ 🕘 | 🗁 | ▤ | GSM | 24 | Dec-05 |
| 227 | MOTOROLA | A855 | □ | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | ▤ | CDMA | 26 | Sep-10 |
| 228 | MOTOROLA | C332 | ☎ 🕘 | 🕮 | ◑ | ✉ 🕘 | □ | ▤ | GSM | 9 | Jul-07 |

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| 229 | MOTOROLA | C343 | ☎ | 🕮 | ◑ | ✉ | □ | ▤ | CDMA | 24 | Apr-06 |
| 230 | MOTOROLA | C350 | ☎ | 🕮 | ◑ | ✉ | □ | ▤ | GSM | 9 | Apr-06 |
| 231 | MOTOROLA | C385 | ☎ | 🕮 | ◑ | ✉ | □ | ▤ | GSM | 9 | Dec-05 |
| 232 | MOTOROLA | C390 | ☎ | 🕮 | ◑ | ✉ | 🗁 | ▤ | GSM | 9 | Dec-05 |
| 233 | MOTOROLA | C550 | ☎ | 🕮 | ◑ | ✉ | □ | ▤ | GSM | 9 | Dec-05 |
| 234 | MOTOROLA | C650 | ☎ | 🕮 | ◑ | ✉ | 🗁 | ▤ | GSM | 9 | Dec-05 |
| 235 | MOTOROLA | C975 | ☎ | 🕮 | ◑ | ✉ | 🗁 | ▤ | GSM | 24 | Dec-05 |
| 236 | MOTOROLA | E1 | ☎ | 🕮 | ◑ | ✉ | 🗁 | ▤ | GSM | 24 | Apr-06 |
| 237 | MOTOROLA | E1000 | ☎ | 🕮 | ◑ | ✉ | 🗁 | ▤ | CDMA | 24 | Oct-06 |
| 238 | MOTOROLA | E1070 | ☎ | 🕮 | ◑ | ✉ | 🗁 | ▤ | GSM | 9 | Jan-07 |
| 239 | MOTOROLA | E398 | ☎ | 🕮 | ◑ | ✉ | 🗁 | ▤ | GSM | 24 | Dec-05 |
| 240 | MOTOROLA | E8 | ☎ | 🕮 | □ | ✉ | 🗁 | □ | GSM | | Jan-10 |
| 241 | MOTOROLA | E815 | ☎ | 🕮 | ◑ | ✉ | □ | ▤ | CDMA | | Oct-06 |
| 242 | MOTOROLA | K1 | ☎ | 🕮 | ◑ | ✉ | 🗁 | ▤ | GSM | 9 | Oct-07 |
| 243 | MOTOROLA | K1m | ☎ | 🕮 | ◑ | ✉ | 🗁 | ▤ | CDMA | | Apr-07 |
| 244 | MOTOROLA | K3 | ☎ | 🕮 | □ | ✉ | 🗁 | ▤ | GSM | 9 | Jul-07 |
| 245 | MOTOROLA | L2 | ☎ | 🕮 | ◑ | ✉ | □ | ▤ | GSM | 9 | Oct-06 |
| 246 | MOTOROLA | L6 | ☎ | 🕮 | ◑ | ✉ | 🗁 | ▤ | GSM | 9 | Apr-06 |
| 247 | MOTOROLA | L7 | ☎ | 🕮 | ◑ | ✉ | 🗁 | ▤ | GSM | 9 | Apr-06 |
| 248 | MOTOROLA | maxx Ve | ☎ | 🕮 | ◑ | ✉ | □ | ▤ | CDMA | | Jan-10 |
| 249 | MOTOROLA | MPX200 | ☎ | 🕮 | ◑ | ✉ | 🗁 | ▤ | GSM | 9 | Jul-06 |
| 250 | MOTOROLA | MPX220 | ☎ | 🕮 | ◑ | ✉ | 🗁 | ▤ | GSM | 24 | Jul-06 |
| 251 | MOTOROLA | Q | □ | 🕮 | ◑ | ✉ | 🗁 | ▤ | GSM | 9 | Jan-08 |
| 252 | MOTOROLA | Q9h | □ | 🕮 | ◑ | ✉ | 🗁 | ▤ | GSM | 26 | Apr-08 |
| 253 | MOTOROLA | QA1 | ☎ | 🕮 | ◑ | ✉ | 🗁 | □ | GSM | 26 | Sep-10 |
| 254 | MOTOROLA | T280i | ☎ | 🕮 | ◑ | ✉ | □ | ▤ | GSM | | Oct-06 |
| 255 | MOTOROLA | T300p | ☎ | 🕮 | ◑ | ✉ | □ | ▤ | CDMA | 24 | Dec-05 |
| 256 | MOTOROLA | U6 | ☎ | 🕮 | ◑ | ✉ | 🗁 | ▤ | GSM | 9 | Apr-06 |

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| 257 | MOTOROLA | V1050 | ☎ 🕘 | 🕮 | ◑ | ✉ 🕘 | 🗁 | ▤ | GSM | 24 | Oct-06 |
| 258 | MOTOROLA | V120c | ☎ 🕘 | 🕮 | ◑ | ✉ 🕘 | □ | □ | CDMA | 24 | Apr-06 |
| 259 | MOTOROLA | V180 | ☎ 🕘 | 🕮 | ◑ | ✉ 🕘 | 🗁 | ▤ | GSM | 9 | Dec-05 |
| 260 | MOTOROLA | V188 | ☎ 🕘 | 🕮 | ◑ | ✉ 🕘 | 🗁 | ▤ | GSM | 9 | Apr-06 |
| 261 | MOTOROLA | V190 | ☎ 🕘 | 🕮 | ◑ | ✉ 🕘 | □ | ▤ | GSM | 9 | Jul-07 |
| 262 | MOTOROLA | V195 | ☎ 🕘 | 🕮 | ◑ | ✉ 🕘 | □ | ▤ | GSM | 9 | Oct-06 |
| 263 | MOTOROLA | V220 | ☎ 🕘 | 🕮 | ◑ | ✉ 🕘 | 🗁 | ▤ | GSM | 9 | Apr-06 |
| 264 | MOTOROLA | V235 | ☎ 🕘 | 🕮 | ◑ | ✉ 🕘 | 🗁 | □ | GSM | 9 | Jan-07 |
| 265 | MOTOROLA | V260 | ☎ | 🕮 | ◑ | ✉ 🕘 | □ | ▤ | CDMA | 24 | Jan-08 |
| 266 | MOTOROLA | V265 | ☎ 🕘 | 🕮 | ◑ | ✉ 🕘 | □ | ▤ | CDMA | 24 | Apr-08 |
| 267 | MOTOROLA | V3 | ☎ 🕘 | 🕮 | ◑ | ✉ 🕘 | 🗁 | ▤ | GSM | 9 | Dec-05 |
| 268 | MOTOROLA | V300 | ☎ 🕘 | 🕮 | ◑ | ✉ 🕘 | 🗁 | ▤ | GSM | 24 | Dec-05 |
| 269 | MOTOROLA | V360 | ☎ 🕘 | 🕮 | ◑ | ✉ 🕘 | 🗁 | ▤ | GSM | 9 | Apr-06 |
| 270 | MOTOROLA | V3a | ☎ 🕘 | 🕮 | ◑ | ✉ 🕘 | 🗁 | ▤ | CDMA | 9 | May-11 |
| 271 | MOTOROLA | V3c | ☎ 🕘 | 🕮 | ◑ | ✉ 🕘 | 🗁 | ▤ | CDMA | | Jan-10 |
| 272 | MOTOROLA | V3i | ☎ 🕘 | 🕮 | ◑ | ✉ 🕘 | 🗁 | ▤ | GSM | 9 | Apr-06 |
| 273 | MOTOROLA | V3m | ☎ 🕘 | 🕮 | ◑ | ✉ 🕘 | □ | ▤ | CDMA | | Apr-08 |
| 274 | MOTOROLA | V3x | ☎ 🕘 | 🕮 | ◑ | ✉ 🕘 | 🗁 | ▤ | GSM | 9 | Jul-06 |
| 275 | MOTOROLA | V3xx | ☎ 🕘 | 🕮 | ◑ | ✉ 🕘 | 🗁 | ▤ | GSM | 9 | Oct-09 |
| 276 | MOTOROLA | V400 | ☎ 🕘 | 🕮 | ◑ | ✉ 🕘 | □ | ▤ | GSM | 24 | Jan-08 |
| 277 | MOTOROLA | V500 | ☎ 🕘 | 🕮 | ◑ | ✉ 🕘 | □ | ▤ | GSM | 24 | Jul-08 |
| 278 | MOTOROLA | V525 | ☎ 🕘 | 🕮 | ◑ | ✉ 🕘 | 🗁 | ▤ | GSM | 24 | Dec-05 |
| 279 | MOTOROLA | V540 | ☎ 🕘 | 🕮 | ◑ | ✉ 🕘 | □ | ▤ | GSM | 24 | Jul-07 |
| 280 | MOTOROLA | V550 | ☎ 🕘 | 🕮 | ◑ | ✉ 🕘 | 🗁 | ▤ | GSM | 24 | Apr-06 |
| 281 | MOTOROLA | V551 | ☎ 🕘 | 🕮 | ◑ | ✉ 🕘 | 🗁 | ▤ | GSM | 24 | Apr-06 |
| 282 | MOTOROLA | V6 | ☎ 🕘 | 🕮 | □ | ✉ 🕘 | 🗁 | ▤ | GSM | 9 | Jul-07 |
| 283 | MOTOROLA | V600 | ☎ 🕘 | 🕮 | ◑ | ✉ 🕘 | 🗁 | ▤ | GSM | | Dec-05 |
| 284 | MOTOROLA | V60p | ☎ 🕘 | 🕮 | ◑ | ✉ 🕘 | □ | ▤ | CDMA | 24 | Dec-05 |

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| 285 | MOTOROLA | V60v | ☎ | 🕮 | ◑ | ✉ | □ | ▤ | CDMA | 24 | Jul-07 |
| 286 | MOTOROLA | V620 | ☎ | 🕮 | ◑ | ✉ | 🗁 | ▤ | GSM | 24 | Apr-06 |
| 287 | MOTOROLA | V635 | ☎ | 🕮 | ◑ | ✉ | 🗁 | ▤ | GSM | 24 | Dec-05 |
| 288 | MOTOROLA | V65p | ☎ | 🕮 | ◑ | ✉ | □ | ▤ | CDMA | 24 | Apr-08 |
| 289 | MOTOROLA | V66i | ☎ | 🕮 | ◑ | ✉ | □ | ▤ | GSM | 24 | Dec-05 |
| 290 | MOTOROLA | V70 | ☎ | 🕮 | ◑ | ✉ | □ | ▤ | GSM | 24 | Dec-05 |
| 291 | MOTOROLA | V710 | ☎ | 🕮 | ◑ | □ | □ | ▤ | CDMA | 24 | Apr-06 |
| 292 | MOTOROLA | V8 | ☎ | 🕮 | □ | ✉ | 🗁 | □ | GSM | | Jan-10 |
| 293 | MOTOROLA | V80 | ☎ | 🕮 | ◑ | ✉ | 🗁 | ▤ | GSM | 24 | Dec-05 |
| 294 | MOTOROLA | V860 (Barrage) | ☎ | 🕮 | ◑ | ✉ | 🗁 | ▤ | CDMA | 26 | May-11 |
| 295 | MOTOROLA | V9 | ☎ | 🕮 | ◑ | ✉ | 🗁 | ▤ | GSM | 26 | Apr-08 |
| 296 | MOTOROLA | V950 | ☎ | 🕮 | ◑ | ✉ | □ | ▤ | CDMA | | Jan-10 |
| 297 | MOTOROLA | V975 | ☎ | 🕮 | ◑ | ✉ | 🗁 | ▤ | GSM | 24 | Jul-08 |
| 298 | MOTOROLA | V980 | ☎ | 🕮 | ◑ | ✉ | 🗁 | ▤ | GSM | 24 | Dec-05 |
| 299 | MOTOROLA | V9m | ☎ | 🕮 | ◑ | ✉ | 🗁 | ▤ | CDMA | | Apr-08 |
| 300 | MOTOROLA | VE240 | ☎ | 🕮 | ◑ | ✉ | 🗁 | ▤ | CDMA | 9 | May-11 |
| 301 | MOTOROLA | W385 | ☎ | 🕮 | ◑ | ✉ | 🗁 | ▤ | CDMA | | Apr-08 |
| 302 | MOTOROLA | W450 | ☎ | 🕮 | ◑ | □ | 🗁 | ▤ | GSM | | Oct-09 |
| 303 | MOTOROLA | W510 | ☎ | 🕮 | ◑ | ✉ | 🗁 | □ | GSM | 9 | Jan-08 |
| 304 | MOTOROLA | W755 | ☎ | 🕮 | ◑ | ✉ | 🗁 | □ | CDMA | | Jan-10 |
| 305 | MOTOROLA | W840 (Quantico) | ☎ | 🕮 | ◑ | ✉ | 🗁 | ▤ | CDMA | 26 | May-11 |
| 306 | MOTOROLA | Z3 | ☎ | 🕮 | ◑ | ✉ | 🗁 | ▤ | GSM | 9 | Apr-07 |
| 307 | MOTOROLA | Z6 | ☎ | 🕮 | □ | ✉ | 🗁 | □ | GSM | | Jan-10 |
| 308 | MOTOROLA | Z6m | ☎ | 🕮 | □ | ✉ | 🗁 | ▤ | CDMA | | Apr-08 |
| 309 | MOTOROLA | Z6tv | ☎ | 🕮 | ◑ | ✉ | 🗁 | □ | CDMA | | Sep-10 |
| 310 | MOTOROLA | Z8 | ☎ | 🕮 | □ | ✉ | □ | ▤ | GSM | | Jul-08 |
| 311 | MOTOROLA | Z9 | ☎ | 🕮 | ◑ | ✉ | 🗁 | □ | GSM | 26 | Apr-09 |
| 312 | MOTOROLA | ZN4 | ☎ | 🕮 | ◑ | ✉ | 🗁 | □ | CDMA | | Jan-10 |

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| 313 | MOTOROLA | MB860 | | | | | | | GSM | 26 | Dec 2011 |
| 314 | MOTOROLA | XT610 | | | | | | | CDMA | 26 | Dec 2011 |
| 315 | MOTOROLA | MB865 | | | | | | | GSM | 26 | Sep-12 |
| 316 | NDRIVE | S300 | | | | | | | GSM | 9 | Apr-09 |
| 317 | NEO | 808i | | | | | | | GSM | | Jan-09 |
| 318 | NOKIA | 1100 | | | | | | | GSM | 25(CD-NOK1) | Oct-07 |
| 319 | NOKIA | 1101 | | | | | | | GSM | 25(CD-NOK1) | Oct-07 |
| 320 | NOKIA | 1110 | | | | | | | GSM | 25(CD-NOK2) | Oct-07 |
| 321 | NOKIA | 1112 | | | | | | | GSM | 25(CD-NOK2) | Oct-07 |
| 322 | NOKIA | 1200 | | | | | | | GSM | 25(CD-NOK1) | Jan-08 |
| 323 | NOKIA | 1208 | | | | | | | GSM | 25(CD-NOK1) | Jan-08 |
| 324 | NOKIA | 1209 | | | | | | | GSM | 25(CD-NOK1) | Apr-09 |
| 325 | NOKIA | 1600 | | | | | | | GSM | 25(CD-NOK2) | Oct-07 |
| 326 | NOKIA | 2100 | | | | | | | GSM | 25(CD-NOK3) | Oct-07 |
| 327 | NOKIA | 2285 | | | | | | | CDMA | 999 | Oct-06 |
| 328 | NOKIA | 2300 | | | | | | | GSM | 25(CD-NOK1) | Oct-07 |

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| 329 | NOKIA | 2310 | ☎ | 🕮 | ◑ 🕘 | ✉ 🕘 | □ | ▤ | GSM | 25(CD-NOK2) | Oct-07 |
| 330 | NOKIA | 2600 | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | □ | GSM | | Jul-08 |
| 331 | NOKIA | 2610 | ☎ 🕘 | 🕮 | ◑ 🕘 | □ | □ | □ | GSM | 25(CD-NOK2) | Oct-07 |
| 332 | NOKIA | 2626 | ☎ 🕘 | 🕮 | ◑ 🕘 | □ | □ | □ | GSM | 25(CD-NOK2) | Oct-07 |
| 333 | NOKIA | 2630 | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | □ | GSM | | Apr-08 |
| 334 | NOKIA | 2650 | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | ▤ | GSM | 25(CD-NOK6) | Oct-07 |
| 335 | NOKIA | 2652 | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | ▤ | GSM | 25(CD-NOK6) | Oct-07 |
| 336 | NOKIA | 2680 | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | □ | GSM | | Jan-09 |
| 337 | NOKIA | 2760 | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | □ | GSM | | Jan-08 |
| 338 | NOKIA | 3100 | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | □ | GSM | 999 | Oct-06 |
| 339 | NOKIA | 3109 | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | □ | GSM | 9 | Oct-07 |
| 340 | NOKIA | 3110 | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | □ | GSM | 9 | Jul-07 |
| 341 | NOKIA | 3120 | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | ▤ | GSM | 999 | Jul-08 |
| 342 | NOKIA | 3200 | □ | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | ▤ | GSM | 999 | Apr-06 |
| 343 | NOKIA | 3210 | □ | 🕮 | ◑ 🕘 | ✉ 🕘 | □ | □ | GSM | 25(CD-NOK8) | Oct-07 |
| 344 | NOKIA | 3220 | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | □ | GSM | 999 | Apr-07 |
| 345 | NOKIA | 3230 | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | ▤ | GSM | 12 | Apr-07 |
| 346 | NOKIA | 3250 | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | □ | GSM | 12 | Apr-07 |
| 347 | NOKIA | 3310 | □ | 🕮 | ◑ 🕘 | ✉ 🕘 | □ | □ | GSM | 25(CD-NOK9) | Oct-07 |
| 348 | NOKIA | 3330 | □ | 🕮 | ◑ 🕘 | □ | □ | □ | GSM | 25(CD-NO | Jan-08 |

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| 349 | NOKIA | 3410 | | | | | | | GSM | 25(CD-NOK9) | Oct-07 |
| 350 | NOKIA | 3510 | | | | | | | GSM | 25(CD-NOK5) | Jan-08 |
| 351 | NOKIA | 3555 | | | | | | | CDMA | 26 | Oct-08 |
| 352 | NOKIA | 5000 | | | | | | | GSM | | Oct-08 |
| 353 | NOKIA | 5070 | | | | | | | GSM | 999 | Jul-07 |
| 354 | NOKIA | 5100 | | | | | | | GSM | 999 | Dec-05 |
| 355 | NOKIA | 5110 | | | | | | | GSM | 25(CD-NOK7) | Oct-07 |
| 356 | NOKIA | 5140 | | | | | | | GSM | 999 | Jul-08 |
| 357 | NOKIA | 5200 | | | | | | | GSM | 9 | Apr-07 |
| 358 | NOKIA | 5210 | | | | | | | GSM | | Apr-07 |
| 359 | NOKIA | 5220 | | | | | | | GSM | 26 | Oct-08 |
| 360 | NOKIA | 5230 | | | | | | | GSM | 26 | Sep-10 |
| 361 | NOKIA | 5300 | | | | | | | GSM | 9 | Apr-07 |
| 362 | NOKIA | 5310 | | | | | | | GSM | 26 | Jan-08 |
| 363 | NOKIA | 5320 | | | | | | | GSM | 26 | Jan-09 |
| 364 | NOKIA | 5500 | | | | | | | GSM | 12 | Apr-07 |
| 365 | NOKIA | 5610 | | | | | | | GSM | 26 | Apr-08 |
| 366 | NOKIA | 5700 | | | | | | | GSM | 9 | Jul-07 |
| 367 | NOKIA | 5800 | | | | | | | GSM | 26 | Jul-09 |
| 368 | NOKIA | 6010 | | | | | | | GSM | 25(CD-NOK5) | Oct-07 |
| 369 | NOKIA | 6020 | | | | | | | GSM | 999 | Dec-05 |
| 370 | NOKIA | 6021 | | | | | | | GSM | 999 | Apr-06 |

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| 371 | NOKIA | 6030 | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | □ | ▤ | GSM | 25(CD-NOK2) | Oct-07 |
| 372 | NOKIA | 6060 | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | □ | ▤ | GSM | 25(CD-NOK2) | Oct-07 |
| 373 | NOKIA | 6061 | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | □ | □ | GSM | 25(CD-NOK2) | Apr-08 |
| 374 | NOKIA | 6070 | ☎ | 🕮 | ◑ 🕘 | ✉ 🕘 | □ | ▤ | GSM | 999 | Oct-06 |
| 375 | NOKIA | 6080 | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | □ | □ | GSM | 999 | Jan-07 |
| 376 | NOKIA | 6085 | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | □ | GSM | 12 | Jul-07 |
| 377 | NOKIA | 6086 | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | □ | GSM | 12 | Apr-08 |
| 378 | NOKIA | 6100 | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | ▤ | GSM | 999 | Dec-05 |
| 379 | NOKIA | 6101 | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | □ | GSM | 999 | Dec-05 |
| 380 | NOKIA | 6103 | ☎ | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | ▤ | GSM | 999 | Oct-06 |
| 381 | NOKIA | 6108 | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | ▤ | GSM | 999 | Oct-07 |
| 382 | NOKIA | 6111 | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | □ | GSM | 12 | Apr-06 |
| 383 | NOKIA | 6120 | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | ▤ | GSM | 9 | Jan-08 |
| 384 | NOKIA | 6125 | ☎ | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | ▤ | GSM | 12 | Oct-06 |
| 385 | NOKIA | 6130 | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | □ | □ | GSM | 25(CD-NOK7) | Oct-07 |
| 386 | NOKIA | 6131 | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | □ | GSM | 12 | Jul-06 |
| 387 | NOKIA | 6136 | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | □ | GSM | 12 | Jan-07 |
| 388 | NOKIA | 6150 | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | □ | □ | GSM | 25(CD-NOK7) | Oct-07 |
| 389 | NOKIA | 6151 | ☎ | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | □ | GSM | 12 | Oct-06 |
| 390 | NOKIA | 6170 | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | □ | GSM | 12 | Dec-05 |
| 391 | NOKIA | 6200 | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | ▤ | GSM | 999 | Jul-07 |
| 392 | NOKIA | 6210 | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | ▤ | GSM | 26 | Jul-09 |

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| 393 | NOKIA | 6210 | ☎ | 🕮 | ◑ 🕘 | ✉ 🕘 | ☐ | ▤ | GSM | 25(CD-NOK7) | Oct-07 |
| 394 | NOKIA | 6220 | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | ☐ | GSM | 999 | Dec-05 |
| 395 | NOKIA | 6225 | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | ▤ | CDMA | 999 | Jul-07 |
| 396 | NOKIA | 6230 | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | ☐ | GSM | 12 | Apr-06 |
| 397 | NOKIA | 6233 | ☎ | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | ▤ | GSM | 12 | Oct-06 |
| 398 | NOKIA | 6234 | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | ☐ | GSM | 12 | Jul-07 |
| 399 | NOKIA | 6260 | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | ▤ | GSM | 12 | Jan-07 |
| 400 | NOKIA | 6263 | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | ☐ | CDMA | 9 | Oct-08 |
| 401 | NOKIA | 6267 | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | ☐ | GSM | 9 | Jan-08 |
| 402 | NOKIA | 6270 | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | ☐ | GSM | 12 | Jul-06 |
| 403 | NOKIA | 6280 | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | ☐ | GSM | 12 | Apr-06 |
| 404 | NOKIA | 6282 | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | ☐ | GSM | 12 | Jul-07 |
| 405 | NOKIA | 6288 | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | ☐ | GSM | 12 | Jul-07 |
| 406 | NOKIA | 6290 | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | ☐ | GSM | 9 | Oct-07 |
| 407 | NOKIA | 6300 | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | ☐ | GSM | 9 | Jul-07 |
| 408 | NOKIA | 6301 | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | ☐ | GSM | 9 | Jan-09 |
| 409 | NOKIA | 6310 | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | ☐ | ▤ | GSM | | Apr-06 |
| 410 | NOKIA | 6360 | ☐ | 🕮 | ◑ 🕘 | ✉ 🕘 | ☐ | ▤ | CDMA | 25(CD-NOK7) | Oct-07 |
| 411 | NOKIA | 6510 | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ | ☐ | ▤ | GSM | | Apr-07 |
| 412 | NOKIA | 6555 | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | ☐ | GSM | 26 | Jan-08 |
| 413 | NOKIA | 6610 | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | ☐ | ▤ | GSM | 999 | Apr-06 |
| 414 | NOKIA | 6620 | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | ▤ | GSM | 12 | Apr-07 |
| 415 | NOKIA | 6630 | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | ▤ | GSM | | Jan-08 |
| 416 | NOKIA | 6650 | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | ▤ | GSM | 26 | Jul-09 |
| 417 | NOKIA | 6670 | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | ▤ | GSM | 12 | Jan-07 |
| 418 | NOKIA | 6680 | ☎ | 🕮 | ◑ | ✉ | 🗁 | ▤ | GSM | 12 | Jan-07 |

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| 419 | NOKIA | 6790 | ☎ | 📖 | ◑ | ✉ | 🗁 | ▤ | GSM | 26 | Sep-10 |
| 420 | NOKIA | 6800 | ☎ | 📖 | ◑ | ✉ | 🗁 | ☐ | GSM | 999 | Oct-07 |
| 421 | NOKIA | 6810 | ☎ | 📖 | ◑ | ✉ | 🗁 | ☐ | GSM | 999 | Jul-07 |
| 422 | NOKIA | 6820 | ☎ | 📖 | ◑ | ✉ | 🗁 | ☐ | GSM | 999 | Apr-06 |
| 423 | NOKIA | 6822 | ☎ | 📖 | ◑ | ✉ | 🗁 | ☐ | GSM | 999 | Dec-05 |
| 424 | NOKIA | 7020 | ☎ | 📖 | ◑ | ✉ | 🗁 | ☐ | GSM | 26 | Dec-10 |
| 425 | NOKIA | 7110 | ☎ | 📖 | ◑ | ✉ | ☐ | ▤ | GSM | 25(CD-NOK7) | Oct-07 |
| 426 | NOKIA | 7200 | ☎ | 📖 | ◑ | ✉ | 🗁 | ☐ | GSM | 999 | Oct-06 |
| 427 | NOKIA | 7210 | ☎ | 📖 | ◑ | ✉ | 🗁 | ☐ | GSM | 26 | Jan-09 |
| 428 | NOKIA | 7210 | ☎ | 📖 | ◑ | ✉ | 🗁 | ▤ | GSM | 999 | Dec-05 |
| 429 | NOKIA | 7260 | ☎ | 📖 | ◑ | ✉ | 🗁 | ☐ | GSM | 999 | Apr-06 |
| 430 | NOKIA | 7270 | ☎ | 📖 | ◑ | ✉ | 🗁 | ☐ | GSM | 12 | Dec-05 |
| 431 | NOKIA | 7280 | ☎ | 📖 | ◑ | ✉ | 🗁 | ☐ | GSM | | Dec-05 |
| 432 | NOKIA | 7360 | ☎ | 📖 | ◑ | ✉ | 🗁 | ☐ | GSM | 999 | Apr-06 |
| 433 | NOKIA | 7370 | ☎ | 📖 | ◑ | ✉ | 🗁 | ☐ | GSM | 12 | Apr-06 |
| 434 | NOKIA | 7373 | ☎ | 📖 | ◑ | ✉ | 🗁 | ☐ | GSM | 12 | Apr-07 |
| 435 | NOKIA | 7380 | ☎ | 📖 | ◑ | ✉ | 🗁 | ☐ | GSM | | Apr-06 |
| 436 | NOKIA | 7390 | ☎ | 📖 | ◑ | ✉ | 🗁 | ☐ | GSM | 9 | Apr-07 |
| 437 | NOKIA | 7500 | ☎ | 📖 | ◑ | ✉ | 🗁 | ☐ | GSM | 9 | Jan-08 |
| 438 | NOKIA | 7510 | ☎ | 📖 | ◑ | ✉ | 🗁 | ☐ | GSM | 26 | Jul-09 |
| 439 | NOKIA | 7600 | ☎ | 📖 | ◑ | ✉ | 🗁 | ▤ | GSM | 12 | Dec-05 |
| 440 | NOKIA | 7610 | ☎ | 📖 | ◑ | ✉ | 🗁 | ▤ | GSM | 12 | Jan-07 |
| 441 | NOKIA | 7900 | ☎ | 📖 | ◑ | ✉ | 🗁 | ☐ | GSM | 26 | Apr-08 |
| 442 | NOKIA | 8210 | ☎ | 📖 | ◑ | ✉ | ☐ | ☐ | GSM | 25(CD-NOK3) | Apr-07 |
| 443 | NOKIA | 8310 | ☎ | 📖 | ◑ | ✉ | ☐ | ▤ | GSM | | Apr-07 |

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| 444 | NOKIA | 8800 | ☎ | 🕮 | ◑ | ✉ | 🗁 | ☐ | GSM | | Dec-05 |
| 445 | NOKIA | 8850 | ☎ | 🕮 | ◑ | ✉ | ☐ | ☐ | GSM | | Apr-07 |
| 446 | NOKIA | 8910 | ☎ | 🕮 | ◑ | ✉ | ☐ | ▤ | GSM | | Dec-05 |
| 447 | NOKIA | 1110i | ☎ | 🕮 | ◑ | ✉ | ☐ | ▤ | GSM | 25(CD-NOK2) | Oct-07 |
| 448 | NOKIA | 2323 Classic | ☎ | 🕮 | ◑ | ✉ | 🗁 | ☐ | GSM | | Oct-09 |
| 449 | NOKIA | 2330 Classic | ☎ | 🕮 | ◑ | ✉ | 🗁 | ☐ | GSM | | Oct-09 |
| 450 | NOKIA | 2700 Classic | ☎ | 🕮 | ◑ | ✉ | 🗁 | ☐ | GSM | 26 | Oct-09 |
| 451 | NOKIA | 2720 Fold | ☎ | 🕮 | ◑ | ✉ | 🗁 | ☐ | GSM | | Jan-10 |
| 452 | NOKIA | 2730 Classic | ☎ | 🕮 | ◑ | ✉ | 🗁 | ☐ | GSM | 26 | Jan-10 |
| 453 | NOKIA | 2865i | ☎ | 🕮 | ◑ | ✉ | 🗁 | ☐ | CDMA | 12 | Jan-08 |
| 454 | NOKIA | 3120 Classic | ☎ | 🕮 | ◑ | ✉ | 🗁 | ☐ | GSM | 26 | Apr-09 |
| 455 | NOKIA | 3155i | ☎ | 🕮 | ◑ | ✉ | 🗁 | ☐ | CDMA | 12 | Apr-08 |
| 456 | NOKIA | 3500 classic | ☎ | 🕮 | ◑ | ✉ | 🗁 | ☐ | GSM | 9 | Jan-08 |
| 457 | NOKIA | 3510i | ☎ | 🕮 | ◑ | ✉ | ☐ | ▤ | GSM | 25(CD-NOK5) | Oct-07 |
| 458 | NOKIA | 3600 Slide | ☎ | 🕮 | ◑ | ✉ | 🗁 | ☐ | GSM | 26 | Oct-08 |
| 459 | NOKIA | 3720 Classic | ☎ | 🕮 | ◑ | ✉ | 🗁 | ☐ | GSM | 26 | Jan-10 |
| 460 | NOKIA | 5130 Xpress Music | ☎ | 🕮 | ◑ | ✉ | 🗁 | ☐ | GSM | 26 | Oct-09 |
| 461 | NOKIA | 5140i | ☎ | 🕮 | ◑ | ✉ | ☐ | ☐ | GSM | 999 | Dec-05 |
| 462 | NOKIA | 5530 Xpress Music | ☎ | 🕮 | ◑ | ✉ | 🗁 | ▤ | GSM | 26 | Oct-09 |
| 463 | NOKIA | 5630 Xpress Music | ☎ | 🕮 | ◑ | ✉ | 🗁 | ▤ | GSM | 26 | Oct-09 |
| 464 | NOKIA | 5730 Xpress Music | ☎ | 🕮 | ◑ | ✉ | 🗁 | ▤ | GSM | 26 | Oct-09 |
| 465 | NOKIA | 6015i | ☎ | 🕮 | ◑ | ✉ | 🗁 | ▤ | CDMA | 999 | Oct-06 |
| 466 | NOKIA | 6030b | ☎ | 🕮 | ◑ | ✉ | ☐ | ☐ | GSM | 25(CD-NOK2) | Jan-10 |
| 467 | NOKIA | 6110 Navigator | ☎ | 🕮 | ◑ | ✉ | 🗁 | ☐ | GSM | 9 | Oct-07 |
| 468 | NOKIA | 6124c | ☎ | 🕮 | ◑ | ✉ | 🗁 | ▤ | GSM | 9 | Jan-09 |

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| 469 | NOKIA | 6155i | ☎ | | ◑ | ✉ | 🗁 | | CDMA | 12 | Apr-08 |
| 470 | NOKIA | 6165i | ☎ | | ◑ | ✉ | 🗁 | | CDMA | 12 | Jan-07 |
| 471 | NOKIA | 6208 Classic | ☎ | | ◑ | ✉ | 🗁 | | GSM | 26 | Oct-09 |
| 472 | NOKIA | 6212 Classic | ☎ | | ◑ | ✉ | 🗁 | | GSM | 26 | Oct-09 |
| 473 | NOKIA | 6220 Classic | ☎ | | ◑ | ✉ | 🗁 | ▤ | GSM | 26 | Apr-09 |
| 474 | NOKIA | 6230i | ☎ | | ◑ | ✉ | | | GSM | 12 | Apr-06 |
| 475 | NOKIA | 6235i | ☎ | | ◑ | | 🗁 | | CDMA | 12 | Apr-06 |
| 476 | NOKIA | 6255i | ☎ | | ◑ | | 🗁 | | CDMA | 12 | Apr-06 |
| 477 | NOKIA | 6260 Slide | ☎ | | ◑ | ✉ | 🗁 | | GSM | 26 | Oct-09 |
| 478 | NOKIA | 6265i | ☎ | | ◑ | ✉ | 🗁 | | CDMA | 12 | Jan-08 |
| 479 | NOKIA | 6275i | ☎ | | ◑ | ✉ | 🗁 | | GSM | 12 | Apr-08 |
| 480 | NOKIA | 6303 Classic | ☎ | | ◑ | ✉ | 🗁 | | GSM | 26 | Oct-09 |
| 481 | NOKIA | 6310i | ☎ | | ◑ | ✉ | | ▤ | GSM | | Apr-07 |
| 482 | NOKIA | 6500 classic | ☎ | | ◑ | ✉ | 🗁 | | GSM | 26 | Jan-08 |
| 483 | NOKIA | 6500 Slide | ☎ | | ◑ | ✉ | 🗁 | | GSM | 26 | Apr-08 |
| 484 | NOKIA | 6600 fold | ☎ | | ◑ | ✉ | 🗁 | | GSM | 26 | Jan-09 |
| 485 | NOKIA | 6600 slide | ☎ | | ◑ | ✉ | 🗁 | | GSM | 26 | Jan-09 |
| 486 | NOKIA | 6600i Slide | ☎ | | ◑ | ✉ | 🗁 | | GSM | 26 | Jan-10 |
| 487 | NOKIA | 6610i | ☎ | | ◑ | ✉ | 🗁 | ▤ | GSM | 999 | Dec-05 |
| 488 | NOKIA | 6700 Classic | ☎ | | ◑ | ✉ | 🗁 | | GSM | 26 | Jan-10 |
| 489 | NOKIA | 6720 Classic | ☎ | | ◑ | ✉ | 🗁 | ▤ | GSM | 26 | Oct-09 |
| 490 | NOKIA | 6730 Classic | ☎ | | ◑ | ✉ | 🗁 | ▤ | GSM | 26 | Oct-09 |
| 491 | NOKIA | 6760 Slide | ☎ | | ◑ | ✉ | 🗁 | ▤ | GSM | 26 | Jan-10 |
| 492 | NOKIA | 7100 Supernova | ☎ | | ◑ | ✉ | 🗁 | | GSM | | Apr-09 |
| 493 | NOKIA | 7250i | ☎ | | ◑ | ✉ | 🗁 | ▤ | GSM | 999 | Dec-05 |
| 494 | NOKIA | 7310 Supernova | ☎ | | ◑ | ✉ | 🗁 | | GSM | 26 | Oct-08 |
| 495 | NOKIA | 7610 Supernova | ☎ | | ◑ | ✉ | 🗁 | | GSM | 26 | Oct-08 |

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| 496 | NOKIA | 8600 Luna | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | ▯ | GSM | 26 | Oct-08 |
| 497 | NOKIA | 8910i | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | ▯ | ▤ | GSM | | Dec-05 |
| 498 | NOKIA | E50 | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | ▯ | GSM | 12 | Apr-07 |
| 499 | NOKIA | E51 | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | ▯ | GSM | 9 | Apr-08 |
| 500 | NOKIA | E55 | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | ▤ | GSM | 26 | Jan-10 |
| 501 | NOKIA | E60 | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | ▤ | GSM | 12 | Apr-07 |
| 502 | NOKIA | E61 | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | ▯ | GSM | 12 | Apr-07 |
| 503 | NOKIA | E63 | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | ▤ | GSM | 26 | Apr-09 |
| 504 | NOKIA | E65 | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | ▤ | GSM | 12 | Apr-07 |
| 505 | NOKIA | E66 | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | ▯ | GSM | 26 | Oct-08 |
| 506 | NOKIA | E70 | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | ▯ | GSM | 12 | Apr-07 |
| 507 | NOKIA | E71 | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | ▤ | GSM | 26 | Oct-08 |
| 508 | NOKIA | E75 | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | ▤ | GSM | 26 | Jul-09 |
| 509 | NOKIA | N70 | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | ▤ | GSM | 12 | Jan-07 |
| 510 | NOKIA | N71 | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | ▯ | GSM | 12 | Jul-07 |
| 511 | NOKIA | N72 | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | ▤ | GSM | 12 | Jan-07 |
| 512 | NOKIA | N73 | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | ▤ | GSM | 12 | Apr-07 |
| 513 | NOKIA | N76 | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | ▤ | GSM | 9 | Jul-07 |
| 514 | NOKIA | N77 | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | ▤ | GSM | 12 | Oct-08 |
| 515 | NOKIA | N79 | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | ▤ | GSM | 26 | Jan-09 |
| 516 | NOKIA | N80 | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | ▯ | GSM | 12 | Apr-07 |
| 517 | NOKIA | N81 8GB | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | ▤ | GSM | 26 | Apr-08 |
| 518 | NOKIA | N82 | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | ▤ | GSM | 26 | Jul-08 |
| 519 | NOKIA | N85 | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | ▤ | GSM | 26 | Apr-09 |
| 520 | NOKIA | N90 | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | ▤ | GSM | 12 | Jan-07 |
| 521 | NOKIA | N91 | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | ▤ | GSM | 9 | Apr-07 |
| 522 | NOKIA | N93 | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | ▤ | GSM | 12 | Apr-08 |
| 523 | NOKIA | N93i | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | ▤ | GSM | 12 | Jul-07 |

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| 524 | NOKIA | N95 | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | ▤ | GSM | 9 | Jan-08 |
| 525 | NOKIA | N95 8GB | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | ▤ | GSM | 9 | Jul-08 |
| 526 | NOKIA | N96 | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | ▤ | GSM | 26 | Oct-08 |
| 527 | NOKIA | N97 | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | ▤ | GSM | 26 | Oct-09 |
| 528 | NOKIA | N97 mini | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | ▤ | GSM | 26 | Sep-10 |
| 529 | NOKIA | X3 | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | □ | GSM | 26 | Dec-10 |
| 530 | NOKIA | X6 | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | ▤ | GSM | 26 | May-11 |
| 531 | NOKIA | 6350 | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | □ | GSM | 26 | Dec 2011 |
| 532 | NOKIA | X2-01 | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | □ | GSM | 26 | Dec 2011 |
| 533 | O2 | ICE | ☎ | 🕮 | □ | ✉ 🕘 | 🗁 | ▤ | GSM | 5 | Oct-07 |
| 534 | O2 | XDA | □ | 🕮 | ◑ 🕘 | ✉ | 🗁 | ▤ | GSM | | Jul-06 |
| 535 | O2 | XDA IIi | □ | 🕮 | ◑ 🕘 | ✉ | 🗁 | ▤ | GSM | | Jul-06 |
| 536 | ORANGE | SPV C500 | □ | 🕮 | ◑ 🕘 | ✉ | 🗁 | ▤ | GSM | 9 | Jul-06 |
| 537 | ORANGE | SPV C550 | □ | 🕮 | ◑ 🕘 | ✉ | 🗁 | ▤ | GSM | 9 | Jul-06 |
| 538 | ORANGE | SPV C600 | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ | 🗁 | ▤ | GSM | 9 | Jul-06 |
| 539 | PALM | 700P | □ | 🕮 | ◑ 🕘 | ✉ 🕘 | □ | ▤ | CDMA | 11 | Jan-10 |
| 540 | PALM | Centro | □ | 🕮 | ◑ 🕘 | □ | □ | ▤ | GSM | 11 | Jan-09 |
| 541 | PALM | Treo 500 | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | ▤ | GSM | 9 | Jan-09 |
| 542 | PALM | Treo 680 | □ | 🕮 | ◑ 🕘 | □ | □ | ▤ | GSM | 11 | Apr-08 |
| 543 | PALM | Treo 750 | ☎ 🕘 | 🕮 | ◑ 🕘 | □ | 🗁 | ▤ | GSM | | Jul-07 |
| 544 | PALM | Treo Pro | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | ▤ | GSM | 9 | Jan-09 |
| 545 | PANTECH | P8000 | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | □ | GSM | 26 | Apr-12 |
| 546 | SAGEM | my302X | ☎ 🕘 | 🕮 | ◑ | ✉ 🕘 | 🗁 | ▤ | GSM | | Apr-07 |
| 547 | SAGEM | my401C | ☎ 🕘 | 🕮 | ◑ | ✉ 🕘 | 🗁 | ▤ | GSM | | Jan-08 |
| 548 | SAGEM | my401V | ☎ 🕘 | 🕮 | ◑ | ✉ 🕘 | 🗁 | ▤ | GSM | | Apr-07 |
| 549 | SAGEM | my401X | ☎ 🕘 | 🕮 | ◑ | ✉ 🕘 | 🗁 | ▤ | GSM | | Apr-07 |
| 550 | SAGEM | my411C | ☎ 🕘 | 🕮 | ◑ | ✉ 🕘 | □ | ▤ | GSM | | Jan-08 |
| 551 | SAGEM | my411Cv | ☎ | 🕮 | ◑ | ✉ | □ | ▤ | GSM | | Jan-08 |

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| 552 | SAGEM | my411X | ☎ 🕘 | 🕮 | ◑ | ✉ 🕘 | 🗁 | 🗏 | GSM | | Jan-08 |
| 553 | SAGEM | my501C | ☎ 🕘 | 🕮 | ◑ | ✉ 🕘 | | 🗏 | GSM | | Apr-07 |
| 554 | SAGEM | my511X | ☎ 🕘 | 🕮 | ◑ | ✉ 🕘 | | 🗏 | GSM | | Jan-08 |
| 555 | SAGEM | my600v | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | | 🗏 | GSM | | Jul-07 |
| 556 | SAGEM | my700X | ☎ 🕘 | 🕮 | ◑ | ✉ 🕘 | 🗁 | 🗏 | GSM | | Apr-07 |
| 557 | SAGEM | myV-55 | ☎ 🕘 | 🕮 | ◑ | ✉ 🕘 | | 🗏 | GSM | | Jan-08 |
| 558 | SAGEM | myV-65 | ☎ 🕘 | 🕮 | ◑ | ✉ 🕘 | | 🗏 | GSM | | Jan-08 |
| 559 | SAGEM | myX5-2 | ☎ 🕘 | 🕮 | ◑ | ✉ 🕘 | | 🗏 | GSM | | Jan-08 |
| 560 | SAGEM | myX-6 | ☎ 🕘 | 🕮 | ◑ | ✉ 🕘 | 🗁 | 🗏 | GSM | | Jan-08 |
| 561 | SAMSUNG | B2100 | ☎ 🕘 | 🕮 | ◑ | ✉ 🕘 | 🗁 | 🗏 | GSM | 29 | Jul-09 |
| 562 | SAMSUNG | B2700 | ☎ 🕘 | 🕮 | | ✉ | 🗁 | 🗏 | GSM | 29 | Apr-09 |
| 563 | SAMSUNG | B3310 | ☎ 🕘 | 🕮 | | ✉ 🕘 | 🗁 | 🗏 | GSM | 26 | Oct-09 |
| 564 | SAMSUNG | B5702 | ☎ 🕘 | 🕮 | ◑ | ✉ 🕘 | 🗁 | 🗏 | GSM | 29 | Oct-09 |
| 565 | SAMSUNG | B7300 | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | 🗏 | GSM | 26 | Jan-10 |
| 566 | SAMSUNG | C3050 | ☎ 🕘 | 🕮 | | ✉ 🕘 | 🗁 | 🗏 | GSM | 29 | Jul-09 |
| 567 | SAMSUNG | C6625 | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | 🗏 | GSM | 29 | Oct-09 |
| 568 | SAMSUNG | E1360 | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | 🗏 | GSM | | Oct-09 |
| 569 | SAMSUNG | E2210 | ☎ 🕘 | 🕮 | ◑ | ✉ 🕘 | 🗁 | 🗏 | GSM | | Oct-09 |
| 570 | SAMSUNG | I8000 | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | 🗏 | GSM | 26 | Jan-10 |
| 571 | SAMSUNG | i8510 | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | 🗏 | GSM | | Apr-09 |
| 572 | SAMSUNG | M3200 | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | 🗏 | GSM | 29 | Jan-10 |
| 573 | SAMSUNG | M7500 | ☎ 🕘 | 🕮 | | ✉ 🕘 | 🗁 | 🗏 | GSM | 26 | Jul-09 |
| 574 | SAMSUNG | M7600 | ☎ 🕘 | 🕮 | | ✉ 🕘 | 🗁 | 🗏 | GSM | 26 | Jul-09 |
| 575 | SAMSUNG | M8800 | ☎ 🕘 | 🕮 | | ✉ | 🗁 | 🗏 | GSM | 29 | Apr-09 |
| 576 | SAMSUNG | S3030 | ☎ 🕘 | 🕮 | | ✉ 🕘 | 🗁 | 🗏 | GSM | 29 | Oct-09 |
| 577 | SAMSUNG | S3100 | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | 🗏 | GSM | 29 | Jan-10 |
| 578 | SAMSUNG | S3500 | ☎ 🕘 | 🕮 | | ✉ | 🗁 | 🗏 | GSM | 29 | Apr-09 |

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| 579 | SAMSUNG | S3600 | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | ▤ | GSM | | Jan-10 |
| 580 | SAMSUNG | S3650 | ☎ 🕘 | 🕮 | □ | ✉ 🕘 | 🗁 | ▤ | GSM | 29 | Jan-10 |
| 581 | SAMSUNG | S5050 | ☎ 🕘 | 🕮 | ◑ | ✉ 🕘 | 🗁 | ▤ | GSM | 29 | Oct-09 |
| 582 | SAMSUNG | S5230 | ☎ 🕘 | 🕮 | □ | ✉ 🕘 | 🗁 | ▤ | GSM | 29 | Oct-09 |
| 583 | SAMSUNG | S5600 | ☎ 🕘 | 🕮 | □ | ✉ 🕘 | 🗁 | ▤ | GSM | 26 | Oct-09 |
| 584 | SAMSUNG | S7220 | ☎ 🕘 | 🕮 | □ | ✉ 🕘 | 🗁 | ▤ | GSM | 26 | Jul-09 |
| 585 | SAMSUNG | S7330 | ☎ 🕘 | 🕮 | □ | ✉ | 🗁 | ▤ | GSM | 29 | Apr-09 |
| 586 | SAMSUNG | S8000 | ☎ 🕘 | 🕮 | □ | ✉ 🕘 | 🗁 | ▤ | GSM | 26 | Oct-09 |
| 587 | SAMSUNG | S8300 | ☎ 🕘 | 🕮 | □ | ✉ 🕘 | 🗁 | ▤ | GSM | 26 | Jul-09 |
| 588 | SAMSUNG | SCH-A310 | ☎ | 🕮 | □ | ✉ 🕘 | □ | ▤ | CDMA | 13 | Apr-06 |
| 589 | SAMSUNG | SCH-A530 | ☎ | 🕮 | □ | ✉ 🕘 | □ | ▤ | CDMA | 13 | Apr-06 |
| 590 | SAMSUNG | SCH-A570 | ☎ | 🕮 | □ | ✉ | □ | ▤ | CDMA | 13 | Oct-06 |
| 591 | SAMSUNG | SCH-A630 | ☎ | 🕮 | □ | ✉ | □ | ▤ | CDMA | 23 | Oct-06 |
| 592 | SAMSUNG | SCH-A650 | ☎ | 🕮 | □ | ✉ 🕘 | □ | ▤ | CDMA | 13 | Apr-06 |
| 593 | SAMSUNG | SCH-A670 | ☎ | 🕮 | □ | ✉ 🕘 | □ | □ | CDMA | 13 | Apr-06 |
| 594 | SAMSUNG | SCH-A795 | ☎ | 🕮 | ◑ 🕘 | ✉ 🕘 | □ | ▤ | CDMA | 23 | Apr-08 |
| 595 | SAMSUNG | SCH-A850 | ☎ | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | ▤ | CDMA | 23 | Apr-08 |
| 596 | SAMSUNG | SCH-A870 | ☎ | 🕮 | ◑ 🕘 | ✉ 🕘 | □ | ▤ | CDMA | 23 | Apr-08 |
| 597 | SAMSUNG | SCH-A930 | ☎ | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | ▤ | CDMA | 23 | Apr-08 |
| 598 | SAMSUNG | SCH-A950 | ☎ | 🕮 | ◑ 🕘 | ✉ | 🗁 | ▤ | CDMA | 23 | Apr-08 |
| 599 | SAMSUNG | SCH-A990 | ☎ | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | ▤ | CDMA | 23 | Apr-08 |
| 600 | SAMSUNG | SCH-i220 | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | ▤ | CDMA | 26 | May-11 |
| 601 | SAMSUNG | SCH-i600 | □ | 🕮 | □ | ✉ 🕘 | 🗁 | ▤ | GSM | | Jul-06 |
| 602 | SAMSUNG | SCH-i730 | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | ▤ | CDMA | | Jul-06 |
| 603 | SAMSUNG | SCH-i760 | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | ▤ | GSM | 30 | Jul-08 |
| 604 | SAMSUNG | SCH-i920 | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | ▤ | CDMA | 26 | Dec-10 |
| 605 | SAMSUNG | SCH-R450 | ☎ | 🕮 | ◑ 🕘 | ✉ 🕘 | □ | ▤ | CDMA | 29 | Jul-09 |
| 606 | SAMSUNG | SCH-U340 | ☎ | 🕮 | ◑ 🕘 | ✉ | 🗁 | ▤ | CDMA | 23 | Jul-09 |

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| 607 | SAMSUNG | SCH-U350 | ☎ | 🕮 | ◑ | ✉ 🕘 | 🗁 | ▤ | CDMA | 29 | Dec-10 |
| 608 | SAMSUNG | SCH-U410 | ☎ | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | ▤ | CDMA | 23 | Apr-08 |
| 609 | SAMSUNG | SCH-U650 | ☎ | 🕮 | ◑ 🕘 | ✉ 🕘 | | ▤ | CDMA | 29 | Jul-09 |
| 610 | SAMSUNG | SCH-U740 | ☎ | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | ▤ | CDMA | 22 | Jan-10 |
| 611 | SAMSUNG | SCH-U820 | ☎ | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | | CDMA | 26 | Dec-10 |
| 612 | SAMSUNG | SCH-U940 | ☎ | 🕮 | ◑ 🕘 | ✉ 🕘 | | ▤ | CDMA | 29 | Jul-09 |
| 613 | SAMSUNG | SGH-A177 | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | ▤ | GSM | 29 | Jan-10 |
| 614 | SAMSUNG | SGH-A300 | ☎ | 🕮 | ◑ 🕘 | | | ▤ | GSM | 14 | Dec-05 |
| 615 | SAMSUNG | SGH-A517 | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | ▤ | GSM | 29 | Apr-08 |
| 616 | SAMSUNG | SGH-A687 | ☎ 🕘 | 🕮 | | ✉ 🕘 | 🗁 | ▤ | GSM | 29 | Dec-10 |
| 617 | SAMSUNG | SGH-A707 | ☎ | 🕮 | | | 🗁 | ▤ | GSM | 22 | Jan-08 |
| 618 | SAMSUNG | SGH-A717 | ☎ | 🕮 | ◑ | | 🗁 | ▤ | GSM | 22 | Jan-08 |
| 619 | SAMSUNG | SGH-A727 | ☎ | 🕮 | ◑ | | 🗁 | ▤ | GSM | 22 | Jan-08 |
| 620 | SAMSUNG | SGH-A737 | ☎ | 🕮 | | ✉ 🕘 | 🗁 | ▤ | GSM | 29 | Oct-08 |
| 621 | SAMSUNG | SGH-A747 | ☎ 🕘 | 🕮 | | ✉ 🕘 | 🗁 | ▤ | GSM | 29 | Oct-08 |
| 622 | SAMSUNG | SGH-A767 | ☎ 🕘 | 🕮 | | ✉ 🕘 | 🗁 | ▤ | GSM | 29 | Jul-09 |
| 623 | SAMSUNG | SGH-A777 | ☎ 🕘 | 🕮 | | ✉ 🕘 | 🗁 | ▤ | GSM | 29 | Dec-10 |
| 624 | SAMSUNG | SGH-A827 | ☎ 🕘 | 🕮 | | ✉ 🕘 | 🗁 | ▤ | GSM | 29 | Oct-08 |
| 625 | SAMSUNG | SGH-A837 | ☎ 🕘 | 🕮 | | ✉ 🕘 | 🗁 | ▤ | GSM | 29 | Jul-09 |
| 626 | SAMSUNG | SGH-A877 | ☎ 🕘 | 🕮 | | ✉ 🕘 | 🗁 | ▤ | GSM | 29B | Dec-10 |
| 627 | SAMSUNG | SGH-A887 | ☎ 🕘 | 🕮 | | ✉ 🕘 | 🗁 | ▤ | GSM | 29B | Dec-10 |
| 628 | SAMSUNG | SGH-C100 | ☎ | 🕮 | ◑ 🕘 | ✉ | | ▤ | GSM | 14 | Dec-05 |
| 629 | SAMSUNG | SGH-C207 | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | | ▤ | GSM | 14 | Jul-06 |
| 630 | SAMSUNG | SGH-C225 | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ | | ▤ | GSM | 14 | Dec-05 |
| 631 | SAMSUNG | SGH-C300 | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | | ▤ | GSM | 14 | Jan-08 |
| 632 | SAMSUNG | SGH-D307 | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | | ▤ | GSM | 13 | Jul-06 |
| 633 | SAMSUNG | SGH-D357 | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | ▤ | GSM | 13 | Jul-07 |
| 634 | SAMSUNG | SGH-D407 | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | ▤ | GSM | | Oct-07 |
| 635 | SAMSUNG | SGH-D410 | ☎ | 🕮 | ◑ | ✉ | | ▤ | GSM | 14 | Dec-05 |

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| 636 | SAMSUNG | SGH-D500 | ☎ | 📖 | ◑ | ✉ | 🗁 | ▯ | GSM | 13 | Dec-05 |
| 637 | SAMSUNG | SGH-D520 | ☎ | 📖 | ◑ | ✉ | 🗁 | ▯ | GSM | 22 | Apr-07 |
| 638 | SAMSUNG | SGH-D600 | ☎ | 📖 | ◑ | ✉ | 🗁 | ▯ | GSM | 13 | Apr-06 |
| 639 | SAMSUNG | SGH-D720 | ☎ | 📖 | ◑ | ✉ | 🗁 | ▯ | GSM | 5 | Jul-07 |
| 640 | SAMSUNG | SGH-D780 | ☎ | 📖 | ◑ | ✉ | 🗁 | ▯ | GSM | 29 | Jan-09 |
| 641 | SAMSUNG | SGH-D800 | ☎ | 📖 | ◑ | ✉ | 🗁 | ▯ | GSM | 22 | Oct-06 |
| 642 | SAMSUNG | SGH-D807 | ☎ | 📖 | ◑ | ✉ | 🗁 | ▯ | GSM | 22 | Apr-08 |
| 643 | SAMSUNG | SGH-D820 | ☎ | 📖 | ◑ | ✉ | 🗁 | ▯ | GSM | 22 | Oct-06 |
| 644 | SAMSUNG | SGH-D830 | ☎ | 📖 | ◑ | ✉ | 🗁 | ▯ | GSM | 22 | Apr-07 |
| 645 | SAMSUNG | SGH-D840 | ☎ | 📖 | ◑ | ✉ | 🗁 | ▯ | GSM | 22 | Jul-07 |
| 646 | SAMSUNG | SGH-D880 | ☎ | 📖 | ◑ | ✉ | 🗁 | ▯ | GSM | 29 | Jul-08 |
| 647 | SAMSUNG | SGH-D900 | ☎ | 📖 | ◑ | ✉ | 🗁 | ▯ | GSM | 22 | Apr-07 |
| 648 | SAMSUNG | SGH-D900i | ☎ | 📖 | ◑ | ✉ | 🗁 | ▯ | GSM | 22 | Oct-07 |
| 649 | SAMSUNG | SGH-D980 | ☎ | 📖 | ◑ | ✉ | □ | ▯ | GSM | 29 | Apr-09 |
| 650 | SAMSUNG | SGH-E105 | ☎ | 📖 | ◑ | ✉ | □ | ▯ | GSM | 14 | Apr-06 |
| 651 | SAMSUNG | SGH-E210 | ☎ | 📖 | □ | ✉ | 🗁 | ▯ | GSM | | Jan-08 |
| 652 | SAMSUNG | SGH-E250 | ☎ | 📖 | ◑ | ✉ | 🗁 | ▯ | GSM | 22 | Apr-07 |
| 653 | SAMSUNG | SGH-E330 | ☎ | 📖 | ◑ | ✉ | 🗁 | ▯ | GSM | 20 | Oct-06 |
| 654 | SAMSUNG | SGH-E335 | ☎ | 📖 | ◑ | ✉ | 🗁 | ▯ | GSM | 20 | Oct-06 |
| 655 | SAMSUNG | SGH-E350 | ☎ | 📖 | ◑ | ✉ | 🗁 | ▯ | GSM | 13 | Dec-05 |
| 656 | SAMSUNG | SGH-E370 | ☎ | 📖 | ◑ | ✉ | 🗁 | ▯ | GSM | 13 | Jan-07 |
| 657 | SAMSUNG | SGH-E390 | ☎ | 📖 | ◑ | ✉ | 🗁 | ▯ | GSM | 22 | Apr-07 |
| 658 | SAMSUNG | SGH-E530 | ☎ | 📖 | ◑ | ✉ | 🗁 | □ | GSM | | Dec-05 |
| 659 | SAMSUNG | SGH-E570 | ☎ | 📖 | ◑ | ✉ | 🗁 | □ | GSM | 22 | Apr-07 |
| 660 | SAMSUNG | SGH-E590 | ☎ | 📖 | ◑ | ✉ | 🗁 | ▯ | GSM | 22 | Oct-07 |
| 661 | SAMSUNG | SGH-E600 | ☎ | 📖 | ◑ | ✉ | □ | ▯ | GSM | 14 | Jul-07 |
| 662 | SAMSUNG | SGH-E630 | ☎ | 📖 | ◑ | ✉ | 🗁 | ▯ | GSM | 20 | Apr-06 |

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| 663 | SAMSUNG | SGH-E700 | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | 🗏 | GSM | 20 | Dec-05 |
| 664 | SAMSUNG | SGH-E715 | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | □ | 🗏 | GSM | 14 | Oct-06 |
| 665 | SAMSUNG | SGH-E720 | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | 🗏 | GSM | 5 | Dec-05 |
| 666 | SAMSUNG | SGH-E730 | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | 🗏 | GSM | 13 | Dec-05 |
| 667 | SAMSUNG | SGH-E740 | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | 🗏 | GSM | 22 | Jan-08 |
| 668 | SAMSUNG | SGH-E760 | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | 🗏 | GSM | 13 | Dec-05 |
| 669 | SAMSUNG | SGH-E770 | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | 🗏 | GSM | 13 | Apr-06 |
| 670 | SAMSUNG | SGH-E800 | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ | 🗁 | 🗏 | GSM | 20 | Dec-05 |
| 671 | SAMSUNG | SGH-E830 | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | 🗏 | GSM | 22 | Apr-08 |
| 672 | SAMSUNG | SGH-E840 | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | 🗏 | GSM | 22 | Oct-07 |
| 673 | SAMSUNG | SGH-E870 | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | 🗏 | GSM | 22 | Oct-06 |
| 674 | SAMSUNG | SGH-E880 | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | □ | GSM | | Jul-07 |
| 675 | SAMSUNG | SGH-E900 | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | 🗏 | GSM | 22 | Jan-07 |
| 676 | SAMSUNG | SGH-E950 | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | 🗏 | GSM | 22 | Jan-08 |
| 677 | SAMSUNG | SGH-F110 | ☎ 🕘 | 🕮 | ◑ | ✉ 🕘 | □ | 🗏 | GSM | 29 | Oct-08 |
| 678 | SAMSUNG | SGH-F210 | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | 🗏 | GSM | | Jan-08 |
| 679 | SAMSUNG | SGH-F250 | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | 🗏 | GSM | 29 | Jan-09 |
| 680 | SAMSUNG | SGH-F300 | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | 🗏 | GSM | 22 | Jul-07 |
| 681 | SAMSUNG | SGH-F330 | ☎ | 🕮 | ◑ | ✉ 🕘 | 🗁 | 🗏 | GSM | 29 | Jul-08 |
| 682 | SAMSUNG | SGH-F400 | ☎ 🕘 | 🕮 | ◑ | ✉ 🕘 | 🗁 | 🗏 | GSM | 29 | Jul-08 |
| 683 | SAMSUNG | SGH-F480 | ☎ 🕘 | 🕮 | □ | ✉ 🕘 | 🗁 | 🗏 | GSM | 29 | Jan-09 |
| 684 | SAMSUNG | SGH-F490 | ☎ 🕘 | 🕮 | ◑ | ✉ 🕘 | 🗁 | 🗏 | GSM | 29 | Jul-08 |
| 685 | SAMSUNG | SGH-F500 | ☎ | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | 🗏 | GSM | 22 | Oct-07 |
| 686 | SAMSUNG | SGH-F700 | ☎ 🕘 | 🕮 | □ | ✉ | 🗁 | 🗏 | GSM | 29 | Apr-09 |
| 687 | SAMSUNG | SGH-G400 | ☎ 🕘 | 🕮 | □ | ✉ | 🗁 | 🗏 | GSM | 29 | Apr-09 |
| 688 | SAMSUNG | SGH-G600 | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | 🗏 | GSM | | Jan-08 |
| 689 | SAMSUNG | SGH-G800 | ☎ | 🕮 | ◑ | ✉ 🕘 | 🗁 | 🗏 | GSM | 29 | Jul-08 |
| 690 | SAMSUNG | SGH-G810 | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | 🗏 | GSM | 26 | Apr-09 |

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| 691 | SAMSUNG | SGH-i200 | ☎ | 🕮 | ◑ | ✉ | 🗁 | ▤ | GSM | 29 | Jan-09 |
| 692 | SAMSUNG | SGH-i300 | ☎ | 🕮 | ◑ | ✉ | 🗁 | ▤ | GSM | 5 | Oct-07 |
| 693 | SAMSUNG | SGH-i320 | ☎ | 🕮 | ◑ | ✉ | 🗁 | ▤ | GSM | | Jan-07 |
| 694 | SAMSUNG | SGH-i325 | ☎ | 🕮 | ◑ | ✉ | 🗁 | ▤ | GSM | 29 | Jan-09 |
| 695 | SAMSUNG | SGH-i600 | ☎ | 🕮 | ◑ | ✉ | 🗁 | ▤ | CDMA | 9 | Oct-07 |
| 696 | SAMSUNG | SGH-i607 | ☎ | 🕮 | ◑ | ✉ | 🗁 | ▤ | GSM | 22 | Jul-07 |
| 697 | SAMSUNG | SGH-i617 | ☎ | 🕮 | ◑ | ✉ | 🗁 | ▤ | GSM | 29 | Oct-08 |
| 698 | SAMSUNG | SGH-i620 | ☎ | 🕮 | ◑ | ✉ | 🗁 | ▤ | GSM | 22 | Jan-09 |
| 699 | SAMSUNG | SGH-i710 | ☎ | 🕮 | ◑ | ✉ | 🗁 | ▤ | GSM | 22 | Oct-07 |
| 700 | SAMSUNG | SGH-i780 | ☎ | 🕮 | ◑ | ✉ | 🗁 | ▤ | GSM | 29 | Jul-09 |
| 701 | SAMSUNG | SGH-i900 | ☎ | 🕮 | ◑ | ✉ | 🗁 | ▤ | GSM | 29 | Jan-09 |
| 702 | SAMSUNG | SGH-J600 | ☎ | 🕮 | | ✉ | 🗁 | ▤ | GSM | 22 | Jan-08 |
| 703 | SAMSUNG | SGH-J610 | ☎ | 🕮 | | ✉ | 🗁 | ▤ | GSM | 29 | Oct-08 |
| 704 | SAMSUNG | SGH-J700 | ☎ | 🕮 | ◑ | ✉ | 🗁 | ▤ | GSM | 29 | Jul-08 |
| 705 | SAMSUNG | SGH-L700 | ☎ | 🕮 | | ✉ | 🗁 | | GSM | 29 | Jan-10 |
| 706 | SAMSUNG | SGH-L760 | ☎ | 🕮 | | ✉ | 🗁 | ▤ | GSM | 29 | Oct-08 |
| 707 | SAMSUNG | SGH-L770 | ☎ | 🕮 | | ✉ | 🗁 | ▤ | GSM | | Jan-09 |
| 708 | SAMSUNG | SGH-M150 | ☎ | 🕮 | ◑ | ✉ | 🗁 | ▤ | GSM | 29 | Oct-08 |
| 709 | SAMSUNG | SGH-M610 | ☎ | 🕮 | ◑ | ✉ | | ▤ | GSM | 29 | Oct-08 |
| 710 | SAMSUNG | SGH-P207 | ☎ | 🕮 | ◑ | ✉ | | ▤ | GSM | 13 | Oct-06 |
| 711 | SAMSUNG | SGH-P300 | ☎ | 🕮 | | ✉ | | | GSM | 22 | Apr-06 |
| 712 | SAMSUNG | SGH-P310 | ☎ | 🕮 | ◑ | ✉ | 🗁 | ▤ | GSM | 22 | Apr-07 |
| 713 | SAMSUNG | SGH-P400 | ☎ | 🕮 | ◑ | ✉ | | ▤ | GSM | 14 | Dec-05 |
| 714 | SAMSUNG | SGH-P510 | ☎ | 🕮 | ◑ | ✉ | | ▤ | GSM | | Dec-05 |
| 715 | SAMSUNG | SGH-P520 | ☎ | 🕮 | ◑ | ✉ | 🗁 | ▤ | GSM | 29 | Apr-08 |
| 716 | SAMSUNG | SGH-P735 | ☎ | 🕮 | ◑ | ✉ | 🗁 | ▤ | GSM | 5 | Dec-05 |
| 717 | SAMSUNG | SGH-P777 | ☎ | 🕮 | ◑ | ✉ | | ▤ | GSM | | Jul-06 |
| 718 | SAMSUNG | SGH-P850 | ☎ | 🕮 | ◑ | ✉ | 🗁 | ▤ | GSM | 13 | Oct-06 |

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| 719 | SAMSUNG | SGH-S300M | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | ▯ | ▤ | GSM | 14 | Oct-06 |
| 720 | SAMSUNG | SGH-S307 | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ | ▯ | ▤ | GSM | 14 | Dec-05 |
| 721 | SAMSUNG | SGH-S400i | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | ▯ | GSM | 13 | Apr-07 |
| 722 | SAMSUNG | SGH-S401i | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | ▯ | GSM | 13 | Apr-07 |
| 723 | SAMSUNG | SGH-T301 | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | ▤ | GSM | 29 | Jan-10 |
| 724 | SAMSUNG | SGH-T309 | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | ▤ | GSM | 13 | Jul-06 |
| 725 | SAMSUNG | SGH-T349 | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | ▤ | GSM | | Jan-10 |
| 726 | SAMSUNG | SGH-T369 | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | ▤ | GSM | 26 | May-11 |
| 727 | SAMSUNG | SGH-T429 | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | ▤ | GSM | 29 | Jul-08 |
| 728 | SAMSUNG | SGH-T439 | ☎ 🕘 | 🕮 | ◑ | ✉ 🕘 | 🗁 | ▤ | GSM | 29 | Oct-08 |
| 729 | SAMSUNG | SGH-T469 | ☎ 🕘 | 🕮 | ▯ | ✉ 🕘 | 🗁 | ▤ | GSM | | Sep-10 |
| 730 | SAMSUNG | SGH-T509 | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | ▤ | GSM | 22 | Jan-07 |
| 731 | SAMSUNG | SGH-T539 | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | ▤ | GSM | 29 | Apr-08 |
| 732 | SAMSUNG | SGH-T609 | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | ▤ | GSM | 13 | Jan-07 |
| 733 | SAMSUNG | SGH-T639 | ☎ | 🕮 | ▯ | ✉ 🕘 | 🗁 | ▤ | GSM | 29 | Oct-08 |
| 734 | SAMSUNG | SGH-T719 | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | ▤ | GSM | 13 | Jan-07 |
| 735 | SAMSUNG | SGH-T729 | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | ▤ | GSM | 29 | Apr-08 |
| 736 | SAMSUNG | SGH-T739 | ☎ 🕘 | 🕮 | ◑ | ✉ 🕘 | 🗁 | ▤ | GSM | 29 | Oct-08 |
| 737 | SAMSUNG | SGH-T749 | ☎ 🕘 | 🕮 | ▯ | ✉ 🕘 | 🗁 | ▤ | GSM | 29 | Dec-10 |
| 738 | SAMSUNG | SGH-T809 | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | ▤ | GSM | 22 | Jul-06 |
| 739 | SAMSUNG | SGH-T819 | ☎ | 🕮 | ▯ | ✉ 🕘 | 🗁 | ▤ | GSM | 29 | Oct-08 |
| 740 | SAMSUNG | SGH-T919 | ☎ 🕘 | 🕮 | ▯ | ✉ 🕘 | 🗁 | ▤ | GSM | 29 | Jul-09 |
| 741 | SAMSUNG | SGH-U100 | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | ▤ | GSM | | Jul-07 |
| 742 | SAMSUNG | SGH-U600 | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | ▤ | GSM | 22 | Jul-07 |
| 743 | SAMSUNG | SGH-U700 | ☎ | 🕮 | ◑ | ✉ 🕘 | 🗁 | ▤ | GSM | 22 | Jan-08 |
| 744 | SAMSUNG | SGH-U800 | ☎ 🕘 | 🕮 | ▯ | ✉ 🕘 | 🗁 | ▤ | GSM | 29 | Jan-09 |
| 745 | SAMSUNG | SGH-U900 | ☎ 🕘 | 🕮 | ◑ | ✉ 🕘 | 🗁 | ▤ | GSM | 29 | Jul-08 |
| 746 | SAMSUNG | SGH-X100 | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | ▤ | GSM | 20 | Oct-07 |

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| 747 | SAMSUNG | SGH-X427m | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | □ | ▤ | GSM | 14 | Apr-06 |
| 748 | SAMSUNG | SGH-X450 | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ | □ | ▤ | GSM | 14 | Dec-05 |
| 749 | SAMSUNG | SGH-X460 | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | ▤ | GSM | 20 | Apr-07 |
| 750 | SAMSUNG | SGH-X475 | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | □ | ▤ | GSM | 20 | Oct-06 |
| 751 | SAMSUNG | SGH-X495 | ☎ 🕘 | 🕮 | ◑ | ✉ 🕘 | 🗁 | ▤ | GSM | 20 | Jul-08 |
| 752 | SAMSUNG | SGH-X497 | ☎ 🕘 | 🕮 | ◑ | ✉ 🕘 | 🗁 | ▤ | GSM | 20 | Jul-08 |
| 753 | SAMSUNG | SGH-X500 | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | □ | GSM | 13 | Apr-08 |
| 754 | SAMSUNG | SGH-X507 | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | ▤ | GSM | 13 | Apr-07 |
| 755 | SAMSUNG | SGH-X530 | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | □ | ▤ | GSM | 14 | Apr-07 |
| 756 | SAMSUNG | SGH-X600 | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | ▤ | GSM | 20 | Oct-06 |
| 757 | SAMSUNG | SGH-X640 | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | ▤ | GSM | 20 | Oct-06 |
| 758 | SAMSUNG | SGH-X650 | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | ▤ | GSM | 20 | Jul-07 |
| 759 | SAMSUNG | SGH-X660 | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | □ | GSM | 13 | Apr-07 |
| 760 | SAMSUNG | SGH-X680 | ☎ 🕘 | 🕮 | ◑ | ✉ 🕘 | 🗁 | □ | GSM | 13 | Jul-08 |
| 761 | SAMSUNG | SGH-X700 | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | ▤ | GSM | | Oct-07 |
| 762 | SAMSUNG | SGH-X820 | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | ▤ | GSM | 22 | Oct-06 |
| 763 | SAMSUNG | SGH-X830 | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | ▤ | GSM | 22 | Apr-07 |
| 764 | SAMSUNG | SGH-Z240 | ☎ | 🕮 | □ | ✉ 🕘 | 🗁 | ▤ | GSM | 22 | Jul-08 |
| 765 | SAMSUNG | SGH-Z320i | ☎ | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | ▤ | GSM | 30 | Apr-09 |
| 766 | SAMSUNG | SGH-Z510 | ☎ | 🕮 | ◑ 🕘 | ✉ 🕘 | □ | ▤ | GSM | 22 | Jul-06 |
| 767 | SAMSUNG | SGH-Z720 | ☎ | 🕮 | □ | □ | 🗁 | ▤ | GSM | 22 | Jul-08 |
| 768 | SAMSUNG | SPH-A513 | ☎ | 🕮 | ◑ 🕘 | ✉ 🕘 | □ | ▤ | CDMA | 29 | Jul-09 |
| 769 | SAMSUNG | SPH-A580 | ☎ | 🕮 | □ | ✉ 🕘 | □ | ▤ | CDMA | 13 | Jan-07 |
| 770 | SAMSUNG | SPH-A600 | ☎ | 🕮 | □ | ✉ 🕘 | □ | ▤ | CDMA | 13 | Jul-07 |
| 771 | SAMSUNG | SPH-A620 | ☎ | 🕮 | □ | □ | □ | □ | CDMA | 13 | Oct-06 |
| 772 | SAMSUNG | SPH-A640 | ☎ | 🕮 | □ | ✉ 🕘 | □ | ▤ | CDMA | 13 | Jul-07 |
| 773 | SAMSUNG | SPH-A660 | ☎ | 🕮 | □ | ✉ 🕘 | □ | □ | CDMA | 13 | Apr-06 |
| 774 | SAMSUNG | SPH-A680 | ☎ | 🕮 | □ | ✉ 🕘 | □ | ▤ | CDMA | 13 | Jul-07 |

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| 775 | SAMSUNG | SPH-A740 | ☎ | 🕮 | | ✉ 🕘 | | | CDMA | 13 | Apr-06 |
| 776 | SAMSUNG | SPH-A760 | ☎ | 🕮 | | ✉ 🕘 | | | CDMA | 13 | Apr-06 |
| 777 | SAMSUNG | SPH-A820 | ☎ | 🕮 | | ✉ 🕘 | | | CDMA | 13 | Apr-07 |
| 778 | SAMSUNG | SPH-A840 | ☎ | 🕮 | | ✉ 🕘 | | | CDMA | 13 | Apr-06 |
| 779 | SAMSUNG | SPH-A900 | ☎ | 🕮 | ◑ 🕘 | ✉ 🕘 | | | CDMA | 13 | Jul-08 |
| 780 | SAMSUNG | SPH-A920 | ☎ | 🕮 | ◑ 🕘 | ✉ 🕘 | | | CDMA | 13 | Jul-08 |
| 781 | SAMSUNG | SPH-A960 | ☎ | 🕮 | ◑ 🕘 | ✉ 🕘 | | | CDMA | 13 | Jul-08 |
| 782 | SAMSUNG | SPH-M500 | ☎ | 🕮 | ◑ 🕘 | ✉ 🕘 | | | CDMA | 13 | Jul-08 |
| 783 | SAMSUNG | SPH-M540 | ☎ | 🕮 | ◑ 🕘 | ✉ 🕘 | | | CDMA | 26 | Jul-09 |
| 784 | SAMSUNG | SPH-M610 | ☎ | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | | CDMA | 22 | Dec-10 |
| 785 | SAMSUNG | SGH-T959V | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | | GSM | 26 | Dec-12 |
| 786 | SAMSUNG | SGH-T249 | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ | 🗁 | | GSM | 26 | Dec-12 |
| 787 | SAMSUNG | SCH-i400 | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | | CDMA | 26 | Apr-12 |
| 788 | SAMSUNG | SPH-D700 | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | | CDMA | 26 | Apr-12 |
| 789 | SAMSUNG | SGH-T589 | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | | GSM | 26 | Apr-12 |
| 790 | SAMSUNG | SPH-M910 | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | | CDMA | 26 | Apr-12 |
| 791 | SAMSUNG | SCH-R350 | ☎ | 🕮 | ◑ 🕘 | ✉ 🕘 | | | CDMA | 26 | Apr-12 |
| 792 | SAMSUNG | SGH-i727 | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | | GSM | 26 | Apr-12 |
| 793 | SAMSUNG | SGH-i897 | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | | GSM | 26 | Apr-12 |
| 794 | SAMSUNG | SGH-i997 | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | | GSM | 26 | Apr-12 |
| 795 | SAMSUNG | SCH-i515 | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | | CDMA | 26 | Sep-12 |
| 796 | SAMSUNG | GT-I9100 | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | | GSM | 26 | Sep-12 |
| 797 | SHARP | FX PLUS | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | | GSM | 26 | May-12 |
| 798 | SIEMENS | A60 | ☎ 🕘 | 🕮 | ◑ | ✉ 🕘 | 🗁 | | GSM | 16 | Jul-08 |
| 799 | SIEMENS | A65 | ☎ 🕘 | 🕮 | ◑ | ✉ | | | GSM | 16 | Dec-05 |
| 800 | SIEMENS | A75 | ☎ 🕘 | 🕮 | ◑ | ✉ | 🗁 | | GSM | 16 | Apr-06 |
| 801 | SIEMENS | C35 | ☎ 🕘 | 🕮 | ◑ | ✉ 🕘 | | | GSM | 17 | Dec-05 |
| 802 | SIEMENS | C35i | ☎ 🕘 | 🕮 | ◑ | ✉ 🕘 | | | GSM | 17 | Oct-06 |

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| 803 | SIEMENS | C55 | ☎ 🕘 | | ◑ | ✉ 🕘 | | | GSM | 16 | Apr-06 |
| 804 | SIEMENS | C60 | ☎ 🕘 | | ◑ | ✉ 🕘 | 🗁 | | GSM | 16 | Apr-06 |
| 805 | SIEMENS | C61 | ☎ 🕘 | 🕮 | ◑ | ✉ | 🗁 | | GSM | 16 | Apr-06 |
| 806 | SIEMENS | C62 | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | | | GSM | 16 | Dec-05 |
| 807 | SIEMENS | C65 | ☎ 🕘 | 🕮 | ◑ | ✉ | 🗁 | ▤ | GSM | 16 | Dec-05 |
| 808 | SIEMENS | C72 | ☎ 🕘 | 🕮 | ◑ | ✉ | 🗁 | ▤ | GSM | 16 | Jul-06 |
| 809 | SIEMENS | CF110 | ☎ 🕘 | 🕮 | ◑ | ✉ | 🗁 | ▤ | GSM | 16 | Apr-06 |
| 810 | SIEMENS | CF75 | ☎ 🕘 | 🕮 | ◑ | ✉ | 🗁 | ▤ | GSM | 16 | Apr-06 |
| 811 | SIEMENS | CL75 | ☎ 🕘 | 🕮 | ◑ | ✉ | | | GSM | 16 | Apr-06 |
| 812 | SIEMENS | CT66 | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ | 🗁 | ▤ | GSM | 16 | Apr-06 |
| 813 | SIEMENS | CX65 | ☎ 🕘 | 🕮 | ◑ | ✉ | 🗁 | ▤ | GSM | 16 | Dec-05 |
| 814 | SIEMENS | M55 | ☎ 🕘 | 🕮 | ◑ | ✉ | 🗁 | ▤ | GSM | 16 | Jul-06 |
| 815 | SIEMENS | M65 | ☎ 🕘 | 🕮 | ◑ | ✉ | 🗁 | ▤ | GSM | 16 | Dec-05 |
| 816 | SIEMENS | M75 | ☎ 🕘 | 🕮 | ◑ | ✉ 🕘 | 🗁 | ▤ | GSM | 16 | Apr-06 |
| 817 | SIEMENS | MC60 | ☎ 🕘 | 🕮 | ◑ | ✉ | | ▤ | GSM | 16 | Dec-05 |
| 818 | SIEMENS | ME45 | ☎ 🕘 | 🕮 | ◑ | ✉ 🕘 | | ▤ | GSM | 17 | Jul-08 |
| 819 | SIEMENS | ME75 | ☎ 🕘 | 🕮 | ◑ | ✉ | 🗁 | ▤ | GSM | 16 | Apr-06 |
| 820 | SIEMENS | S55 | ☎ 🕘 | 🕮 | ◑ | ✉ | 🗁 | ▤ | GSM | 16 | Apr-06 |
| 821 | SIEMENS | S65 | ☎ 🕘 | 🕮 | ◑ | ✉ | 🗁 | ▤ | GSM | 16 | Dec-05 |
| 822 | SIEMENS | S75 | ☎ 🕘 | 🕮 | ◑ | ✉ 🕘 | 🗁 | ▤ | GSM | 16 | Apr-06 |
| 823 | SIEMENS | SF65 | ☎ 🕘 | 🕮 | ◑ | ✉ 🕘 | 🗁 | ▤ | GSM | | Jul-06 |
| 824 | SIEMENS | SK65 | ☎ 🕘 | 🕮 | ◑ | ✉ | 🗁 | ▤ | GSM | 16 | Dec-05 |
| 825 | SIEMENS | SL55 | ☎ 🕘 | 🕮 | ◑ | ✉ | 🗁 | ▤ | GSM | 16 | Dec-05 |
| 826 | SIEMENS | SL65 | ☎ 🕘 | 🕮 | ◑ | ✉ | 🗁 | ▤ | GSM | 16 | Dec-05 |
| 827 | SIEMENS | SP65 | ☎ 🕘 | 🕮 | ◑ | ✉ | | ▤ | GSM | | Jul-09 |
| 828 | SONIM | XP3 | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | ▤ | GSM | | Oct-09 |
| 829 | SONY ERICSSON | C510 | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | ▤ | GSM | 18 | Apr-09 |
| 830 | SONY | C702 | ☎ | 🕮 | ◑ | ✉ | 🗁 | ▤ | GSM | | Oct-08 |

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| | ERICSSON | | | | | | | | | | |
| 831 | SONY ERICSSON | C901 | | | | | | | GSM | 18 | Oct-09 |
| 832 | SONY ERICSSON | C902 | | | | | | | GSM | | Oct-08 |
| 833 | SONY ERICSSON | C903 | | | | | | | GSM | 18 | Oct-09 |
| 834 | SONY ERICSSON | C905 | | | | | | | GSM | 18 | Apr-09 |
| 835 | SONY ERICSSON | D750i | | | | | | | GSM | 18 | Apr-06 |
| 836 | SONY ERICSSON | F305 | | | | | | | GSM | | Oct-09 |
| 837 | SONY ERICSSON | F500i | | | | | | | GSM | 2 | Dec-05 |
| 838 | SONY ERICSSON | G502 | | | | | | | GSM | 18 | Oct-08 |
| 839 | SONY ERICSSON | G700 | | | | | | | GSM | 18 | Jan-09 |
| 840 | SONY ERICSSON | G705 | | | | | | | GSM | 18 | Apr-09 |
| 841 | SONY ERICSSON | G900 | | | | | | | GSM | 18 | Jan-09 |
| 842 | SONY ERICSSON | J105i | | | | | | | GSM | 18 | Sep-10 |
| 843 | SONY ERICSSON | J300i | | | | | | | GSM | 2 | Dec-05 |
| 844 | SONY ERICSSON | K300i | | | | | | | GSM | 2 | Dec-05 |
| 845 | SONY ERICSSON | K310i | | | | | | | GSM | 18 | Oct-06 |
| 846 | SONY ERICSSON | K320i | | | | | | | GSM | 18 | Jan-09 |
| 847 | SONY ERICSSON | K500i | | | | | | | GSM | 2 | Dec-05 |
| 848 | SONY ERICSSON | K510i | | | | | | | GSM | 18 | Jan-07 |
| 849 | SONY ERICSSON | K530i | | | | | | | GSM | 18 | Jan-08 |
| 850 | SONY ERICSSON | K550i | | | | | | | GSM | 18 | Jul-07 |
| 851 | SONY ERICSSON | K550im | | | | | | | GSM | 18 | Jul-07 |
| 852 | SONY ERICSSON | K600i | | | | | | | GSM | 2 | Dec-05 |
| 853 | SONY ERICSSON | K608i | | | | | | | GSM | 2 | Oct-06 |
| 854 | SONY ERICSSON | K610i | | | | | | | GSM | 18 | Oct-06 |
| 855 | SONY ERICSSON | K630i | | | | | | | GSM | 18 | Jul-08 |
| 856 | SONY ERICSSON | K660i | | | | | | | GSM | 18 | Jul-08 |

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| 857 | SONY ERICSSON | K700i | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | ▤ | GSM | 2 | Dec-05 |
| 858 | SONY ERICSSON | K750i | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | ▤ | GSM | 18 | Dec-05 |
| 859 | SONY ERICSSON | K770i | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | ▤ | GSM | 18 | Jan-08 |
| 860 | SONY ERICSSON | K800i | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | ▤ | GSM | 18 | Jul-06 |
| 861 | SONY ERICSSON | K810i | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | ▤ | GSM | 18 | Jul-07 |
| 862 | SONY ERICSSON | K850i | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | ▤ | GSM | 18 | Jan-08 |
| 863 | SONY ERICSSON | M600 | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | □ | □ | GSM | 18 | Jan-09 |
| 864 | SONY ERICSSON | P1i | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | □ | □ | GSM | 18 | Jan-09 |
| 865 | SONY ERICSSON | P800 | ☎ 🕘 | 🕮 | □ | ✉ 🕘 | □ | ▤ | GSM | | Apr-08 |
| 866 | SONY ERICSSON | P900i | ☎ 🕘 | 🕮 | □ | ✉ 🕘 | □ | ▤ | GSM | | Jul-08 |
| 867 | SONY ERICSSON | P990i | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | □ | □ | GSM | 18 | Jan-09 |
| 868 | SONY ERICSSON | S302 | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | □ | GSM | | Oct-09 |
| 869 | SONY ERICSSON | S312 | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | □ | GSM | | Jan-10 |
| 870 | SONY ERICSSON | S500i | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | ▤ | GSM | 18 | Oct-07 |
| 871 | SONY ERICSSON | S700i | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | ▤ | GSM | 2 | Dec-05 |
| 872 | SONY ERICSSON | S710a | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | ▤ | GSM | 2 | Apr-06 |
| 873 | SONY ERICSSON | T230 | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | □ | □ | GSM | 2 | Jul-07 |
| 874 | SONY ERICSSON | T290i | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | □ | □ | GSM | 2 | Dec-05 |
| 875 | SONY ERICSSON | T300 | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | □ | □ | GSM | 2 | Dec-05 |
| 876 | SONY ERICSSON | T310 | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | □ | □ | GSM | 2 | Dec-05 |
| 877 | SONY ERICSSON | T610 | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | ▤ | GSM | 2 | Dec-05 |
| 878 | SONY ERICSSON | T630 | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | ▤ | GSM | 2 | Dec-05 |
| 879 | SONY ERICSSON | T650i | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | ▤ | GSM | 18 | Jan-08 |
| 880 | SONY ERICSSON | T68 | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | □ | □ | GSM | 2 | Dec-05 |
| 881 | SONY ERICSSON | T68i | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | □ | ▤ | GSM | 2 | Oct-06 |
| 882 | SONY ERICSSON | T700 | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | ▤ | GSM | 18 | Jan-09 |
| 883 | SONY ERICSSON | T707 | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | ▤ | GSM | 18 | Oct-09 |

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| 884 | SONY ERICSSON | T715 | ☎ | 🕮 | ◑ | ✉ | 🗁 | ▯ | GSM | 18 | Jan-10 |
| 885 | SONY ERICSSON | TM506 | ☎ | 🕮 | ◑ | ✉ | 🗁 | ▮ | GSM | 18 | Dec-10 |
| 886 | SONY ERICSSON | U100i Yari | ☎ | 🕮 | ◑ | ✉ | 🗁 | ▯ | GSM | 18 | Jan-10 |
| 887 | SONY ERICSSON | U10i Aino | ☎ | 🕮 | ◑ | ✉ | 🗁 | ▯ | GSM | 18 | Jan-10 |
| 888 | SONY ERICSSON | U1i Satio | ☎ | ▯ | ◑ | ✉ | 🗁 | ▯ | GSM | | Jan-10 |
| 889 | SONY ERICSSON | U5i (Vivaz) | ☎ | 🕮 | ◑ | ✉ | 🗁 | ▯ | GSM | 26 | May-11 |
| 890 | SONY ERICSSON | V600i | ☎ | 🕮 | ◑ | ✉ | 🗁 | ▮ | GSM | 2 | Apr-06 |
| 891 | SONY ERICSSON | V630i | ☎ | 🕮 | ◑ | ✉ | 🗁 | ▮ | GSM | 18 | Jul-07 |
| 892 | SONY ERICSSON | V640i | ☎ | 🕮 | ◑ | ✉ | 🗁 | ▮ | GSM | 18 | Jul-08 |
| 893 | SONY ERICSSON | V800 | ☎ | 🕮 | ◑ | ✉ | 🗁 | ▮ | GSM | 2 | Dec-05 |
| 894 | SONY ERICSSON | W200i | ☎ | 🕮 | ◑ | ✉ | 🗁 | ▮ | GSM | 18 | Jul-07 |
| 895 | SONY ERICSSON | W300i | ☎ | 🕮 | ◑ | ✉ | 🗁 | ▮ | GSM | | Jul-06 |
| 896 | SONY ERICSSON | W302 | ☎ | 🕮 | ◑ | ✉ | 🗁 | ▯ | GSM | | Oct-09 |
| 897 | SONY ERICSSON | W350 | ☎ | 🕮 | ◑ | ✉ | 🗁 | ▮ | GSM | 18 | Oct-08 |
| 898 | SONY ERICSSON | W380i | ☎ | 🕮 | ◑ | ✉ | 🗁 | ▮ | GSM | 18 | Jul-08 |
| 899 | SONY ERICSSON | W395 | ☎ | 🕮 | ◑ | ✉ | 🗁 | ▯ | GSM | | Oct-09 |
| 900 | SONY ERICSSON | W508 | ☎ | 🕮 | ◑ | ✉ | 🗁 | ▮ | GSM | 18 | Oct-09 |
| 901 | SONY ERICSSON | W518A | ☎ | 🕮 | ◑ | ✉ | 🗁 | ▮ | GSM | 18 | Dec-10 |
| 902 | SONY ERICSSON | W550i | ☎ | 🕮 | ◑ | ✉ | 🗁 | ▮ | GSM | 18 | Dec-05 |
| 903 | SONY ERICSSON | W580i | ☎ | 🕮 | ◑ | ✉ | 🗁 | ▮ | GSM | 18 | Oct-07 |
| 904 | SONY ERICSSON | W595 | ☎ | 🕮 | ◑ | ✉ | 🗁 | ▮ | GSM | 18 | Jan-09 |
| 905 | SONY ERICSSON | W610i | ☎ | 🕮 | ◑ | ✉ | 🗁 | ▮ | GSM | 18 | Jul-07 |
| 906 | SONY ERICSSON | W660i | ☎ | 🕮 | ◑ | ✉ | 🗁 | ▮ | GSM | 18 | Jan-08 |
| 907 | SONY ERICSSON | W705 | ☎ | 🕮 | ◑ | ✉ | 🗁 | ▮ | GSM | 18 | Apr-09 |
| 908 | SONY ERICSSON | W710i | ☎ | 🕮 | ◑ | ✉ | 🗁 | ▮ | GSM | 18 | Oct-06 |
| 909 | SONY ERICSSON | W760 | ☎ | 🕮 | ◑ | ✉ | 🗁 | ▮ | GSM | | Oct-08 |
| 910 | SONY ERICSSON | W800i | ☎ | 🕮 | ◑ | ✉ | 🗁 | ▮ | GSM | 18 | Dec-05 |

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| 911 | SONY ERICSSON | W810i | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | 🗏 | GSM | 18 | Jul-06 |
| 912 | SONY ERICSSON | W850i | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | 🗏 | GSM | 18 | Oct-06 |
| 913 | SONY ERICSSON | W880i | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | 🗏 | GSM | 18 | Apr-07 |
| 914 | SONY ERICSSON | W890i | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | 🗏 | GSM | 18 | Jul-08 |
| 915 | SONY ERICSSON | W900i | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | 🗏 | GSM | 18 | Apr-06 |
| 916 | SONY ERICSSON | W902 | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | 🗏 | GSM | 18 | Apr-09 |
| 917 | SONY ERICSSON | W910i | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | 🗏 | GSM | 18 | Jan-08 |
| 918 | SONY ERICSSON | W950i | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | □ | □ | GSM | 18 | Jan-09 |
| 919 | SONY ERICSSON | W960 | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | □ | □ | GSM | 18 | Jan-09 |
| 920 | SONY ERICSSON | W980 | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | 🗏 | GSM | 18 | Jan-09 |
| 921 | SONY ERICSSON | W995 | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | 🗏 | GSM | 18 | Oct-09 |
| 922 | SONY ERICSSON | X1 | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | 🗏 | GSM | 9 | Jan-09 |
| 923 | SONY ERICSSON | X10 | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | □ | GSM | 26 | May-11 |
| 924 | SONY ERICSSON | Z1010 | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | 🗏 | GSM | 2 | Jul-07 |
| 925 | SONY ERICSSON | Z310i | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ | 🗁 | 🗏 | GSM | 18 | Jul-07 |
| 926 | SONY ERICSSON | Z500a | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | 🗏 | GSM | 2 | Apr-06 |
| 927 | SONY ERICSSON | Z520a | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | 🗏 | GSM | 18 | Oct-06 |
| 928 | SONY ERICSSON | Z520i | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | 🗏 | GSM | 18 | Dec-05 |
| 929 | SONY ERICSSON | Z530i | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | 🗏 | GSM | 18 | Jul-06 |
| 930 | SONY ERICSSON | Z550i | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | 🗏 | GSM | 18 | Oct-06 |
| 931 | SONY ERICSSON | Z555i | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | 🗏 | GSM | 18 | Jul-08 |
| 932 | SONY ERICSSON | Z600 | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | 🗏 | GSM | 2 | Dec-05 |
| 933 | SONY ERICSSON | Z610i | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | 🗏 | GSM | 18 | Apr-07 |
| 934 | SONY ERICSSON | Z710i | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | 🗏 | GSM | 18 | Apr-07 |
| 935 | SONY ERICSSON | Z770 | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | 🗏 | GSM | | Oct-08 |
| 936 | SONY ERICSSON | Z800i | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | 🗏 | GSM | 2 | Dec-05 |
| 937 | T-MOBILE | MDA Vario II | □ | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | 🗏 | GSM | 9 | Jul-08 |

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| 938 | TOSHIBA | G810 | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | ▤ | GSM | 9 | Jul-09 |
| 939 | TOSHIBA | G910 | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | ▤ | GSM | 9 | Jul-09 |
| 940 | TOSHIBA | Portege G500 | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | ▤ | GSM | 9 | Jul-07 |
| 941 | TOSHIBA | Portege G710 | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | ▤ | GSM | 9 | Apr-09 |
| 942 | UBiQUiO | 401 | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | ▤ | GSM | 9 | Jul-07 |
| 943 | UBiQUiO | 501 | ☎ 🕘 | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | ▤ | GSM | 9 | Jul-07 |
| 944 | VERIZON | XV6700 | □ | 🕮 | ◑ 🕘 | ✉ 🕘 | 🗁 | ▤ | GSM | 9 | Oct-07 |
| 945 | VISOA | Spiderphone | ☎ 🕘 | □ | ◑ | ✉ 🕘 | 🗁 | □ | GSM | | Jan-10 |
| 946 | VODAFONE | 527 | ☎ 🕘 | 🕮 | ◑ | ✉ 🕘 | □ | ▤ | GSM | | Jul-09 |
| 947 | VODAFONE | 533 | ☎ 🕘 | 🕮 | ◑ | ✉ 🕘 | □ | ▤ | GSM | | Jul-09 |
| 948 | VODAFONE | 710 | ☎ | 🕮 | □ | ✉ 🕘 | 🗁 | ▤ | GSM | | Oct-07 |
| 949 | VODAFONE | 725 | ☎ | 🕮 | □ | ✉ 🕘 | 🗁 | ▤ | GSM | | Jul-09 |
| 950 | VODAFONE | 810 | ☎ 🕘 | 🕮 | □ | ✉ 🕘 | 🗁 | ▤ | GSM | | Jul-08 |
| 951 | VODAFONE | 830 | ☎ | 🕮 | □ | ✉ 🕘 | 🗁 | ▤ | GSM | | Jul-09 |
| 952 | ZTE | C78 | ☎ | 🕮 | □ | ✉ 🕘 | 🗁 | ▤ | CDMA | | Sep-10 |

## Handsets – Expected Support

The following handsets have not been verified on CellDEK however their appearance or technology indicates that data extraction will be possible as shown by the icons on CellDEK. These handsets are assigned an amber tick. It is recommended that all data is treated as a minimum extraction as there may be additional data sets available that require further examination.

Data can be extracted from these handsets as normal by selecting the device from the Manufacturers list and extracting over Bluetooth, Infrared or Cable as required.

All Windows Mobile devices can be extracted using the PDA option and selecting Windows. All Windows Mobile devices are supported by Infrared and/or Cable.

| MFG | MODEL | MFG | MODEL | MFG | MODEL |
|---|---|---|---|---|---|
| ACER | beTouch E100 | ASUS | H502 | AT&T | 2125 |
| ACER | beTouch E200 | ASUS | M530W | AT&T | 3125 |
| ACER | c510 | ASUS | M356 | AT&T | 5700 |
| ACER | c530 | ASUS | M930 | AT&T | 8125 |
| ACER | c531 | ASUS | Mars II | AT&T | 8500 |
| ACER | DX650 | ASUS | Mypal A626 | AT&T | 8525 |
| ACER | DX900 | ASUS | MyPal A632 | AT&T | SX56 |
| ACER | Liquid | ASUS | MyPal A636 | AT&T | SX66 |
| ACER | M900 | ASUS | MyPal A636N | AUDIOVOX | 5050 |
| ACER | n10 | ASUS | MyPal A639 | AUDIOVOX | 5600 |
| ACER | n30 | ASUS | MyPal A686 | AUDIOVOX | 6601 |
| ACER | n35 | ASUS | P305 | AUDIOVOX | XV6600 |
| ACER | n300 | ASUS | P320 | AUDIOVOX | XV6700 |
| ACER | n310 | ASUS | P505 | BENQ-SIEMENS | P51 |
| ACER | n311 | ASUS | P525 | BLACKBERRY | 8110 |
| ACER | n320 | ASUS | P526 | BLACKBERRY | 8130 (Pearl) |
| ACER | n321 | ASUS | P527 | BLACKBERRY | 8220 |
| ACER | neoTouch | ASUS | P535 | BLACKBERRY | 8230 (Pearl) |
| AIRIS | T610 | ASUS | P550 | BLACKBERRY | Pearl 3G 9100 |
| AIRIS | T620 | ASUS | P552 | BLACKBERRY | 9105 (Pearl 3G) |
| AIRO | A25 | ASUS | P560 | BLACKBERRY | Curve 3G 9300 |
| AMOI | E72 | ASUS | P565 | BLACKBERRY | 9520 |
| AMOI | E75 | ASUS | P735 | BLACKBERRY | 9550 |
| AMOI | E76 | ASUS | P750 | BLACKBERRY | 9630 |
| AMOI | E78 | ASUS | P835 | BLACKBERRY | 9650 (Bold) |
| AMOI | E850 | ASUS | V88i | BLACKBERRY | 9670 (Style) |
| AMOI | E860 | ASUS | Z801 | BLACKBERRY | Torch 9800 |
| AnexTEK | mobo DA 3160 | ASUS | Z810 | BLACKBERRY | 9900 |
| AnexTEK | mobo DA 3360 | ASUS | ZX1 | CINGULAR | 2125 |
| AnexTEK | mobo DA 3380 | AT Mobile | AT Bear | CINGULAR | 3125 |
| AnexTEK | SP310 | AT Mobile | AT Cobra | CINGULAR | 8100 |
| Apple | iPod Touch | AT Mobile | AT Eagle | CINGULAR | 8125 |
| Apple | iPhone 5 | AT Mobile | AT Falcon | CINGULAR | SX66 |

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|---|---|---|---|---|---|---|---|
| ASUS | A696 | | AT Mobile | AT Pelican | | CINGULAR iPAQ | h6320 |
| ASUS | J501 | | | | | | |
| CINGULAR iPAQ | h6325 | | DOPOD | CHT 9100 | | FUJITSU SIEMENS | C550 |
| COMPAQ iPAQ | 3800 | | DOPOD | D600 | | FUJITSU SIEMENS | N100 |
| COMPAQ iPAQ | 3830 | | DOPOD | D802 | | FUJITSU SIEMENS | N110 |
| COMPAQ iPAQ | 3835 | | DOPOD | D8110 | | FUJITSU SIEMENS | N500 |
| COMPAQ iPAQ | 3850 | | DOPOD | M700 | | FUJITSU SIEMENS | N520 |
| COMPAQ iPAQ | 3870 | | DOPOD | P100 | | FUJITSU SIEMENS | N520c |
| COMPAQ iPAQ | 3875 | | DOPOD | P800W | | FUJITSU SIEMENS | N520e |
| COMPAQ iPAQ | 3900 | | DOPOD | S300 | | FUJITSU SIEMENS | N520p |
| COMPAQ iPAQ | 3950 | | DOPOD | U1000 | | FUJITSU SIEMENS | N560 |
| COMPAQ iPAQ | 3955 | | E-PLUS | PDA III | | FUJITSU SIEMENS | N560c |
| COMPAQ iPAQ | 3970 | | E-PLUS | PDA IV | | FUJITSU SIEMENS | N560e |
| COMPAQ iPAQ | 3975 | | ETEN | 600 | | FUJITSU SIEMENS | T810 |
| DAXIAN | CU928 | | ETEN | 600e | | FUJITSU SIEMENS | T830 |
| DELL | AXIM | | ETEN | DX900 | | FUJITSU SIEMENS | V70 |
| DELL | Pocket DJ 20GB | | ETEN | E500 | | GARMIN-ASUS | Garminfone |
| DELL | Pocket DJ 30GB | | ETEN | E900 | | GIGABYTE | g-Smart |
| DELL | X3 | | ETEN | G500 | | GIGABYTE | g-Smart i |
| DELL | X3i | | ETEN | G500+ | | GIGABYTE | g-Smart i+ |
| DELL | X30 | | ETEN | M500 | | GIGABYTE | g-Smart i120 |
| DELL | X5 | | ETEN | M550 | | GIGABYTE | g-Smart i128 |
| DELL | X50 | | ETEN | M600 | | GIGABYTE | g-Smart i300 |
| DELL | X50v | | ETEN | M600+ | | GIGABYTE | g-Smart i350 |
| DELL | X51 | | ETEN | M700 | | GIGABYTE | g-Smart MS800 |
| DOCOMO | htc Z | | ETEN | M800 | | GIGABYTE | g-Smart MS802 |
| DOPOD | 310 | | ETEN | M810 | | GIGABYTE | g-Smart MS804 |
| DOPOD | 515 | | ETEN | N100 | | GIGABYTE | g-Smart MS808 |
| DOPOD | 535 | | ETEN | P100 | | GIGABYTE | g-Smart MS820 |
| DOPOD | 565 | | ETEN | P100w | | GIGABYTE | g-Smart |

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|---|---|---|---|---|---|
| | | | | | MW700 |
| DOPOD | 566 | ETEN | P120 | GIGABYTE | g-Smart MW702 |
| DOPOD | 575 | ETEN | P300 | GIGABYTE | g-Smart MW998 |
| DOPOD | 585 | ETEN | P600 | GIGABYTE | g-Smart q60 |
| DOPOD | 586 | ETEN | P603 | GIGABYTE | g-Smart S1200 |
| DOPOD | 595 | ETEN | P610 | GIGABYTE | g-Smart t600 |
| DOPOD | 686 | ETEN | P700 | GOOGLE | NEXUS 7 |
| DOPOD | 696 | ETEN | P700i | HP iPAQ | 114 |
| DOPOD | 699 | ETEN | T470 | HP iPAQ | 214 |
| DOPOD | 700 | ETEN | T500 | HP iPAQ | 500 |
| DOPOD | 710 | ETEN | V900 | HP iPAQ | 510 |
| DOPOD | 818 | ETEN | X500 | HP iPAQ | 512 |
| DOPOD | 830 | ETEN | X500+ | HP iPAQ | 610c |
| DOPOD | 838 | ETEN | X600 | HP iPAQ | 614 |
| DOPOD | 900 | ETEN | X610 | HP iPAQ | 614c |
| DOPOD | 577W | ETEN | X650 | HP iPAQ | 9120c |
| DOPOD | 586W | ETEN | X800 | HP iPAQ | Glisten |
| DOPOD | 696i | EVEREX | NEON | HP iPAQ | h1900 |
| DOPOD | 818 Pro | FITH MEDIA | A308 | HP iPAQ | h1910 |
| DOPOD | 828+ | FLY | IQ-110 | HP iPAQ | h1915 |
| DOPOD | 838 Pro | FUJITSU SIEMENS | 410 | HP iPAQ | h1920 |
| DOPOD | C500 | FUJITSU SIEMENS | 420 | HP iPAQ | h1930 |
| DOPOD | C720W | FUJITSU SIEMENS | 600 | HP iPAQ | h1935 |
| DOPOD | C730 | FUJITSU SIEMENS | 710 | HP iPAQ | h1937 |
| DOPOD | C800 | FUJITSU SIEMENS | 718 | HP iPAQ | h1940 |
| DOPOD | C858 | FUJITSU SIEMENS | 720 | HP iPAQ | h1945 |
| DOPOD | CHT 9000 | FUJITSU SIEMENS | 610BT | HP iPAQ | h2200 |
| HP iPAQ | h2210 | HP iPAQ | hx2490 | HTC | Galaxy |
| HP iPAQ | h2215 | HP iPAQ | hx2495 | HTC | Gene |
| HP iPAQ | h3630 | HP iPAQ | hx2700 | HTC | Harrier |
| HP iPAQ | h3670 | HP iPAQ | hx2750 | HTC | HD2 |
| HP iPAQ | h3800 | HP iPAQ | hx2790 | HTC | Herald |
| HP iPAQ | h3830 | HP iPAQ | hx2795 | HTC | Hermes |
| HP iPAQ | h3835 | HP iPAQ | hx4700 | HTC | Himalaya |
| HP iPAQ | h3850 | HP iPAQ | hx4705 | HTC | Hurricane |
| HP iPAQ | h3870 | HP iPAQ | hx4710 | HTC | Imagio |
| HP iPAQ | h3875 | HP iPAQ | K3 Obsidian | HTC | Inspire 4G |
| HP iPAQ | h3900 | HP iPAQ | rw6815 | HTC | Libra |
| HP iPAQ | h3950 | HP iPAQ | rw6818 | HTC | Love |
| HP iPAQ | h3955 | HP iPAQ | rw6828 | HTC | Magician |
| HP iPAQ | h3970 | HP iPAQ | rx1700 | HTC | MAX 4G |

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|---|---|---|---|---|---|---|---|
| HP iPAQ | h3975 | HP iPAQ | rx1950 | HTC | Monet | | |
| HP iPAQ | h4140 | HP iPAQ | rx1955 | HTC | MTeoR | | |
| HP iPAQ | h4150 | HP iPAQ | rx3100 | HTC | Nike | | |
| HP iPAQ | h4155 | HP iPAQ | rx3110 | HTC | Oxygen | | |
| HP iPAQ | h4350 | HP iPAQ | rx3115 | HTC | Ozone | | |
| HP iPAQ | h4355 | HP iPAQ | rx3400 | HTC | P3350 | | |
| HP iPAQ | h5100 | HP iPAQ | rx3415 | HTC | P3400 | | |
| HP iPAQ | h5150 | HP iPAQ | rx3417 | HTC | P3600 | | |
| HP iPAQ | h5155 | HP iPAQ | rx3700 | HTC | P4000 | | |
| HP iPAQ | h5400 | HP iPAQ | rx3710 | HTC | P4350 | | |
| HP iPAQ | h5450 | HP iPAQ | rx3715 | HTC | P4450 | | |
| HP iPAQ | h5455 | HP iPAQ | rx4240 | HTC | P4500 | | |
| HP iPAQ | h5500 | HP iPAQ | rx5700 | HTC | P6300 | | |
| HP iPAQ | h5555 | HP iPAQ | rx5900 | HTC | P6500 | | |
| HP iPAQ | h6310 | HP iPAQ | rz1700 | HTC | Panda | | |
| HP iPAQ | h6315 | HP iPAQ | rz1715 | HTC | Polaris | | |
| HP iPAQ | h6320 | HTC | Advantage X7500 | HTC | Prophet | | |
| HP iPAQ | h5325 | HTC | Advantage X7501 | HTC | Pure | | |
| HP iPAQ | h6340 | HTC | Advantage A7510 | HTC | Robbie | | |
| HP iPAQ | h6365 | HTC | Alphine | HTC | S320 | | |
| HP iPAQ | h6500 | HTC | Amadeus | HTC | S630 | | |
| HP iPAQ | hw6510 | HTC | Apache | HTC | S720 | | |
| HP iPAQ | hw6515 | HTC | Aria | HTC | S730 | | |
| HP iPAQ | h6515a | HTC | Artemis | HTC | Sensation 4G | | |
| HP iPAQ | h6710 | HTC | Athena | HTC | Shadow Hotspot | | |
| HP iPAQ | h6715 | HTC | Atlas | HTC | Shift | | |
| HP iPAQ | hw6900 | HTC | Blue Angel | HTC | Sirius | | |
| HP iPAQ | hw6910 | HTC | Breeze | HTC | Sonata | | |
| HP iPAQ | hw6920 | HTC | Canary | HTC | Star Trek | | |
| HP iPAQ | hw6925 | HTC | Cavalier | HTC | Surround | | |
| HP iPAQ | h6940 | HTC | Charmer | HTC | Tanager | | |
| HP iPAQ | hw6945 | HTC | Dash 3G | HTC | Thunderbolt | | |
| HP iPAQ | h6965 | HTC | Dream | HTC | Tilt2 | | |
| HP iPAQ | hx2000 | HTC | Elf | HTC | Touch2 | | |
| HP iPAQ | hx2090 | HTC | EVO View 4G (Tablet) | HTC | Touch 3G | | |
| HP iPAQ | nx2110 | HTC | Excalibur | HTC | Touch Cruise 09 | | |
| HP iPAQ | hx2190 | HTC | Falcon | HTC | Touch Dual | | |
| HP iPAQ | hx2400 | HTC | Faraday | HTC | Touch HD | | |
| HP iPAQ | hx2410 | HTC | Feeler | HTC | Touch Pro | | |
| HP iPAQ | hx2415 | HTC | Flyer (tablet) | HTC | Touch Pro 2 | | |
| HTC | Touch Viva | IZENMOBILE | KRMA KSMT | MITAC | 8380 | | |
| HTC | Tilt | KINPO | iDO S601 | MITAC | 8390 | | |
| HTC | Trinity | KINPO | IDO S630 | MITAC | 8870 | | |
| HTC | Typhoon | KINPO | SP70 | MITAC | 168RS | | |

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|---|---|---|---|---|---|---|---|
| HTC | TyTN | KINPO | SP70R | MITAC | 336BT |
| HTC | Universal | KINPO | SP90 | MITAC | 338 Plus |
| HTC | Volans | KROME | Intellekt iQ200 | MITAC | A201 |
| HTC | Vox | KROME | Intellekt iQ700 | MITAC | A501 |
| HTC | Voyager | KROME | Mega M900i | MITAC | A700 |
| HTC | Wallaby | KROME | Navigator F1 | MITAC | A701 |
| HTC | Wizard | KROME | Spy | MITAC | A702 |
| HTC | XV6900 | KYOCERA | E1100 | MITAC | P3400 |
| IMATE | JAM Black | LENOVO | ET960 | MITAC | P350 |
| IMATE | JAMA | LENOVO | ET980 | MITAC | P550 |
| IMATE | JAMA101 | LENOVO | i921 | MITAC | OP550m |
| IMATE | JAMA 201 | LG | Incite | MITAC | P560 |
| IMATE | JAQ | LG | AX145 | MITSUBISHI | Trium Mondo |
| IMATE | JAQ3 | LG | KB770 | MOTOROLA | A845 |
| IMATE | JAQ4 | LG | KC1 | MOTOROLA | A3100 |
| IMATE | JASJAM | LG | KE990 | MOTOROLA | C250 |
| IMATE | PDA-2 | LG | KF300 | MOTOROLA | C343a |
| IMATE | EDVO | LG | KF310 | MOTOROLA | C353 |
| IMATE | PDAL | LG | KF350 | MOTOROLA | C353t |
| IMATE | PDA-N | LG | KF700 | MOTOROLA | C380 |
| IMATE | Phone Edition | LG | KF750 | MOTOROLA | E550 |
| IMATE | Pocket PC | LG | KF755 | MOTOROLA | i275 |
| IMATE | Smartflip | LG | KF770 | MOTOROLA | i720 |
| IMATE | Smartphone | LG | KF900 | MOTOROLA | i733 |
| IMATE | Smartphone 2 | LG | KP100 | MOTOROLA | i740 |
| IMATE | SP2 | LG | KP501 | MOTOROLA | i920 |
| IMATE | SP3 | LG | KS20 | MOTOROLA | i920 |
| IMATE | SP4m | LG | KT610 | MOTOROLA | i930 |
| IMATE | SP5m | LG | KU380 | MOTOROLA | MC35 |
| IMATE | SPJAS | LG | Optimus GT540 | MOTOROLA | MPx |
| IMATE | Ultimate 5150 | LG | P509 (Optimus T) | MOTOROLA | MPx100 |
| IMATE | Ultimate 6150 | LG | U8100 | MOTOROLA | T720i |
| IMATE | Ultimate 7150 | LG | U8150 | MOTOROLA | V1150 |
| IMATE | Ultimate 8150 | LG | U8180 | MOTOROLA | V120e |
| IMATE | Ultimate 8502 | LG | U8210 | MOTOROLA | V120t |
| IMATE | Ultimate 9150 | LG | U8290 | MOTOROLA | V120x |
| IMATE | Ultimate 9502 | LG | U8300 | MOTOROLA | V186 |
| IMATE | 810-F | LG | Quantum | MOTOROLA | V191 |
| INTERMEC | 730 | MIO | A502 | MOTOROLA | V330 |
| INTERMEC | 730B | MIO | A702 | MOTOROLA | V505 |
| INTERME | 741B | MIO | P3600 | MOTOROLA | V535 |

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|---|---|---|---|---|---|
| INTERMEC | 751B | MIO | P560 | MOTOROLA | V545 |
| INTERMEC | 761B | MITAC | 168 | MOTOROLA | V547 |
| INTERMEC | CN2B | MITAC | 169 | MOTOROLA | V555 |
| INTERMEC | CN3 | MITAC | 180 | MOTOROLA | V557 |
| INTERMEC | CN30 | MITAC | 336 | MOTOROLA | V60 |
| INTERMEC | Mercury | MITAC | 338 | MOTOROLA | V60c |
| i-teq | Bond | MITAC | 339 | MOTOROLA | V60g |
| i-teq | Laser | MITAC | 558 | MOTOROLA | V60i |
| i-teq | X-Bond | MITAC | 728 | MOTOROLA | V60s |
| MOTOROLA | V60t | NOKIA | N8 | ORANGE | SPV C220 |
| MOTOROLA | V60x | NOKIA | N75 | ORANGE | SPV C700 |
| MOTOROLA | V66 | NOKIA | N78 | ORANGE | SPV Classic |
| MOTOROLA | Z10 | NOKIA | N81 | ORANGE | SPV E100 |
| MOTOROLA | Backflip | NOKIA | N92 | ORANGE | SPV E200 |
| MOTOROLA | Bravo | NOKIA | X5 | ORANGE | SPV E600 |
| MOTOROLA | Charmer | O2 | Cosmo | ORANGE | SPV E610 |
| MOTOROLA | Cliq 2 | O2 | Pocket PC | ORANGE | SPV E650 |
| MOTOROLA | Defy | O2 | XDA Argon | ORANGE | SPV F600 |
| MOTOROLA | Flipout | O2 | XDA Atom | ORANGE | SPV M1000 |
| MOTOROLA | Flipside | O2 | XDA Atom Exec | ORANGE | SPV M2000 |
| MWG | Atom Life | O2 | XDA Atom Life | ORANGE | SPV M2500 |
| MWG | Atom V | O2 | XDA Atom Pure | ORANGE | SPV M3000 |
| MWG | Zinc II | O2 | XDA Comet | ORANGE | SPV M3100 |
| NEONODE | N1 | O2 | XDA Cosmo | ORANGE | SPV M500 |
| NEONODE | N1m | O2 | XDA Exec | ORANGE | SPV M5000 |
| NEONODE | N2 | O2 | XDA Flame | ORANGE | SPV M600 |
| NEXIO | S160 | O2 | XDA Graphite | ORANGE | SPV M650 |
| NEXIO | XP40 | O2 | XDA Guide | ORANGE | SPV M700 |
| NOKIA | 2320 Classic | O2 | XDA Ignito | ORANGE | SPV Smartphone |
| NOKIA | 2605 | O2 | XDA II | ORSiO | G735 |
| NOKIA | 2705 Shade | O2 | XDA ii mini | ORSiO | GN725 |
| NOKIA | 3205 | O2 | XDA iis | ORSiO | N725 GPS |

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|---|---|---|---|---|---|---|---|
| NOKIA | 3606 | O2 | XDA mini S | ORSiO | P745 | QTEK | 8080 |
| NOKIA | 3711 | O2 | XDA NEO | PALM | Treo 700w | QTEK | 8100 |
| NOKIA | 5030 | O2 | XDA Nova | PALM | Treo 700wx | QTEK | 8200 |
| NOKIA | 5250 | O2 | XDA Orbit | PALM | Treo 750V | QTEK | 8300 |
| NOKIA | 6012 | O2 | XDA Orbit II | PALM | Treo 755p | QTEK | 8310 |
| NOKIA | 6102 | O2 | SDA Orion | PALM | Treo 800w | QTEK | 8500 |
| NOKIA | 6121 | O2 | XDA Phone | PALM | Tungsten E2 | SAMSUNG | S5230W |
| NOKIA | 6126 | O2 | XDA Stealth | PALM | Tungsten T5 | SAMSUNG | S5233 |
| NOKIA | 6205 | O2 | XDA Serra | PANASONIC | X700 | SAMSUNG | S5600v Blade |
| NOKIA | 6350 | O2 | XDA Stellar | PANASONIC | X800 | SAMSUNG | S5603 |
| NOKIA | 6560 | O2 | XDA Terra | PANTECH | PN820 | SAMSUNG | S7350 |
| NOKIA | 6590 | O2 | XDA Trion | PARAGON WIRELESS | HIPI-2200 | SAMSUNG | SCH-i830 |
| NOKIA | 6600 | O2 | XDA Zest | PHAROS | 600 GPS Phone | SONY ERICSSON | K610im |
| NOKIA | 6681 | O2 | XDA Zinc | PHAROS | Traveller GPS 525 | SONY ERICSSON | K700c |
| NOKIA | 6682 | O2 | Xphone | POCKET NAVIGATOR | PN-3550 | SONY ERICSSON | K750c |
| NOKIA | 6710 Navigator | O2 | Xphone ii | POCKET NAVIGATOR | PN-3560 | SONY ERICSSON | K758c |
| NOKIA | 6750 | O2 | Xphone iim | POCKET NAVIGATOR | PN-P201 | SONY ERICSSON | K790a |
| NOKIA | 7205 | OKWAP | K728 | POCKET NAVIGATOR | PN-P550 A | SONY | K790c |
| NOKIA | 7250 | OKWAP | K868 | POCKET NAVIGATOR | PN-P550 A | | |
| NOKIA | 8801 | OKWAP | K860 | PSION TEKLOGIX | Workabout PRO | | |
| NOKIA | 8890 | OKWAP | K871 | PSION TEKLOGIX | Workabout PRO G2 | | |
| NOKIA | 6236i | OKWAP | S868 | QOOL LABS | QDA Icon | | |
| NOKIA | C5 | OPTICON | H-16B | QOOL LABS | QDA Lite | | |
| NOKIA | C6 | OPTICON | H-19A | QOOL LABS | Twins 178 | | |
| NOKIA | E5 | OPTICON | H-19-B | QTEK | 1010 | | |
| NOKIA | E52 | OPTICON | PHL-5400 | QTEK | 2020 | | |
| NOKIA | E61i | OPTICON | PHL-7111 | QTEK | 2060 | | |
| NOKIA | E62 | OPTICON | PHL-7114 | QTEK | 7070 | | |
| NOKIA | E66 | OPTICON | PHL-7142 | QTEK | 8010 | | |
| NOKIA | E72 | ORANGE | SPV C100 | QTEK | 8020 | | |
| NOKIA | E90 | ORANGE | SPV C200 | QTEK | 8060 | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| QTEK | 8600 | | SAMSUNG | SCH-M400 | | ERICSSON SONY | K790i |
| QTEK | 9000 | | SAMSUNG | SGH-A257 | | ERICSSON SONY | M608i |
| QTEK | 9090 | | **SAMSUNG** | **SGH-A877** | | ERICSSON SONY | S700c |
| QTEK | 9100 | | **SAMSUNG** | **SGH-A887** | | ERICSSON SONY | T226 |
| QTEK | 9600 | | SAMSUNG | SGH-D300 | | ERICSSON SONY | T237 |
| QTEK | 2020i | | SAMSUNG | SGH-D730(Symbian) | | ERICSSON SONY | T290a |
| QTEK | G100 | | SAMSUNG | SGH-E808 | | ERICSSON SONY | T616 |
| QTEK | S100 | | SAMSUNG | SGH-i250 | | ERICSSON SONY | T637 |
| QTEK | S110 | | SAMSUNG | SGH-i300x | | ERICSSON SONY | W300c |
| QTEK | S200 | | SAMSUNG | SGH-i400(Symbian) | | ERICSSON SONY | W550c |
| QTEK | S310 | | SAMSUNG | SGH-i450(Symbian) | | ERICSSON SONY | W600 |
| QUEST | Pocket PC6700 | | SAMSUNG | SGH-i718 | | ERICSSON SONY | W600c |
| ROVER PC | C6 | | SAMSUNG | SGH-i750 | | ERICSSON SONY | W710c |
| ROVER PC | E5 | | SAMSUNG | SGH-i760 | | ERICSSON SONY | W715a |
| ROVER PC | G5 | | SAMSUNG | SGH-i770 | | ERICSSON SONY | W800c |
| ROVER PC | G6 | | SAMSUNG | SGH-i897 | | ERICSSON SONY | W810c |
| ROVER PC | M5 | | SAMSUNG | SGH-i917 | | ERICSSON SONY | W830 |
| ROVER PC | N6 | | SAMSUNG | i9000 (Galaxy S 4G) | | ERICSSON SONY | W880c |
| ROVER PC | N7 | | SAMSUNG | i9100 (Galaxy S 2) | | ERICSSON SONY | W888c |
| ROVER PC | P6 | | SAMSUNG | SGH-L870(Symbian) | | ERICSSON SONY | W900c |
| ROVER PC | P745 | | SAMSUNG | SGH-P730 | | ERICSSON SONY | Xperia X10 |
| ROVER PC | Q5 | | SAMSUNG | SGH-T929 | | ERICSSON SONY | Xperia X10 mini |
| ROVER PC | Q6 | | SAMSUNG | SGH-T589 (Gravity Smart) | | ERICSSON SONY | Xperia X8 |
| ROVER PC | R5 | | SAMSUNG | SGH-T759 (Exhibit 4G) | | ERICSSON SONY | Z502a |
| ROVER PC | S5 | | SAMSUNG | SGH-T959 | | ERICSSON SONY | Z520c |
| ROVER PC | S6 | | SAMSUNG | SGH-Z600 | | ERICSSON SONY | Z525a |
| ROVER PC | S7 | | SHARP | W-ZERO3 | | ERICSSON | Z525i |
| ROVER | W5 | | SIEMENS | A62 | | SONY | Z530c |

| | |
|---|---|
| PC | |
| SAMSUNG | GALAXY |
| SAMSUNG | GALAXY S3 |
| SAMSUNG | GALAXY S4 |
| SAMSUNG | B7320 |
| SAMSUNG | B7330, OmniaPRO |
| SAMSUNG | B7610 OmniaPRO |
| SAMSUNG | C6620 |
| SAMSUNG | C3010 |
| SAMSUNG | C3110 |
| SAMSUNG | E1310 |
| SAMSUNG | i520(Symbian) |
| SAMSUNG | i550(Symbian) |
| SAMSUNG | i560(Symbian) |
| SAMSUNG | i640 |
| SAMSUNG | i7110(Symbian) |
| SAMSUNG | i7500(Android) |
| SAMSUNG | i8910 |
| SAMSUNG | i907 |
| SAMSUNG | M7610 |
| SAMSUNG | Propel Pro |
| SAMSUNG | S3110 |
| SAMSUNG | S3310 |
| T-MOBILE | MDA |
| T-MOBILE | MDA Compact |
| T-MOBILE | MDA Compact II |
| T-MOBILE | MDA Compact III |
| T-MOBILE | MDA II |
| T-MOBILE | MDA III |
| T-MOBILE | MDA Mail |
| T-MOBILE | MDA Pro |

| | |
|---|---|
| SIEMENS | C6620 |
| SIEMENS | L56 |
| SIEMENS | S56 |
| SIEMENS | S66 |
| SIEMENS | SX45 |
| SIEMENS | SX45i |
| SIEMENS | SX56 |
| SIEMENS | SX66 |
| SOCKET MOBILE | SoMo 650 |
| SONY ERICSSON | C901 GreenHeart |
| SONY ERICSSON | G900 |
| SONY ERICSSON | J300a |
| SONY ERICSSON | J300c |
| SONY ERICSSON | K300a |
| SONY ERICSSON | K300c |
| SONY ERICSSON | K310a |
| SONY ERICSSON | K310c |
| SONY ERICSSON | K500c |
| SONY ERICSSON | K506c |
| SONY ERICSSON | K510a |
| SONY ERICSSON | K510c |
| T-MOBILE | h6315 |
| TOSHIBA | G900 |
| TOSHIBA | TG01 |
| UBIQUIO | 601 |
| UBIQUIO | 503G |
| VELOCITY MOBILE | 103 |
| VELOCITY MOBILE | 111 |
| VERIZON | PN-820 |

| | |
|---|---|
| ERICSSON SONY | |
| ERICSSON SONY | Z550a |
| ERICSSON SONY | Z550c |
| ERICSSON SONY | Z710c |
| ERICSSON SONY | Z712a |
| SPRINT | Ace |
| SPRINT | PPC-6600 |
| SPRINT | PPC-6601 |
| SPRINT | PPC-6700 |
| SPRINT | PPC-6800 |
| SPRINT | XV6600 Nomad |
| TDS | 800B Nomad |
| TDS | 800L Nomad |
| TDS | 800LC Nomad |
| TDS | 800LE Ranger |
| TDS | 300X Ranger |
| TDS | 500X |
| T-MOBILE | Ameo |
| T-MOBILE | Comet |
| T-MOBILE | Dash |
| T-MOBILE | G2 |
| T-MOBILE | G2x |
| VODAFONE | VDA V VPA |
| VODAFONE | Compact VPA II |
| VODAFONE | Compact |
| VODAFONE | VPA III |
| VOXTEL | W210 |
| VOXTEL | W420 |
| VOXTEL | W520 |
| VOXTEL | W740 |

| | | | | |
|---|---|---|---|---|
| | | | WIRELESS | |
| | MDA | | VERIZON | |
| T-MOBILE | Pocket PC | | WIRELESS | XV6600 |
| | | | VERIZON | |
| T-MOBILE | MDA Touch | | WIRELESS | XV6800 |
| T-MOBILE | MDA Vario | | VODAFONE | v1210 |
| | MDA Vario | | | |
| T-MOBILE | III | | VODAFONE | v1240 |
| | myTouch | | | |
| T-MOBILE | 3G slide | | VODAFONE | v1415 |
| | myTouch | | | |
| T-MOBILE | 4G | | VODAFONE | v1605 |
| T-MOBILE | SDA | | VODAFONE | v1620 |
| T-MOBILE | SDA II | | VODAFONE | v1640 |
| T-MOBILE | SDA Music | | VODAFONE | VDA |
| | | | | VDA Compact |
| T-MOBILE | Shadow 2 | | VODAFONE | GPS |
| | | | | VDA Compact |
| T-MOBILE | Sidekick 4G | | VODAFONE | IV |
| T-MOBILE | Wing | | VODAFONE | VDA II |

## Handsets – Other

Other handsets can be tested on CellDEK, however the amount of data extracted has not been assessed and all information should be treated as a minimum data extraction.

## GPS Device – Verified CellDEK Support

The following GPS Devices have been tested on CellDEK using the standard verification procedures of Logicube. The results below display the data sets that can be extracted from CellDEK for the specific handset. There may be additional data sets available from handsets and these will require further examination.

Key:

| | | | | | |
|---|---|---|---|---|---|
| Phone ID | | Home | | Routes | |
| Contacts | | Favourites | ★ | Routes with Waypoints | |
| Call Logs | | Recent Destinations | | Track Logs | |

| Call Logs w timestamp | | Location History | | Track Logs with Waypoints | |
|---|---|---|---|---|---|
| SMS | | | | | |
| SMS w timestamp | | | | | |

| | Manufacturer | Model | GPS ID | Contacts | Call Logs | Incoming SMS | Outgoing SMS | Home | Favourite | Recent Destinations | Location History | Routes | Tracks | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | ACER | P610 | | | | | | | ★ | | | | | Apr 2009 |
| 2 | GARMIN | nuvi 250W | | | | | | | ★ | | | | | Oct 2008 |
| 3 | GARMIN | nuvi 300 | | | | | | | ★ | | | | | Oct 2008 |
| 4 | GARMIN | nuvi 760 | | | | | | | ★ | | | | | Apr 2009 |
| 5 | HP | iPAQ 314 | | | | | | | ★ | | | | | Jan 2009 |
| 6 | NAVIGON | 7210 | | | | | | | ★ | | | | | Jul 2009 |
| 7 | NAVMAN | S50 3D | | | | | | | ★ | | | | | Jul 2009 |
| 8 | NAVMAN | S70 | | | | | | | ★ | | | | | Jul 2009 |
| 9 | NAVMAN | S70 3D | | | | | | | ★ | | | | | Jul 2009 |
| 10 | NDRIVE | S300 | | | | | | | ★ | | | | | Apr 2009 |
| 11 | TOMTOM | G0 720 | | | | | | | ★ | | | | | Jul 2008 |
| 12 | TOMTOM | ONE | | | | | | | ★ | | | | | Jul 2008 |
| 13 | **TOMTOM** | **ONE XL** | | | | | | | ★ | | | | | **Jan 2010** |
| 14 | **VIAMICHELIN** | **X970** | | | | | | | ★ | | | | | **Jan 2010** |

## GPS Device – Expected Support

The following GPS Devices have not been verified on CellDEK however their appearance or technology indicates that data extraction will be possible. It is recommended that all data is treated as a minimum extraction as there may be additional data sets available that require further examination.

Data can be extracted from these handsets as normal by selecting either Mass Storage Device or Windows PDA from the GPS Device list.

**GARMIN nuvi:** 200, 200W, 205, 205W, 250, 255W, 260, 260W, 265T, 265WT, 270, 275T, 350, 360, 370, 500, 550, 600, 610, 650, 660, 670, 680, 750, 755T, 765T, 770, 775T, 780, 785T, 850, 855, 855T, 880, 885T, 1200, 1250, 1260T, 1300, 1350T, 1370T, 1390T, 1490T, 5000

**NAVIGON:** 1200, 1210, 2100 max, 2110 max, 2150 max, 2200, 2310, 3300 max, 3310 max, 4310 max, 4350 max, 7310, 8110, 8310

**NAVMAN:** S30, S30 3D, S50, S80, S90i

**NDRIVE:** G280R, G280S, G400, G800R, S400, Touch, Touch XL

**TOMTOM:** GO, GO 300, GO 500, GO 510, GO 520, GO 530, GO 540 LIVE, GO 700, GO 710, GO 730, GO 740 LIVE, GO 910, GO 920, GO 940 LIVE, XL

## Additional Cable Support for PDAs

The set of 5 cable tips can be purchased from **http://www.gomadic.com/celldek.html** This will enable the User to extract data from the following 150 PDAs:

**PDA Cable Tip 1**

**DELL**: Axim X5

**PDA Cable Tip 2**

**CINGULAR iPAQ**: h6320, h6325

**COMPAQ iPAQ**: 3800, 3830, 3835, 3850, 3870, 3875, 3900, 3950, 3955, 3970, 3975

**HP iPAQ**: h1900, h1910, h1915, h1920, h1930, h1935, h1937, h1940, h1945, h2200, h2210, h2215, h3800, h3830, h3835, h3850, h3870, h3875, h3900, h3950, h3955, h3970, h3975, h4140, h4150, h4350, h4355, h5100, h5150, h5155, h5400, h5450, h5455, h5500, h5550, h5555, h6315, h6320, h6325, h6340, h6365, hw6500, hw6510, hw6515a, hw6515, hw6710, hw6715, hw6910, hw6915, hw6925, hw6940, hw6965, hx2000-Series, hx2090, hx2110, hx2190, hx2410, hx2415, hx2490, hx2495, hx2700-Series, hx2750, hx2790, hx2795, hx4700, hx4705, hx4710, rx1700-Series, rx1950, rx1955, rx3100, rx3110, rx3115, rx3400, rx3415, rx3417, rx3700, rx3710, rx3715, rz1700, rz1710, rz1715

**MOTOROLA**: C250

**T-MOBILE iPAQ**: h6315

**PDA Cable Tip 8**

**AT&T**: SX56, SX66

**AUDIOVOX**: 5050, 6601, XV6600

**CINGULAR**: SX66

**HTC**: Blue Angel, Canary, Falcon, Harrier, Himalaya, Tanager, Voyager, Wallaby

**I-MATE**: PDA2k, PPC Phone, Smartphone 1, Smartphone 2

**O2**: XDA IIi, XDA IIs, XDA-II, XDA PPC Phone, XPhone I

**ORANGE**: SPV-E100, SPV-E200, SPV-M1000, SPV-M2000, SPV-Smartphone

**QTEK**: 1010, 2020, 7070, 8060, 8080, 9090

**SIEMENS**: SX56, SX66

**SPRINT**: 6601, XV6600

**T-MOBILE**: MDA, MDA II, MDA III, PPC Edition

**VERIZON**: XV6600

**PDA Cable Tip 11**

**DELL**: Axim X30, Axim X3i, Axim X3, Pocket DJ 20GB, Pocket DJ 30GB

**PDA Cable Tip 13**

**DELL**: Axim X50v, Axim X50, Axim X51v, Axim X51

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# 9. CellDEK Software License

## CellDEK Software License - EU

**EU CUSTOMER LICENCE**

**BETWEEN LOGICUBE, INC.** (the **"Licensor"**); and the End User (**"You"**).

**RECITAL**

(A) The Licensor is engaged in creating and is the owner of the Software (as hereinafter defined).

(B) The Licensor has agreed to grant You a non-exclusive licence to use the Software (as hereinafter defined) upon the terms and conditions of this Agreement.

(C) The Licensor has provided You with a copy of the End User Software License (as hereinafter defined) which grants You a license to use the Microsoft and related software contained within the PC embedded in the CellDEK device.

**OPERATIVE PROVISIONS**

1 **DEFINITIONS AND INTERPRETATION**

1.1 In this Agreement including the Schedule hereto the following words shall have the following meanings:

**"Agreement"**
means this agreement, including its Schedule;

**"Business Day"**
means any day other than Saturdays, Sundays or public holidays in England;

**"Commencement Date"**
means the date of the Contract;

**"Contract"**
means the contract between the Parties for the purchase of the Goods in which the Software is embedded;

**"Customer"**
means a third party who is licensed by the Licensor to use the Software when it is installed into the Goods;

**"End User License"**
means the paper license provided with the CellDEK device for software within the embedded PC;

**"Executable Code"**
means the fully compiled version of a software programme that can be executed by a computer and used by a Customer without further compilation;

**"Force Majeure"**
means the following:

(a) Acts of God;

(b) outbreak of hostilities, riot, civil disturbance, acts of terrorism;

(c) an act of any government or authority (including refusal or revocation of any licence or consent);

(d) fire, explosion, flood, fog or bad weather;

(e) power failure, failure of telecommunication lines, failure or breakdown of plant, machinery or vehicles;

(f) default of suppliers or sub-contractors;

(g) theft, malicious damage, strike, lock-out or industrial action of any kind; and

(h) any cause or circumstance whatsoever beyond the reasonable control of a Party;

**"Goods"**

means CellDEK mobile phone and PDA data extraction kit;

**"Intellectual Property Rights"**

means all inventions (whether patentable or not), patents, utility models, designs (both registered and unregistered and including rights in semiconductor topographies), copyright, database rights, trade and service marks (both registered and unregistered) together with all applications for, right to the grant of and extensions of the same, and all other intellectual and industrial property including but not limited to all similar or analogous rights throughout the world, in each case for the full term of the relevant right;

**"Licensed Software Materials"**

means the Software, the Software Documentation, the Periodic New Releases, any Releases and any fixes created and which are provided to You pursuant to the Contract;

**"Periodic New Releases"**

means a release of the Software that is made available to all Customers and that corrects errors or changes or improves the Software's utility, efficiency or capability and associated cable upgrade specifications and which is provided to You pursuant to the Contract;

**"Party"**

means each of the persons identified as parties to this Agreement and jointly "**the Parties**";

**"Release"**

means the most recent standard version of the Software made available to all Customers and which is provided to You pursuant to the Contract;

**"Software"**

means the software programs in Executable Code only and which are listed in the Schedule;

**"Software Documentation"**

means the instruction manuals, user guides and other information and any modifications or additions thereto to be made available by the Licensor at its discretion to You in either printed or machine readable form;

**"Software Specifications"**

means the technical specifications from time to time published by the Licensor in respect of the Software; and

**"Use"**

means the copying or transmission of the Software or (where in machine readable form) the Software Documentation for use in accordance with the instructions contained in the Software or (as the case may be) the Software Documentation.

1.2 In this Agreement unless the context requires otherwise:

1.2.1 the singular includes the plural and vice versa and any gender includes any other gender;

1.2.2 references to Clauses and Schedules are to Clauses of, and schedules to, this Agreement;

1.2.3 any reference to an enactment, order, regulation or other similar instrument includes a reference to that enactment, order, regulation or instrument as from time to time amended, extended or re-enacted;

1.2.4 references to persons include bodies corporate, unincorporated associations and partnerships, and any reference to the Parties include their respective successors, permitted assigns and personal representatives; and

1.2.5 any reference to "company", "subsidiary" and "holding company"

shall be as defined in section 736 of the Companies Act 1985.

1.3 The headings of this Agreement are for ease of reference only and shall not affect its interpretation or construction.

1.4 In the event of a conflict between any of the terms of this Agreement including its Schedules and appendices, the conflict shall be resolved according to the following order of priority:

1.4.1 the Clauses of this Agreement;

1.4.2 the Schedules of this Agreement; and

1.4.3 the Recitals.

2 **GRANT OF LICENCE**

2.1 The Licensor hereby grants to You a non-exclusive non-transferable licence to Use the Software (and where appropriate the Software Documentation, any Periodic New Releases and any Releases) and to possess and refer to the Software Documentation (the "**Licence**") in accordance with and subject to the terms and conditions of this Agreement.

2.2 The Licensor has provided a copy of the the End User License to You. By using the Software You are granted a license to the software in PC embedded in the CellDEK device and You agree to be bound by the terms of the End User License agreement.

3 **TERM**

This Agreement shall commence on the Commencement Date and shall continue in force unless or until terminated by either Party in accordance with the provisions of Clause 10.

4 **PROPERTY AND CONFIDENTIALITY IN THE LICENSED SOFTWARE MATERIALS**

4.1 The Licensed Software Materials contain Confidential Information (as defined in Clause 9.1 below) of the Licensor and all Intellectual Property Rights in the Licensed Software Materials are the exclusive property of or are licensed to the Licensor.

4.2 You shall not:

4.2.1 save as provided in Clause 5 below copy the whole or any part of the Licensed Software Materials;

4.2.2 save as required to be permitted by law modify, merge or combine the whole or any part of the Licensed Software Materials with any other software or documentation;

4.2.3 remove or tamper with any proprietary notice contained in the Licensed Software Materials;

4.2.4 assign, license, transfer, sell, lease, rent, charge or otherwise deal in or encumber the Licensed Software Materials nor use on behalf of or make available the same to any third party; or

4.2.5 save as required to be permitted by law reverse compile the whole or any part of the Licensed Software Materials from object code into source code.

4.3 You shall:

4.3.1 keep confidential the Licensed Software Materials and limit access to the same to those of its employees, agents and sub-contractors who either have a need to know or who are engaged in the Use of the Software (including where appropriate the Software Documentation);

4.3.2 reproduce on any copy of the Software or Licensed Software Materials the Licensor's copyright and trade mark notices;

4.3.3 maintain an up-to-date record of the number of copies of the Licensed Software Materials and their location and upon request forthwith produce such record to the Licensor;

4.3.4 only use the Software in accordance with the number of copies licensed to You (and as set out in the Schedule);

4.3.5 without prejudice to the foregoing take all such other steps as shall from time to time be necessary to protect the Confidential Information (as defined in Clause 9.1 below) and Intellectual Property Rights of the Licensor in the Licensed Software Materials;

4.3.6 in its Use of the Licensed Software Materials comply with all

present and future statutes, laws, ordinances, regulations and/or guidelines of any applicable jurisdiction or agency;

4.3.7 ensure that its personnel are, at all times, educated and trained in the proper Use and operation of the Licensed Software Materials;

4.3.8 ensure that the Licensed Software Materials are used in accordance with any and all applicable Software Documentations; and

4.3.9 indemnify and hold harmless the Licensor from and against all claims, damages, losses, judgments, fees, expenses and costs, including legal costs, arising out of or resulting from Your acts, negligence or failure to comply with this Clause 4 or any other provision of this Agreement.

4.4 You shall inform all relevant employees, agents and sub-contractors that the Licensed Software Materials constitute Confidential Information (as defined below) of the Licensor and that all Intellectual Property Rights therein are the property of or are licensed to the Licensor and the You shall take all such steps as shall be necessary to ensure compliance by its employees agents and sub-contractors with the provisions of this Clause 4.

5 **COPYING OF THE LICENSED SOFTWARE MATERIALS**

5.1 You shall be entitled to make one back-up copy of the Software. Any such copy shall in all respects be subject to the terms and conditions of this Agreement and shall be deemed to form part of the Software.

5.2 You shall not be entitled to copy in whole or in part the Software Documentation.

6 **WARRANTY**

6.1 Subject to the exceptions set out in Clause 6.3 below and the limitations upon its liability in Clause 7 below the Licensor warrants that:

6.1.1 it has the right, power and authority to license the Licensed Software Materials upon the terms and conditions of this Agreement; and

6.1.2 the Software will for a period of twelve (12) months from the date it is delivered to You conform to the Software Specifications.

6.2 You shall give notice to the Licensor as soon as it is reasonably able upon becoming aware of a breach of warranty. If no such notice is given within 30 days of You becoming aware of a breach of warranty, the Licensor shall not be liable for such breach of warranty.

6.3 The Licensor shall have no liability to remedy a breach of warranty where such breach arises:

6.3.1 in respect of Software that is not properly licensed pursuant to Clause 2 of this Agreement;

6.3.2 in circumstances where You is not in conformity with the minimum technical requirements and prerequisites set out in the Software Specifications; or

6.3.3 as a result of:

a) the improper use, operation or neglect of either the Software or the Goods upon which the Software is installed or used;

b) the modification of the Software or its merger (in whole or in part) with any other software;

c) the failure by You to implement recommendations in respect of or solutions to faults previously advised by the Licensor;

d) any repair, adjustment. alteration or modification of the Software by any person other than the Licensor without the Licensor's prior consent;

e) failure by You adequately to back-up the Software;

f) any breach by You of any of its obligations under any maintenance agreement in respect of the Goods upon which the Software is installed or used;

g) any failure, accident, neglect or misuse of equipment, software or media not supplied by the Licensor;

h) Your failure to install and Use in substitution for the previous release any New Release of the Software within ninety (90) days of receipt of the same; or

i) the use of the Software for a purpose for which they were not designed.

6.4 Without prejudice to the foregoing the Licensor does not warrant that the Use of the Software will meet Your requirements or that the operation of the Software (including where in machine-readable form the Software Documentation) will be uninterrupted or error free.

6.5 Nothing in this Agreement shall obligate the Licensor to improve or otherwise support the Licensed Software Materials.

6.6 Subject to the foregoing all conditions, warranties, terms, representations (unless fraudulent) and undertakings express or implied, statutory or otherwise in respect of the Licensed Software Materials are hereby excluded to the fullest extent permissible by law.

7 **LIMITATION OF LIABILITY**

7.1 Where any sustainable claim is made by You in respect of any breach of the warranties given by the Licensor pursuant to clause 6 above, the Licensor shall be entitled at its option either to replace or repair the Software free of charge. This shall be Your sole and exclusive remedy and the Licensor shall have no further liability to You for breach of such warranties.

7.2 Subject to Clause 7.1 above and without prejudice to Clause 7.4, and except as otherwise provided in this Agreement, the total liability of the Licensor in contract, tort (including negligence or breach of statutory duty) or otherwise arising by reason of or in connection with this Agreement shall be limited in aggregate to the total price paid and payable by You for the Goods under the Contract.

7.3 Without prejudice to Clause 7.4, in no event shall the Licensor be liable to You for loss of revenue, loss of anticipated savings, loss of profits, loss of data, damage to goodwill, loss of reputation or for any type of indirect, economic or consequential loss or damage whatsoever or howsoever caused.

7.4 Neither party excludes or limits liability to the other for death or personal injury caused by its negligence or for fraud.

7.5 Save as expressly stated in this Agreement, all conditions, warranties and representations (unless fraudulent) expressed or implied by statute, common law or otherwise in relation to the Licensed Software Materials are hereby excluded to the fullest extent permissible by law.

8 **RISK IN THE LICENSED SOFTWARE MATERIALS**

Risk in the Licensed Software Materials will pass to You upon the date of delivery of the Licensed Software Materials to You. If subsequently the Licensed Software Materials are (in whole or in part) destroyed, damaged or lost the Licensor will upon written request replace the same subject to You paying its then prevailing charges.

9 **CONFIDENTIALITY**

9.1 Neither Party shall use, copy, adapt, alter, disclose or part with possession of any information or data of the other Party which is disclosed or otherwise comes into its possession directly or indirectly as a result of this Agreement and which is of a confidential nature ("**Confidential Information**") without the prior written consent of the disclosing Party except as strictly necessary to perform its obligations or exercise its rights under this Agreement.

9.2 The receiving Party undertakes not to disclose any Confidential Information of the disclosing Party to any third party other than employees, professional advisors and approved sub-contractors of the receiving Party on a "need to know" basis only and to whom disclosure is necessary for the proper performance of their duties under this Agreement.

9.3 The foregoing obligations shall not apply to Confidential Information that:

9.3.1 was known to the receiving Party prior to receipt from the

disclosing Party; or

9.3.2 is received from a third party without breach of any other confidentiality arrangements; or

9.3.3 is or becomes public knowledge other than by breach of this Clause or is independently developed by or for the receiving Party; or

9.3.4 is required to be disclosed by any applicable law or by order of any Court of competent jurisdiction or any government body, agency or regulatory body, provided that the receiving Party shall use all reasonable endeavours to give the other Party not less than two business days' written notice of the disclosure.

9.4 The Parties shall ensure that their respective employees, agents and sub-contractors comply with the provisions of this Clause and are bound by terms and conditions of use and non-disclosure at least as onerous as those contained in this Clause.

9.5 The obligations in this Clause shall continue in force notwithstanding termination of this Agreement for any reason.

9.6 If this Agreement is terminated, the receiving Party shall return or destroy at the request of the disclosing Party all Confidential Information of the disclosing Party.

10 **TERMINATION**

10.1 This Agreement may be terminated:

10.1.1 by either Party upon giving not less than sixty (60) days written notice to the other;

10.1.2 forthwith by either Party upon giving written notice to the other if the other commits any material breach of this Agreement and which (in the case of a breach capable of remedy) shall not have been remedied within thirty (30) days of a written request to remedy the same (and non-payments of sums when due to the Licensor shall be a material breach);

10.1.3 forthwith by either Party upon giving written notice to the other Party if the other Party makes or proposes to make any arrangement or composition with its creditors or has a receiver, administrative receiver, administrator, liquidator, manager or similar officer appointed in respect of all or any part of its assets or passes a resolution for winding-up (otherwise than for the purpose of a solvent amalgamation or reconstruction where the resulting entity assumes all of the obligations of the relevant party under this Agreement), or (in the case of an individual) commits any act of bankruptcy or dies, or (in the case of a partnership) is dissolved, or undergoes or suffers any analogous acts or proceedings under any foreign law;

10.1.4 if the other Party shall commit any act of bankruptcy, shall have a receiving order made against it, shall make or negotiate for any composition or arrangement with or assignment for the benefit of its creditors or if the other party being a body corporate, shall present a petition or have a petition presented by a creditor for its winding up or shall enter into any liquidation (other than for the purpose of reconstruction or amalgamation), shall call any meeting of its creditors, shall have a receiver of all or any of its undertakings or assets appointed, shall be deemed by virtue of section 123 of the Insolvency Act 1986 to be unable to pay its debts, or shall cease to carry on business; or

10.1.5 forthwith by either Party upon giving written notice to the other if the other shall cease to carry on its business or substantially the whole of its business.

10.2 Any termination of this Agreement (however occasioned) shall not operate so as to affect any accrued rights or liabilities of either Party.

10.3 Within fourteen (14) days of the termination of this Agreement (howsoever and by whomsoever occasioned) You shall return or destroy (as the Licensor shall instruct) all copies of the Licensed Software Materials in its possession and a duly authorised officer of You shall

certify in writing to the Licensor that You has complied with such obligation.

11 **FORCE MAJEURE**

11.1 Neither Party shall be liable to the other Party for any delay or non-performance of its obligations under this Agreement to the extent that its performance is interrupted or prevented by Force Majeure.

11.2 Such delay or failure shall not constitute a breach of this Agreement and the time for performance shall be extended by a period equivalent to that during which performance is so prevented provided that if such delay or failure persists for sixty (60) days or more, the Party not affected may, at its option and if it is reasonable for it to do so, terminate this Agreement by giving fourteen (14) days written notice to the other Party.

12 **WAIVER**

Any failure or delay on the part of either Party to exercise any power or right under this Agreement shall not operate as a waiver of it, nor shall any single or partial exercise of any such right or power preclude any other or further exercise of the right or power. Any of the rights and remedies of either Party under this Agreement may at any time be enforced separately or concurrently with any other rights and remedies, whether under this Agreement or arising by operation of law with the effect that the rights and remedies are cumulative and not exclusive of each other.

13 **NOTICES**

13.1 Any notices required to be given under this Agreement shall be in writing and delivered personally or by first class post or transmitted by facsimile to the Parties as set out below:

13.1.1 The Licensor:

Address: Logicube, Inc.
19755 Nordhoff Place
Chatsworth, CA 91311 USA

For attention of: COO

13.1.2 You:

to the address or facsimile number that You provided for Your purchase of the Software.

13.2 Any notice served by:

13.2.1 personal delivery, shall be deemed served at the time of delivery;

13.2.2 first class post, shall be deemed served at the start of the fifth business day after posting; and

13.2.3 facsimile, shall be deemed served on the day of transmission (or the next following business day if transmitted outside the Party's normal working hours) provided that the sender shall have received a transmission report indicating that all the pages of the notice have been transmitted to the correct facsimile number.

13.3 Any Party may change any details of its address or facsimile number by notice in the manner described above.

14 **SEVERABILITY**

If any term or provision of this Agreement or its application to any Party or circumstances shall, to any extent, be invalid or unenforceable, the remainder of this Agreement or the application of the term or provision to any other Party or circumstances, other than those as to which it is already invalid or unenforceable, shall not be affected, and each term and provision of this Agreement shall be valid and enforceable to the fullest extent permitted by law. The Parties shall negotiate in good faith to replace any invalid or unenforceable provisions by substitute provisions.

15 **ENTIRE AGREEMENT**

15.1 This Agreement and the Contract constitute the entire agreement

between the Parties with respect to the subject matter hereof and supersede and invalidate all prior oral or written communications, understandings, representations or warranties relating to the subject matter hereof.

15.2 Each Party warrants to the other that it has not relied on any such communications, understandings, representations or warranties in entering into this Agreement.

15.3 Notwithstanding anything contained herein to the contrary, the provisions of Clauses 4, 7, 9 and any other Clauses which are intended to survive termination shall survive termination of the Agreement and shall continue in full force and effect thereafter.

16 **ASSIGNMENT/SUB-CONTRACTING/AGENCY**

16.1 You shall not be entitled to assign, sub-contract or otherwise transfer your rights or obligations under this Agreement whether in whole or in part without the Licensor's prior written consent.

16.2 The Licensor shall be entitled to assign its rights hereunder (in whole or in part) to any person, partnership or company.

16.3 This Agreement shall be binding upon and inure for the benefit of the Parties and their respective permitted successors and assigns.

17 **THIRD PARTY RIGHTS**

A person who is not a Party to this Agreement has no rights under the Contracts (Rights of Third Parties) Act 1999 to enforce any term of this Agreement but this does not affect any right or remedy of a third party which exists or is available apart from that Act.

18 **PUBLICITY**

The Parties agree to keep confidential the terms of this Agreement, and neither Party shall make any announcement in relation to this Agreement or otherwise publicise its existence or its contents or use or refer to the name, trade mark or trade name of the other Party in any disclosure without the prior written consent of the other Party such consent not to be unreasonably withheld or delayed. A Party shall be entitled to withhold such consent and shall be under no obligation to provide any explanation for such action.

19 **AMENDMENTS**

No amendment to this Agreement whether oral or written shall be binding on either Party unless in writing and signed on behalf of the Parties.

20 **GOVERNING LAW AND JURISDICTION**

20.1 This Agreement shall be governed by and construed in accordance with English law.

20.2 It is irrevocably agreed that the English courts shall have non-exclusive jurisdiction as regards any claim or matter arising out of or in connection with this Agreement.

21 **NO PARTNERSHIP/AGENCY**

Nothing in this Agreement is intended to or shall operate to create a partnership or joint venture of any kind between the Parties, or to authorise either Party to act as agent for the other.

22 **THIRD PARTY SOFTWARE**

22.1 CellDEK software uses libraries and other components from the LibUSB-Win32 project.

The library is distributed under the terms of the GNU Lesser General Public License (LGPL).

The other components are distributed under the terms of the GNU General Public License (GPL).

These licenses are available to read at the LibUSB-Win32 project home-page www.libusb-win32.sourceforge.net.

22.2.1 The End User License is provided as a paper license along with the CellDEK device. By using the Software You agree to be bound by the terms of the End User Liclense Agreement.

Additional copies of this license are also available from Logicube.

## CellDEK Software License - US

**THIS AGREEMENT** shall be binding on installation of the Software and is by and between **LOGICUBE, INC.** ("Licensor") and the End User ("You").

**1. Grant of License.** So long as You shall be in compliance with the terms hereof, You shall have a limited, perpetual, non-exclusive and non-transferable license ("License") to use the Software solely in the course of lawfully operating the device with which the Software is integrated, and for no other purpose. You are also granted a license to use the Microsoft and related software contained within the PC embedded in the CellDEK device and by using such software You agree to be bound by the terms of the End User License agreement, a copy of which is provided to You with the device. Additional copies of the End User License are also available from Logicube.

**2. Title.** No title or ownership in the Software is transferred to You. Title to all applicable rights in patents, copyrights, trademarks and trade secrets in the Software shall remain in Licensor. Software licensed hereunder is property of Licensor, and You shall be bound by and observe such nature thereof as herein provided. You shall take appropriate action by instruction to and agreement with its employees, agents, consultants or any other end users who are permitted access to the Software to fulfill its obligations hereunder. Without limiting the foregoing, You shall ensure that any end user license agreement provided with the Software is brought to the reasonable attention of all such end users. You shall not provide, or otherwise make available, the Software or copies thereof to any third party. All ownership rights to any developments or improvements to the Software made by You shall belong solely to Licensor.

**3. Copying.**

(a) You shall be entitled to make one copy the Software for back-up and archival purposes. You shall include in each such copy the Licensor's copyright notice(s) and trademark(s).

(b) In no event shall You be entitled to remove or tamper with any such proprietary notices contained in the Software.

(c) Software shall not be reverse compiled, disassembled, reverse assembled, or otherwise reverse engineered. All rights in or to the Software not expressly granted to You under this Agreement are retained by Licensor.

**4. Warranty.**

(a) Subsection 4(b) hereof provides Licensor's twelve month limited warranty for the Software.

(b) Licensor warrants that for a period of twelve (12) months from installation of the Software, the Software will perform in accordance with the Software documentation. In the event the Software does not perform in accordance with such documentation, then during such twelve month period, Licensor shall at its option: (i) correct any variance between the Software performance and its documentation; or (ii) replace the Software media. The foregoing shall be Your sole and exclusive remedy with respect to the Software or otherwise hereunder. EXCEPT AS WARRANTED BY THE PRECEDING THREE SENTENCES, THE SOFTWARE IS LICENSED AS IS, AND NO WARRANTY OF ANY KIND, EXPRESS, IMPLIED OR STATUTORY, WHETHER IN RELATION TO MERCHANTABILITY, HIDDEN DEFECTS, FITNESS FOR PARTICULAR PURPOSE, COURSE OF PERFORMANCE, COURSE OF DEALING, USAGE OF TRADE, NONINFRINGEMENT, THAT THE SOFTWARE'S OPERATION SHALL BE ERROR FREE OR UNINTERRUPTED, OR OTHERWISE IS GIVEN BY LICENSOR TO YOU OR ANY OTHER PARTY. LICENSOR SHALL NOT UNDER ANY CIRCUMSTANCES BE RESPONSIBLE FOR ANY LOSSES OR DAMAGES, DIRECT, INDIRECT, SPECIAL, ORDINARY, EXEMPLARY, CONSEQUENTIAL OR OTHERWISE (INCLUDING, BUT NOT LIMITED TO, LOSS OF DATA, LOSS OF REVENUE, PROFIT OR USE OR COST OF CAPITAL OR OF SUBSTITUTE USE OF PERFORMANCE), ARISING OUT OF OR RELATED IN ANY WAY TO THE TRANSACTIONS CONTEMPLATED HEREUNDER, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGES. UNDER NO CIRCUMSTANCES SHALL LICENSOR'S TOTAL LIABILITY OF ALL KINDS ARISING OUT OF OR RELATED TO THIS AGREEMENT (INCLUDING BUT NOT LIMITED TO ANY

WARRANTY OR SUPPORT-RELATED CLAIMS HEREUNDER), REGARDLESS OF WHETHER ANY ACTION OR CLAIM IS BASED ON CONTRACT, STRICT LIABILITY, TORT OR OTHERWISE, EXCEED THE TOTAL AMOUNT PAID BY YOU FOR THE DEVICE WITH WHICH THE SOFTWARE IS PROVIDED (DETERMINED AS OF THE DATE OF ANY FINAL JUDGMENT IN SUCH ACTION).

(c) This limited warranty shall be valid and remain in effect only if: (i) the Software is used and maintained by You as directed by all applicable documentation; (ii) You promptly notify Licensor in writing of the claim and is able to reproduce it; (iv) the Software has not in any way been modified and You have not installed any other hardware or software affecting the Software; (v) the claim is unrelated to the failure by You to follow the most current instructions issued by Licensor or its authorized reseller; (vi) the claim is unrelated to the negligence, accident or act of You or any third party; (vii) You provide reasonable access to the Software; (viii) there has been no operation of the Software under conditions more severe than those for which the Software was designed; (ix) the claim is unrelated to force majeure; (x) the claim is unrelated to operator error or to any software, firmware, peripheral or communication device; and (xi) where authorized Licensor updates are provided to You, the Software incorporates all such updates within ninety (90) days of each update being provided or otherwise made available. In the event it is determined that any warranty claim reported by You falls within any of the foregoing exceptions, You shall pay for services at then current rates and charges.

(d) Nothing herein shall obligate Licensor or its authorized reseller to improve or otherwise support any Software licensed hereunder. Without prejudice to the foregoing, all support, enhancements, modifications and upgrades delivered to You, if any, shall be subject to the same protections, restrictions, limited warranty, and limitations on copying and tampering as set forth elsewhere herein.

**5. Component Items.** In the event that Licensor or its authorized reseller shall deliver to You any individual components apart from the Software specifically licensed hereunder, You shall not use or attempt to use any such component outside or independent of the parameter of this License, and each such component shall be subject to the same rules and restrictions binding on You to which the Software is subject, whether under this Agreement or otherwise.

**6. Breach.** In the event that either party hereto should breach any of the material terms and conditions of this Agreement, the aggrieved party shall notify the other party. The offending party shall thereafter have 30 days to correct the identified deficiency. In the event such deficiency is not rectified to the satisfaction of the aggrieved party, then the aggrieved party shall be entitled to declare this Agreement null, void and of no further force and effect, and all rights hereunder, including the License granted hereunder, shall be cancelled. In the event of the expiration or termination hereof for any reason (a) You shall continue to observe the limitations and restrictions set forth in Sections 3(b) and (c), 4, 5-7 and 11 hereof, and (b) immediately return or destroy the Software and all copies thereof as directed by Licensor or its authorized reseller and, if requested by Licensor or its authorized reseller, certify in writing as to the destruction or return of the Software and all copies thereof.

**7. Confidentiality.** You acknowledge and understand that the Software involves highly confidential and trade secret information that belongs to Licensor (“Confidential Information”). The Confidential Information shall be maintained in absolute confidence by You, not be used other than for the purposes hereof and not be disclosed by You, except as may be permitted under this Agreement, to anyone, without the prior written permission of Licensor. All Confidential Information coming into Your possession shall be marked by You as such.

**8. Use.** (a) You shall be solely responsible for the design, repair and configuration of Your equipment, machinery, systems and/or products, except where specified in another agreement between the parties hereto. You assume all rights and liability for results obtained by the use or implementation of the Software, whether such results are used singly or in combination with other software or products. You agree that Licensor shall have no liability to You or to any third party for any ordinary, special, indirect, consequential or other damages or losses that might arise directly or indirectly by reason of Your use of the Software. You shall be responsible for use of all hardware, including but not limited to operating procedures, audit controls, accuracy and security of input and output data, restart and recovery routines and other procedures necessary for Your intended use of hardware. You shall maintain back-up data necessary to replace Your critical data in the event of

loss of or damage to such data from any cause. Regardless of the cause of loss of Your data, Licensor shall not in any way be liable therefor.
(b) In Your use of the Software You shall comply with all present and future statutes, laws, ordinances, regulations and/or guidelines of any applicable jurisdiction or agency. You shall ensure that its personnel are, at all times, educated and trained in the proper use and operation of the Software and that the Software is used in accordance with any and all applicable manuals, documentation, and instructions. You shall indemnify and hold Licensor harmless from and against all claims, damages, losses, judgments, fees, expenses and costs, including attorneys' fees, arising out of or resulting from Your acts, negligence or failure to comply with this or any other provision of this Agreement.
**9. Delay in Performance.** Neither party shall be liable for failure or delay in the performance of any of its obligations under this Agreement, except obligations for the payment of money, if such delay or failure is caused by circumstances of force majeure that are beyond the control of the party affected. Notwithstanding the foregoing, in the event that any delay or failure identified in this Section 9 continues for sixty (60) consecutive days, the party adversely affected by such delay may cancel this Agreement and the License granted hereunder upon written notice to the other party.
**10. Term.** This Agreement, unless terminated pursuant to other applicable provisions hereof, shall commence on the date the Software is purchased and shall be perpetual, unless terminated in accordance with this Agreement.
**11. Miscellaneous.**
(a) This Agreement shall be governed by and interpreted in accordance with the substantive (and not conflicts) laws of California. Other than for collection and equitable actions against You, to the extent legal actions are commenced by or name Licensor, each party hereto: (i) submits to the exclusive general jurisdiction of the State and Federal Courts in the State of Ohio, and any **appellate courts** from any decision thereof, in any legal action or proceeding relating to this Agreement; (ii) consents that any such action or proceeding may be brought in such courts; and (iii) waives any objection that he, she or it may have to the venue of any such action or proceeding in any such court or that such action or proceeding was brought in an inconvenient court and agrees not to plead or claim the same. Any action arising hereunder or related in any way hereto against Licensor shall be brought within one (1) year after the occurrence giving rise to the claim or be barred forever. If any provision or portion of this Agreement is held by a court of competent jurisdiction to be invalid, void, or unenforceable, the remaining provisions or portions of this Agreement shall remain in full force and effect and shall in no way be affected, impaired or invalidated. IT IS EXPRESSLY UNDERSTOOD AND AGREED THAT EACH AND EVERY PROVISION OF THIS AGREEMENT THAT PROVIDES FOR A LIMITATION OF LIABILITY, DISCLAIMER OF WARRANTIES OR EXCLUSION OF DAMAGES, IS INTENDED BY THE PARTIES TO BE SEVERABLE AND INDEPENDENT OF ANY OTHER PROVISION AND TO BE ENFORCED AS SUCH. You hereby waive any governmental immunity, if applicable, to any and all causes of action arising hereunder or related hereto. All notices required to be given hereunder shall be in writing. Notices shall be considered delivered and effective upon receipt when sent by registered or certified mail, postage pre-paid, return receipt requested, addressed to the parties as set forth above or by telecopy with proof of transmission. Either party, upon written notice to the other, many change the address to which future notices shall be sent.(b) It is expressly declared that this Agreement and the relationship between the parties hereby established do not constitute a partnership, joint venture or agency arrangement between them.
All amounts payable hereunder are exclusive of all freight, insurance and all **federal, state, local,** municipal or other excise, sales, use, property or similar taxes, duties, import charges and fees, now in force or enacted in the future, and all such amounts shall be paid by You, unless You provides a certificate of exemption or similar document exempting a payment from an applicable tax.
(c) If You attempt to use, copy, disclose, or transfer any portion of the Software or any modification thereof or Confidential Information in a manner contrary to the terms of this Agreement or in derogation of Licensor's rights, whether those rights are explicitly stated, determined by law, or otherwise, Licensor shall have the right, in addition to any other legal remedies available, to injunctive relief enjoining such acts without the posting of bond, it being acknowledged by You that all other remedies are inadequate.
(d) This Agreement contains the entire agreement of the parties with respect to the subject

matter hereof, and supersedes and terminates any and all correspondence, proposals, RFPs, Your purchase order, terms or agreements or contracts, written or oral, entered into between the parties relating to the subject matter hereof, and any representation, promise, or condition in connection herewith not in writing shall not be binding upon either party. Neither the title of this Agreement nor the Section headings shall have any bearing whatsoever on any interpretation hereof. None of the provisions of this Agreement shall be deemed to have been waived by any act of or acquiescence on the part of Licensor, its agents, or employees, but only by an instrument in writing signed by an authorized representative of Licensor. No waiver by Licensor of any provisions of this Agreement shall constitute a waiver of any other provision or of the same provision on another occasion. This Agreement may be amended only in writing signed by each of the parties hereto. This Agreement is personal to You, and You may not assign or sublicense its rights or obligations under this Agreement in any way to any third party. This Agreement shall be binding upon and inure to the benefit of the parties hereto and their respective permitted successors and assigns.

## GNU General Public License

# GNU GENERAL PUBLIC LICENSE

Version 2, June 1991

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51 Franklin Street, Fifth Floor, Boston, MA 02110-1301 USA
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## Preamble

The licenses for most software are designed to take away your freedom to share and change it. By contrast, the GNU General Public License is intended to guarantee your freedom to share and change free
software--to make sure the software is free for all its users. This General Public License applies to most of the Free Software Foundation's software and to any other program whose authors commit to
using it. (Some other Free Software Foundation software is covered by the GNU Lesser General Public License instead.) You can apply it to your programs, too.

When we speak of free software, we are referring to freedom, not price. Our General Public Licenses are designed to make sure that you have the freedom to distribute copies of free software (and charge for this service if you wish), that you receive source code or can get it if you want it, that you can change the software or use pieces of it in new free programs; and that you know you can do these things.

To protect your rights, we need to make restrictions that forbid anyone to deny you these rights or to ask you to surrender the rights. These restrictions translate to certain responsibilities for you if you distribute copies of the software, or if you modify it.

For example, if you distribute copies of such a program, whether gratis or for a fee, you must give the recipients all the rights that you have. You must make sure that they, too, receive or can get the source code. And you must show them these terms so they know their rights.

We protect your rights with two steps: (1) copyright the software, and (2) offer you this license which gives you legal permission to copy, distribute and/or modify the software.

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For further assistance please contact
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