MC8704

T3_0_2_1AP & T3_0_2_1BT

Release Notes & Upgrading Instructions

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General

Purpose

This document is intended to capture technical changes to the release package. The document covers changes in the Modem firmware (Bootloader and Application).

These release notes are **NOT** intended for the end user.

A new revision of this document will be issued when any of the firmware components of the product are updated.

Scope

This document covers issues that affect carriers and end users.

Revision History

Date	Author	Summary of changes
June 09, 2011	Hailong Zhu	Created for T2.0 Release 1
July 05,2011	Hailong Zhu	Updated for T2.0 Release 2
July 11,2011	Wukui Sun	Updated for T2.0 Release 3
Aug 22,2011	Wukui Sun	Updated for T2.0 Release 4
Sep 20,2011	Wukui Sun	Updated for T2.0 Release 4.1
Nov 29,2011	Wukui Sun	Updated for T3.0 Release 1
Jan,19,2012	Traving Chen	Updated for T3.0 Release 2

Installing and Upgrading the Release

Download the entire necessary upgrade files

Download the files and follow any additional instructions on the download website:

Please contact your Sierra Wireless representative for access/instructions.

Supported Operating Systems

This software and firmware package supports the Sierra Wireless MC8704 on the following Microsoft Operating Systems:

1. Windows XP SP3 (Service Pack 3 or higher)
2. Windows Vista SP1 (Service Pack 1 or higher)
3. Windows 7

Upgrade Procedure

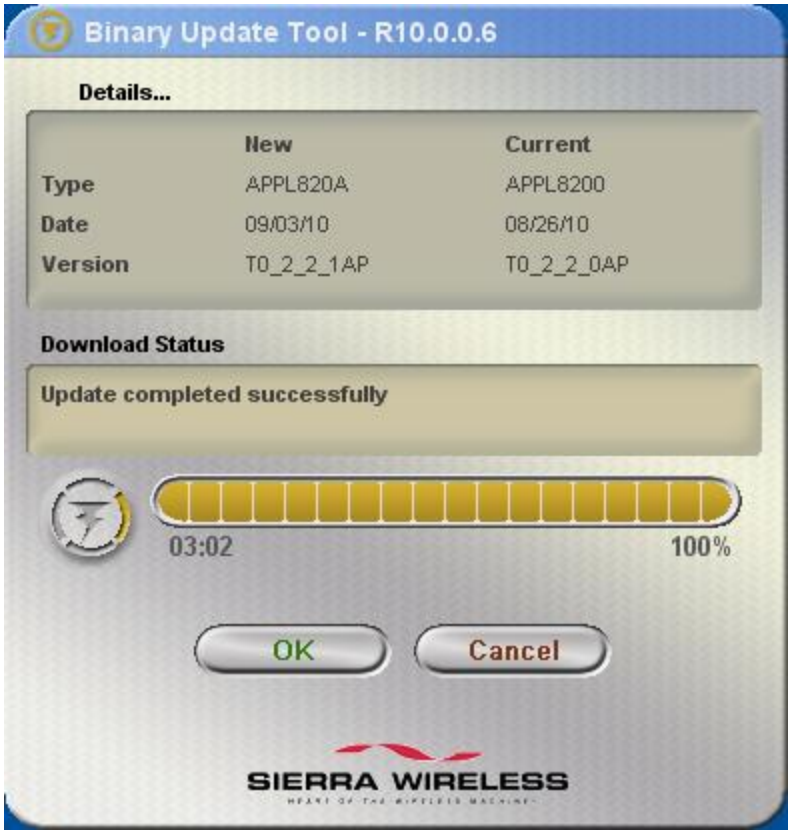
Sierra Wireless firmware upgrades are provided in a One-Click tool, which contains the firmware bundled right in with it. Before you start your upgrade, please ensure the following:

- Your computer is connected to an AC power supply, or that it has at least ½ hour of battery life remaining
- Please close all active sessions such as Hyperterminal, etc. that you may have open, debug logging sessions, etc.
- Please ensure that your card is powered and operating normally

To proceed with the download please follow the next steps:

1. Navigate to the folder in the current release containing the folder named “Firmware” and open it
2. Open the folder named “OneClickTool” and click on the executable within that folder to start the BinUpdater tool

NOTE: The download can take up to 10 minutes to complete. Do not remove the power to either the laptop or the card until the Binary Update Tool announces that the upgrade has been successful, as shown here:



NOTE 2: There can be more than one firmware image bundled with the One Click Tool. If so, then you will be asked if you want to upgrade the device once for each image. If you click Cancel instead of OK, the remainder of the download will be aborted.

NOTE 3: When a boot image is released it is usually bundled with the application firmware within the same OneClickTool executable. That OneClickTool will automatically install both the boot and application images for you. If you intend to perform repeated download stability tests, please use the oneclick tools with just the Application image.

Debug Tools

Sierra Wireless devices provide support for trace tools such as QXDM or the Sierra Wireless log-gathering tool. Please contact your Sierra Wireless representative for the logger tool and the installation instructions

Revision History

T3.0 Release 2

Firmware Component Revision Levels

Component	Revision	Compatibility
Hardware	DV1 or newer	
Boot loader	T3_0_2_1bt	DV1 or newer
Application	T3_0_2_1ap	DV1 or newer
Qualcomm Stack Version	3.0.35.0_M8200CFACPASZD	

Firmware Changes

- Merge QCT new stack 3.0.33.0_M8200CFACPASZD_SBA
- Merge IPV6 from MDM9200 to MDM8200A
- Develop voice ACDB control AT interface
- When NV4118 not active, AT!HSDCAT? return 14 ,But actually we report 18
- Correct EC block data shift
- Support ACDB writing using BUT for T3.0 voice
- Merge QCT new SBA 3.0.35.0
- Voice or Class0 SMS with MWI not functioning via AT cmd
- SVN update to 6

Known Issues with T3.0 Release 1

- **This release contains the following limitations:**
  None
- **The following crashes have been observed via AT!GCDUMP:**
  None

T3.0 Release 1

Firmware Component Revision Levels

Component	Revision	Compatibility
Hardware	DV1 or newer	
Boot loader	T3_0_0_2Bbt	DV1 or newer
Application	T3_0_0_2Bap	DV1 or newer
Qualcomm Stack Version	3.0.32.0_M8200CFACPASZD	

Firmware Changes

- Add NV management when switch from T1.0/T2.0 to T3.0 for MC8705/MC8704
- Fix a bug [Calyptech] MC8704 Dual PDP issue
- Add Qualcomm 3.0.32.0_M8200CFACPASZD to branch b2021_30300
- SVN update for MC8704 3.X baseline to 4
- Add feature AT!AVEC can set the Voice ACDB parameters.
- Add Qualcomm 3.0.30.0_M8200CFACPASZD to branch b2021_30300

Known Issues with T3.0 Release 1

- **This release contains the following limitations:**
  None
- **The following crashes have been observed via AT!GCDUMP:**
  None

T2.0 Release 4.1

Firmware Component Revision Levels

Component	Revision	Compatibility
Hardware	DV2 or newer	
Boot loader	T2_0_2_1Bbt	DV1 or newer
Application	T2_0_2_1Bap	DV1 or newer
Qualcomm Stack Version	M8200CFACPASZD20350	

Firmware Changes

- Increase SVN version from 2 to 3

Known Issues with T2.0 Release 4.1

- **This release contains the following limitations:**
  - NA
- **The following crashes have been observed via AT!GCDUMP:**
  None

T2.0 Release 4

Firmware Component Revision Levels

Component	Revision	Compatibility
Hardware	DV2 or newer	
Boot loader	T2_0_2_1bt	DV1 or newer
Application	T2_0_2_1ap	DV1 or newer
Qualcomm Stack Version	M8200CFACPASZD20350	

Firmware Changes

- merge QCT baseline 20350
- Fix an issue of About 20% samples found call lost in UMTS non-signaling test after calibration
- Fixed an issue of CHAP random data always 0.

Known Issues with T2.0 Release 4

- **This release contains the following limitations:**
  - NA

- **The following crashes have been observed via AT!GCDUMP:**
  None

T2.0 Release 3

Firmware Component Revision Levels

Component	Revision	Compatibility
Hardware	DV2 or newer	
Boot loader	T2_0_1_7bt	DV1 or newer
Application	T2_0_1_7ap	DV1 or newer
Qualcomm Stack Version	M8200CFACPASZD20340	

Firmware Changes

- Fixed an issue of Verify IMEI Change Notification Application Interoperability 2G - idle Mode
- Fixed an issue of second voice call fail when codec controlled by MCU

Known Issues with T2.0 Release 3

- **This release contains the following limitations:**
  - About 20% samples found call lost in UMTS non-signaling test after calibration
- **The following crashes have been observed via AT!GCDUMP:**
  None

T2.0 Release 2

Firmware Component Revision Levels

Component	Revision	Compatibility
Hardware	DV2 or newer	
Boot loader	T2_0_1_6bt	DV1 or newer
Application	T2_0_1_6ap	DV1 or newer
Qualcomm Stack Version	M8200CFACPASZD20340	

Firmware Changes

- Fixed an issue of Modem random goes into download mode after reset
- Fixed an issue of Modem Crashes with GPSENABLE in Linux OS
- Added test commands for GPS
- Added Qualcomm stack M8200CFACPASZD20340

Known Issues with T2.0 Release 2

- **This release contains the following limitations:**
  None
- **The following crashes have been observed via AT!GCDUMP:**
  None

T2.0 Release 1

Firmware Component Revision Levels

Component	Revision	Compatibility
Hardware	DV2 or newer	
Boot loader	T2_0_1_4bt	DV1 or newer
Application	T2_0_1_4ap	DV1 or newer
Qualcomm Stack Version	M8200CFACPASZD20330	

Firmware Changes

- Fixed an issue of cannot set 2 network interface
- Added SYSINFO AT Command Support
- Disable auto answer

Known Issues with T2.0 Release 1

- **This release contains the following limitations:**
  None
- **The following crashes have been observed via AT!GCDUMP:**
  None

Troubleshooting

The following sections describe troubleshooting information when using the AirPrime when using in a live network and when using with a test box.

Ciphering/Integrity

If you're not attaching, check your ciphering settings. The UE needs to use the same settings as the network/test set. Generally, live networks will have ciphering/integrity enabled. Test sets may have them enabled or disabled, but it is common for test sets to leave it disabled unless explicitly testing that feature.

The AT command is noted below:

AT Command	Description
AT!GCIPHER=X	Set the card to support integrity and ciphering with the following settings: X = 0, Ciphering OFF, Integrity OFF X = 1, Ciphering ON, Integrity OFF X = 2, Ciphering ON, Integrity ON
AT!GCIPHER?	Query the GCIPHER settings.

Crash Investigation

Should the UE crash there are a number of different means to provide useful feedback to Sierra Wireless for resolution of the issue.

Full memory dump

This is the preferred process because it captures the most crash information.

Configuring the UE for crash dump capture

This must be done to enable or disable the crash capture feature on the UE. This configuration is stored in NV so it is persistent across power cycles / power removal. The UE must be reset after changing the setting before the changes take effect.

To enable crash dump capture
AT!EROPTION=0

To enable UE reset upon a crash (default behaviour)
AT!EROPTION=1

Capturing a crash dump

1. Wait for / cause a crash to occur
2. Close connection manager software (to release the com port)
3. Run SwiMemDebug
4. Click Start to initiate crash dump collection. If this fails, the application likely cannot open the com port (see step 2)
5. Once 100% is reached, the crash dump collection is complete. Click Reset to reset the modem (optional), and Exit to exit the program
6. Crash files will be in the same location as SwiMemDebug. Zip up the crash files and label the zip file with a unique name (date/timestamp is suggested) and send the zip to Sierra Wireless for analysis

Mini Dump

If a crash occurs, the summary of why the crash occurs is saved in memory. The command following command will display the crash summary:
AT!GCDUMP

Note that this crash summary is lost once power is removed from the device (or manually cleared via AT!GCCLR).

Error Listing

The AT!ERR command will display “points of interest” that have occurred in the UE. These are not crashes, but are often used by developers to highlight areas they wish to examine.

Vista Recommendations

For optimum performance and stability in Microsoft Vista, it is recommended that USB Selective Suspend be disabled. In order to disable Selective Suspend properly, follow both procedures (B.1 and B.2) below:

B.1 Disabling Global Selective Suspend

The following procedure will disable the global selective suspend setting in Microsoft Vista.

a. Open the **Control Panel**
b. Select the **Power Options** applet
c. For whichever item is selected as the current Power Mode (ie: Maximum Battery Life), select **Change plan settings**
d. Select **Change advanced power settings**
e. Expand **USB Settings**
f. Expand **USB Selective Suspend settings**
g. Change the settings for **Plugged in** to **DISABLED**
h. Change the settings for **On Battery** to **DISABLED**
i. Close the **Power Options** applet

B.2 Disabling Device Specific Selective Suspend for Generic Sierra Wireless Drivers

The following procedure will disable the device specific selective suspend setting in Microsoft Vista when using a device configured with the generic Sierra Wireless drivers:

1. Open a notepad
2. Type the following text into notepad

```
[HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\SWUMX32\Parameters]
"IdleDetect"=dword:00000000
"UsbSelSus"=dword:00000000
```

Compass885 use SWUMX80 instead of SWUMX32
AC885E use SWUMX59 instead of SWUMX32

3. Save the text file you just created with the filename ***disableSelSus.reg*** to the Desktop
4. Exit Notepad
5. Double-click the file you just created (***disableSelSus.reg***)
6. When prompted by Vista to allow this information to be added to the registry, select Yes.
7. Select OK
8. Reboot the PC