



SL808x S4_1_0_21

Customer Release Note

Document number	4134242
Rev	R01.00
Date	2014/12/23

Document History

Rev XX.YY	Date YYYY/MM/DD	Updates	Author
01.00	2014/12/23	Creation	Xin

Table of Contents

<u>1</u>	<u>INTRODUCTION</u>	<u>5</u>
1.1	SCOPE OF THIS DOCUMENT	5
1.2	AUDIENCE OF THIS DOCUMENT	5
1.3	NEW FEATURES / ENHANCEMENTS	5
<u>2</u>	<u>ABBREVIATIONS AND DEFINITIONS</u>	<u>5</u>
<u>3</u>	<u>RELATED DOCUMENTATION</u>	<u>5</u>
<u>4</u>	<u>COMPATIBILITY</u>	<u>6</u>
<u>5</u>	<u>SOFTWARE RELEASE DESCRIPTION</u>	<u>6</u>
5.1	RELEASE IDENTIFICATION	6
5.2	RELEASED FILES AND DOWNLOAD PROCESSES	6
5.2.1	DOWNLOAD THE ENTIRE NECESSARY UPGRADE FILES	7
5.2.2	SUPPORTED OPERATING SYSTEMS	7
5.2.3	UPGRADE INSTRUCTIONS	7
5.2.4	BINARY FILES	8
5.3	SOFTWARE TOOLS VERSIONS	8
<u>6</u>	<u>SOFTWARE CHANGES DESCRIPTION</u>	<u>9</u>
6.1	VALIDATED CORRECTIONS / IMPROVEMENTS	9
<u>7</u>	<u>TROUBLESHOOTING</u>	<u>12</u>
7.1	CIPHERING/INTEGRITY	12
7.2	CRASH INVESTIGATION	13
7.2.1	FULL MEMORY DUMP	13
7.2.1.1	Configuring the UE for crash dump capture	13
7.2.1.2	Capturing a crash dump	13
7.2.1.3	Mini Dump	13
7.2.1.4	Error Listing	13
7.2.2	DEBUG TOOLS	14
<u>8</u>	<u>CERTIFICATION DESCRIPTION</u>	<u>14</u>
<u>9</u>	<u>RESTRICTIONS AND ADDITIONAL INFORMATION</u>	<u>14</u>
9.1	VISTA RECOMMENDATIONS	14
9.1.1	DISABLING GLOBAL SELECTIVE SUSPEND	14



Template #:	4134112	Revision:	R01.00
-------------	---------	-----------	--------

1 Introduction

1.1 Scope of this document

This document covers issues that affect carriers and end users.

1.2 Audience of this document

The audiences include System engineering team, certification team and customers of Sierra Wireless.

1.3 New Features / Enhancements

Feature	Description
NA	NA

2 Abbreviations and definitions

Abbreviation/Acronym	Definitions
NA	NA

3 Related documentation

Ref. #	Doc. #	Document title
NA	NA	NA

4 Compatibility

Hardware compatibility

Airprime compatibility list
SL8080T / SL8082T / SL8084T

Software compatibility

Component	Version
Firmware	S4_1_0_21
Open AT OS	support
Location Library	NA
eCall inbandModem Library	NA
Security Library	NA
Internet Library	NA
Extended AT Application	NA

5 Software Release Description

5.1 Release identification

Component	Revision
Boot loader	SIERRA_BOOT_S4.1.0.21.cwe
Application	SIERRA_S4.1.0.21.cwe
Date of generation	11/27/2014
Binary Size	
IMEI SV	19
Qualcomm Stack Version	AMSS 6270 4.2.31(4231003A_Q6270BKPEZL)
USB Host Version	Support USB1.1 and USB2.0

5.2 Released Files and Download Processes

Download Option	Files
SIERRA_BOOT_S4.1.0.21.cwe	Boot loader
SIERRA_S4.1.0.21.cwe	AMSS Application
S4.1-Release-10-S4_1_0_21bt-S4_1_0_21ap.exe	OneClick to upgrade Boot / AMSS / hyper visor
S4.1-Release-10-S4_1_0_21bt-S4_1_0_21ap.zip	Compressed OneClick

5.2.1 Download the entire necessary upgrade files

Download the files and follow any additional instructions from the restricted access SL SharePoint website:

From: <https://swiextranet.sierrawireless.com/Products/SL%20Series/default.aspx>

Please contact your Sierra Wireless representative for access information.

5.2.2 Supported Operating Systems

This software and firmware package supports the Sierra Wireless AirPrime SL808x Series on the following Microsoft Operating Systems:

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

5.2.3 Upgrade Instructions

Sierra Wireless firmware upgrades are provided in a One-Click tool, which contains the firmware and download tool bundled in a self-extracting executable. Before starting an upgrade, please ensure the following:

- The host computer is connected to an AC power supply, or has at least 30 minutes of battery life remaining
- The device to be upgraded is powered and operating normally
- All applications which communicate with the device, such as Watcher, Hyper-terminal, etc. are closed

Steps:

1. Navigate to the folder in the current release containing the folder named "Firmware" and open it
2. Open the folder named "[S4.1-Release-10-S4_1_0_21bt-S4_1_0_21ap.exe](#)" and click on the executable within that folder to start the BinUpdater tool and download the firmware automatically.
3. When BinUpdater tool starts, the following window will appear:



NOTE: The upgrade can take up to 10 minutes to complete. Do not remove the power to either the laptop or the card until the One-Click Tool announces that the upgrade has been successful, as shown below.



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.

5.2.4 Binary Files

If you are using binary CWE files to update your module, your platform must be setup to handle these files. Use the method that you have setup for your platform in order to update the module.

5.3 Software Tools Versions

S/W Tools Name	Version	Resource file
BinUpdater	R11.2.1105.0	\\jasmine2\Projects-1\Engineering\HostSW\15 - External Release Packages\BinUpdater\BinUpdater-R11.2.1105.0

6 Software Changes Description

6.1 Validated Corrections / Improvements

ID	Description	Fixed in
DEV76643	OAT bootloader upgrade	S4.1.0.21
DEV76010 DEV76633 ANO76230 DEV76148	EFS improvement.	S4.1.0.21
DEV75954	Fixed an issue where TS34.123 TC16.1.2 failed.	S4.1.0.21
ANO75331	Improved installation of concatenated file trough AVMS(Open AT FW).	S4.1.0.18
DEV75568	Updated TS 25(22nd September 2014) and increased SVN to 18.	S4.1.0.18
DEV72380	Improved DOTA images downloading[OAT FW].	S4.1.0.17
CUS72444	Fixed an issue where SMS status report would be dropped, when sending SMS without any delay.	S4.1.0.17
CUS72229	Fixed an issue where incoming call waiting tone alert was not present during active call.	S4.1.0.17
NEW72381	Improved File provisioning into file system[OAT FW]	S4.1.0.17
DEV73979	Added recovery for EFS corruption issue.	S4.1.0.17
DEV74288	Added an AT command !FMSTATS to monitor flash usage	S4.1.0.17
DEV74506	Updated SE13 list (to 30th June 2014)	S4.1.0.17
DEV74372	Added an AT command !EFSCOUNTER to query EFS crash	S4.1.0.17
DEV75141	Fixed the GCF issues for TS34.123-1 TC6.1.2.1&TC6.1.2.2&TC6.1.2.8	S4.1.0.17
DEV75292	Increased SVN number to 17	S4.1.0.17
CUS75190	Fixed an issue where device couldn't boot up if its NVBU was corrupted.	S4.1.0.17
DEV71698	Increase the SVN number	S4.1.0.13
ANO70943	Fixed a random crash issue	S4.1.0.13
ANO71535	Fixed an issue where device couldn't show the MO Call Error counter in Roaming	S4.1.0.13
CUS71363	Fixed an issue where AT!GWINFO? caused crash	S4.1.0.13
DEV70990	Added JSC new memory support	S4.1.0.13
ANO69966	Fixed an issue where +CLCK couldn't response	S4.1.0.13
CUS67039	Fixed a PAD packet dropping/buffering issue	S4.1.0.13
ANO69754	MS fail to send ROUTING AREA UPDATE REQUEST while DETACH ACCEPT message is delayed from the SS	S4.1.0.13
DEV70587	Disable AMR-WB	S4.1.0.12
CUS70552	Fixed an issue where calling emergency numbers stored in SIM can't be set up when SIM status is "No PIN" or "PIN blocked"	S4.1.0.12
ANO70421	[GCF FT][Emergency call]Fail in TC40.5.1	S4.1.0.12
DEV69857	SL808X: Revert this(DEV69857) change	S4.1.0.12
DEV69857	[SL808x/SL808xT] Add new memory JSC support	S4.1.0.12
DEV70247	Modify the default RF NV	S4.1.0.12
DEV70013	Update the SE13 list to the 21 Oct	S4.1.0.12

ID	Description	Fixed in
DEV69993	Downgrade AT!NVSPCODE to protect level	S4.1.0.12
DEV69937	Update the SE13 list to the 21 Oct	S4.1.0.10
DEV69928	Save NV 1877 into NVBF SL808x	S4.1.0.10
ANO68352	Fixed the issue that system mode doesn't update after handover from GSM to WCDMA	S4.1.0.10
ANO69334	Fixed the issue that AMSS crashes frequently during IDS downloading	S4.1.0.10
ANO69081	Fixed the issue that MS doesn't send out GMM_DETACH_REQUEST_MO when issue at+cgatt=0 in PS only mode	S4.1.0.10
ANO68379	Fixed the issue that AT+CPIN returns "SIM busy" while no sim inserted	S4.1.0.10
ANO69015	Fixed the issue that AT+CNMA blocks the module after receive SMS and select message storage	S4.1.0.10
ANO69674	Special command included into dwl not executed by the bootloader	S4.1.0.10
DEV69677	BSP support for SL808x Re-design	S4.1.0.10
DEV69307	Updated SE13 list update to 09 September 2013	S4.1.0.10
ANO69333	Delta format upgrade failed	S4.1.0.10
ANO69230	Fixed the issue that after running an OPEN AT application and erase it, immediately application download is not working	S4.1.0.10
CUS69283	Fixed adl_fsRead issue	S4.1.0.10
DEV69221	Port the !FMPATH from SL9090	S4.1.0.10
DEV69238	Increase SVN	S4.1.0.10
CUS65421	Fixed the issue that module becomes unresponsive when deleting non-empty directory	S4.1.0.10
ANO66155	Fixed the issue that modem cannot make Emergency call without SIM or cpin lock	S4.1.0.10
ANO68715	Fixed the issue that modem is unable to display user prompt when received MWI message	S4.1.0.10
ANO68589	Fixed the issue that modem fallbacks automatically after application enable/disable	S4.1.0.10
ANO68459	Fixed the issue that IMEI_APPLI.dwl cannot be used for IMEI reprogramming	S4.1.0.10
CUS68588	GPIO pin sleep configuration for Netgear	S4.1.0.10
CUS67024	Fixed Docomo IOT FT failure -1.	S4.1.0.8
BZ47104	Fix the issue that SL8084T Docomo IOT MTPDP test fail	S4.1.0.8
BZ45986	Fix the issue that at!swicallprog command not functional with CSD call	S4.1.0.8
BZ46556	Fix the issue that when the CSD call is released, double NO CARRIER is displayed in the HyperTerminal.	S4.1.0.8
BZ46610	Fix the issue that Change call state for !SWICALLPROG from incoming state to waiting state on receiving a new call, when there are held call but no active call	S4.1.0.8
BZ46030	Fix the issue that AT port can't input anymore after at+cops=0 without SIM card	S4.1.0.8
BZ 46591	Fix the issue that [BSP][SL808xT][OAT] Impossible to upload the FW using the JTAG	S4.1.0.8
BZ46752	Fix the issue that [SL808XT] command AT!PCOFFEN=1 return OK, but invalid in fact.	S4.1.0.8
BZ46351	Fix the issue that [SL808xT][GpsOne] Factory start shall delete DEE content and start in factory mode	S4.1.0.8
BZ45124	Fix the issue that [SL808X][BSP]:boot_debug_6K_2_0.cmm, mjnload_sierra_debug.cmm, those files are invalid	S4.1.0.8
ANO65483	fix the issue that modules only download apps in 115200 baud rate	S4.1.0.8
CUS66938	fix the issue that playing audio file gets hung after voice call (Hughes Telematics)	S4.1.0.8



ID	Description	Fixed in
CUS66950	Update the SE13 file as GCF request.	S4.1.0.8
CUS66951	fix the issue that TC42.3.1a/b fail.	S4.1.0.8
CUS66793	fixes the issue that missing DTMF tones during high system load (with GPS running).	S4.1.0.8
ANO67012	fixes the issue that Crash dump message found during the Anritsu tests.	S4.1.0.8
CUS67234	fixes the issue that unable to write IMEIs to units with blank IMEIs (Hughes Telematics).	S4.1.0.8
DEV67235	improve Fine Grained Schedule on AMSS side.	S4.1.0.8
ANO67279	to support DOTA function.	S4.1.0.8
CUS67283	revert code changes on BZ39783	S4.1.0.8
ANO67159	[BSP][SL8084T][UART] AT+WHCNF command in SL8084T with FW S4.1.0.7	S4.1.0.8
ANO67321	[UMTS][SL808X][TC_6329]The DTMF tone just heard locally lasts for 1 seconds when set "AT+VTD=100"(10S).	S4.1.0.8
CUS67264	[SL808xT][AMSS] Missing !SWICALLPROG notification remote side hangs up call	S4.1.0.8
ANO67301	[SL808XT]+CCWA will return incorrect number when SWICALLPORG enable.	S4.1.0.8
ANO67455	[SL8080T][increase IMEI SVN	S4.1.0.8
NEW67399	SL808xT Feature IMEI programming tool	S4.1.0.8
CUS67175	[UMTS][SL8084T][Telstra][54-55-56-57]Emergency call 000 not possible in PIN or PUK	S4.1.0.8
ANO67439	[BSP][SL8080T] Modem can't enter into download mode when crash happen	S4.1.0.8
CUS67170	[BSP][SL8080T][GPS] - loss of GPS lock when in good GPS signal conditions (Hughes Telematics)	S4.1.0.8
CUS67020	[BSP][SL8080T][GPS] Incorrect location reported with "good" NMEA	S4.1.0.8
ANO67493	[BSP][SL8080T] Vtimer issue	S4.1.0.8
ANO66896	[SL808X][BSP] - AT^HVER return Error,FSN in it	S4.1.0.8
CUS66948	[UMTS][SL8082][BZ47135][GCF] TC57.1.6.1	S4.1.0.8
ANO67534	[BSP][SL808XT] AMSS standalone support	S4.1.0.8
ANO66878	[BSP][SL808XT] Reset was monitored while enabling CUSD indication	S4.1.0.8
DEV66710	Read big size NV with at!nv, modem will crash	S4.1.0.8
ANO67656	When the user back nv great than specific size	S4.1.0.8
DEV67611	Add the TTY profile support	S4.1.0.8
ANO67829	Support FOTA function	S4.1.0.8
DEV67625	reconfigure the GPIO pin for Netgear	S4.1.0.8
ANO67785	AMSS resets Open AT Firmware	S4.1.0.8
CUS67413	Redundant information on 2G neighbor cells when using AT+CCED=0,2 or AT+CCED=0,35 command	S4.1.0.8
ANO67714	removing redundant files	S4.1.0.8
ANO67965/ ANO67966	When the CSD call is released using ATH command, the distant is not warned that the call is over / it is not possible to make successive CSD call	S4.1.0.8
ANO68244	When unplug/plug cable, IMEI is default one for old produced SL808x	S4.1.0.8
CUS66905	Fix the issue where ATT test case GSM-BTR-1-9815 failed	S4.1.0.8
ANO65722	Wrong TON of address for phone number is received	S4.1.0.8

Template #:	4134112	Revision:	R01.00
-------------	---------	-----------	--------



ID	Description	Fixed in
DEV68233	After atlcustrst, OAT will be disabled	S4.1.0.8
ANO68179	Modem will always stay at "LOW POWER MODE" when disabled Open AT	S4.1.0.8
ANO66311	Dual PDP not working	S4.1.0.8
ANO66398	Module has not fallback for the special package	S4.1.0.8
DEV68259	update success or failed depending on the order the patches into the update package	S4.1.0.8
ANO68015	[Location][SL808xT] AT port becomes irresponsible when DEE download is requested	S4.1.0.8
CUS68309	[BSP][SL8080T] WP8 to WP9 Upgrade Requires 2 attempts	S4.1.0.8
ANO68431	[BSP][BOOT][SL808xT] special command included into dwl not executed by the bootloader	S4.1.0.8
DEV68438	[BSP][FS][SL808xT][OAT-QCT]OAT File System working efficiency need to be improved	S4.1.0.8
ANO68260	[SL808x] [Supplementary service] No unsolicited response after SS reject the interrogation	S4.1.0.8
ANO66595	[CSD][SL808x] ATH doesn't work with outcoming CSD calls	S4.1.0.8
ANO67546	[UMTS][SL808xT] The MO Emergency call will auto release from callbox after PUK1 unlocked.	S4.1.0.8
ANO68502	[CSD][UMTS][SL808xT]MO CSD call with ATH on AT port, without !SWICALLPROG indication.	S4.1.0.8
ANO68543	[BSP][SL808X] Correct the band support	S4.1.0.8
DEV68560	[BSP][SL808X] Add the calibrated data to the audio profile	S4.1.0.8
ANO68913	[UMTS][SL808X][TTY] Test case 9.2 failed	S4.1.0.8
ANO68952	Crash will happen when doing PRI	S4.1.0.8
	Fix the issue that crash when run "AT+CSMP=132".	S4.1.0.7
	Support OPEN-AT Application	S4.1.0.7
	Add flow control for VSIO	S4.1.0.7
	Enhance PCM vocoder performance	S4.1.0.7
	Fix the issue that poor DTMF decoding performance	S4.1.0.7

7 Troubleshooting

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

7.1 Cipherring/Integrity

If you're not attaching, check your cipherring settings. The UE needs to use the same settings as the network/test set. Generally, live networks will have cipherring/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.

7.2 Crash Investigation

[R-1] Should the UE crash there are a number of different means to provide useful feedback to Sierra Wireless for resolution of the issue.

7.2.1 Full memory dump

[R-2] This is the preferred process because it captures the most crash information.

7.2.1.1 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

7.2.1.2 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

7.2.1.3 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).

7.2.1.4 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.

7.2.2 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

8 Certification Description

This version has passed the PTCRB certification

9 Restrictions and Additional Information

Issue ID	Description (What/When)	Impacted Domain	Impacted Sub-Domain
None	None	None	None

9.1 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 (9.1 and 9.2) below:

9.1.1 Disabling Global Selective Suspend

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

1. Open the Control Panel
2. Select the Power Options applet
3. For whichever item is selected as the current Power Mode (ie: Maximum Battery Life), select Change plan settings
4. Select Change advanced power settings
5. Expand USB Settings
6. Expand USB Selective Suspend settings
7. Change the settings for Plugged in to DISABLED
8. Change the settings for On Battery to DISABLED
9. Close the Power Options applet

9.1.2 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\SWUMX3C\Parameters]
"IdleDetect"=dword:00000000
"UsbSelSus"=dword:00000000
[HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\SWUMX3E\Parameters]
"IdleDetect"=dword:00000000
"UsbSelSus"=dword:00000000
[HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\SWUMXA3\Parameters]
"IdleDetect"=dword:00000000
"UsbSelSus"=dword:00000000
```

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

Template #:	4134112	Revision:	R01.00
-------------	---------	-----------	--------