Customer Release Note

Linux QMI SDK 03.03.12

SIERRA WIRELESS®

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Due to the nature of wireless communications, transmission and reception of data can never be guaranteed. Data may be delayed, corrupted (i.e., have errors) or be totally lost. Although significant delays or losses of data are rare when wireless devices such as the Sierra Wireless modem are used in a normal manner with a well-constructed network, the Sierra Wireless modem should not be used in situations where failure to transmit or receive data could result in damage of any kind to the user or any other party, including but not limited to personal injury, death, or loss of property. Sierra Wireless accepts no responsibility for damages of any kind resulting from delays or errors in data transmitted or received using the Sierra Wireless modem, or for failure of the Sierra Wireless modem to transmit or receive such data.

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Document History

Version	Date	Updates
01.00	October 28, 2015	Creation
01.01	October 29, 2015	Updated Section 6.1

Contents

List of Tables

1. Introduction

1.1. Document Scope

This document describes the content of the Linux QMI SDK 03.03.12 release.

1.2. Document Audience

This release note may be distributed to all direct and indirect customers.

1.3. New Features/Enhancements

Table 1. New Features/Enhancements

Feature	Description
UIM Update	Add UimSLQSPowerUp API
SMS	Fixed issue on SMS decoding
Firmware Update	Updated Firmware_Download Sample app: - Added “-k” to end SDK process on exits - Update exit code according to download status - Support single NVU update

2. Abbreviations and Definitions

Table 2. Abbreviations and Definitions

Abbreviation/Acronym	Definitions
MSM	Mobile Station Modem
PRI	Product Release Instructions
QMI	Qualcomm MSM Interface
SLQS	Sierra Linux QMI SDK
WP	Work Package

3. Related Documentation

Table 3. Related Documentation

Ref. #	Doc. #	Document title
[R-1]	4110914	Linux QMI SDK Application Developer's Guide

4. Compatibility

Table 4. Hardware Compatibility

Devices Compatibility List
AR7554/AR7554RD
EM/MC73xx
MC77xx
MC83x5
MC/SL9090
WP71xx
MC/EM7455

Note: MC77xx devices must operate in "QMI Mode" and not in "Direct-IP" mode.

To switch device into QMI mode of operation, use the following AT commands:

- **AT!UDPID=68A2**
- **AT!RESET**

*Note: MC73xx, set the device using "**AT!UDPID=68C0**".*

The tables below list the hexadecimal values of the Vendor ID (VID) and Product ID (VID) pairs supported by the Linux QMI SDK.

Table 5. Supported Application-Mode VID/PIDs

VID	1199	1199	1199	1199	1199	1199	1199	1199	3F0
PID	68A2	68C0	9011	9013	9015	9019	9041	9071	371D

Table 6. Supported Boot-Mode VID/PIDs

VID	1199	1199	1199	1199	1199	1199	1199	1199	3F0
PID	68A2	68C0	9010	9012	9014	9018	9040	9070	361D

To check your device's VID/PID, issue the **lsusb** command. The output will present a list of USB devices with a column showing each device's manufacturer. The device VID/PID can be read from the row containing the correct device manufacturer. Additionally, on MC77xx devices, you can use the **AT!UDINFO?** command to check VID/PID information. If your VID/PID does not match the any of the entries in the tables above, contact your FAE for support.

The following table enumerates the modems with their corresponding firmware that were tested with Linux QMI SDK 03.03.12.

Table 7. Modem and Firmware tested with the SDK

Modem	Firmware
EM/MC7455	SWI9X30C_02.03.01.00

Modem	Firmware
MC7304	SWI9X15C_05.05.58.00
MC7354	SWI9X15C_05.05.58.00
MC7350	SWI9C15C_05.05.58.01
MC7355	SWI9X15C_05.05.58.00
MC7330	SWI9X15C_05.05.63.00
MC7305	SWI9X15C_05.05.64.00
MC7710	SWI9200X_03.05.29.03
MC9090	SWI6600U_02.04.04.00
EM7355	SWI9X15C_05.05.64.00
EM7330	SWI9X15C_05.05.63.00
EM7305	SWI9X15C_05.05.64.00

Note: The SDK in general work across all firmware revisions. However, some new API might require a recent firmware.

5. Software Release Description

Table 8. Release Information

Component	Content
SDK version	03.03.12
Date of generation	2015/10/28
Binary archive name	SLQS03.03.12.bin.tar.gz
MD5 checksum	555cd395b272dd1c23f7dfcd55140993
Source code archive name	SLQS03.03.12.tar.gz
MD5 checksum	765f0b2be11a2fb6f4ff068db6ef0b59
Processor compatibility	x86, ARM, PowerPC, MIPS
Linux kernel compatibility	2.6.32 to 4.1
USB drivers compatibility	S2.25N2.35

6. Software Changes Description

6.1. Validated Corrections/Improvements

ID	Description
CUS83086	"USB write open error" after 10 hrs of testing "aggressive bearer deletion" test
DEV83221	[Linux] [QMI SDK] Address Deprecated QMI DMS UIM Commands for reading SIM ICCID and IMSI
DEV83324	Add API for UIM Power Up
CUS83441	Uninitialized struct wcdmaMsgEncodingParams alphabet field in QA test doSLQSWCDMAEncodeMOTextMsg()
CUS83445	SLQSWCDMADecodeMTTextMsg does not decode MT SMSes correctly
ANO83891	MC7350 cannot read SMS successfully on Verizon LTE without IMS service registered
ANO84074	[EM7455][LINUX Sample APP] Connection manager exits immediately after starting it [FDT]
DEV84200	Add Carrier PRI version to QMI_DMS_SWI_GET_CWE_PKGS_INFO command
ANO84296	[SLQS03.03.11] qa test app exits after executing t404
ANO84308	[Linux] [EM7455] SLQSOMADMGetSessionInfo returned Memory error
DEV84446	Update SLQSGetCurrentChannelRate to support multi pdn
ANO84479	Firmware Download sample application crashes when running in disconnected mode [FDT]
DEV84480	Firmware Download sample application to return explicit error codes and 0 on success [FDT]
ANO84481	Firmware Download sample application documentation to be updated to support 9x30 [FDT]
ANO84482	[Linux QMI SDK] SLQSSwiGetAllCarrierImages() out of bounds memory reference [SW-Quality] [FDT]
ANO84484	[Linux QMI SDK] UpgradeFirmware2k() incorrect fw path for EM/MC74xx can result in out of bounds memory reference [SW-Quality] [FDT]
ANO84489	SLQSGet3GPPConfigItem seg faults in certain scenarios [SW-Quality]
DEV84494	The Firmware Download sample application can have another option to kill the spawned SDK process [FDT]
ANO84541	SLQSKillSDKProcess() does not kill SDK process reliably [FDT]
DEV84550	reduce logging noise in during firmware download process [FDT]
CUS84584	FW download with .nvu alone fails with 9x30 modems [FDT]
ANO84865	[AVMS][SLQS 3.11] RSRP being reported incorrectly on the AVMS portal
DEV84898	[Linux SDK] Need download firmware to specified slot for MC74xx
ANO84992	[9x30]Firmware Download reported as failure even though modem upgrades successfully
CUS85129	SLQSSet3GPPConfigItem() needs to be updated for 74xx modems

ID	Description
ANO85135	[SLQS03.03.12-rc0] EM7455 image switch failed when switch to an image stored in device
ANO85181	[SLQS03.03.12-rc0] sms encoding is wrong when encoding scheme is 8 bit or UCS2
ANO85194	[SLQS03.03.12-rc0] [MC/EM73xx] single 9x15 nvu file download will cause device stay at low power mode after download finished
ANO85196	[SLQS03.03.12-rc0] [MC9090] Gobi_Image_Management cannot switch a new active image by option 6

6.2. Known Issues

ID	Description
ANO85332	[SLQS03.03.12-rc1] [MC7455] send SMS failure on Verizon LTE when IMS is registered
ANO85423	[SLQS03.03.12-rc1] [MC7455] Get SMS failed on MC7455 on Verizon LTE when IMS is registered

6.3. New API

API	Comment
SLQSDownloadFirmwareToSlot	This API is used to download firmware to a specific slot id of the modem. It is only applicable for EM74xx variant
SLQSUIMReadTransparent	This API executes the Read Transparent algorithm on the card
SLQSUIMPowerUp	This API powers up the SIM card

6.4. Minor API prototype change

Note: when updating SDK, please make sure to pull the latest headers from <SDK_ROOT>/api folder

API	Comment
SLQSGetImageInfo	In struct slqsfwinfo_s, added new member curr_carr_name & curr_carr_rev for EM/MC74xx
SLQSLOCStart/SLQSLOCStop	Request structure rename
SLQSCDMADecodeMTTextMsg	Add alphabet parameter for encoding control
SLQSGetCurrentChannelRate	Add instance parameter for PDN selection

6.5. Macro Usage

Macro	Usage
AM_API_MUTEX_TIMEOUT_IN_SEC	This is the timeout time (in seconds) for which the mutex is locked when the SDK is compiled with API_TIMEOUT flag.
API_TIMEOUT	This is a compilation flag. If this flag is defined during compilation, SDK will lock the mutex for a particular time. The locking time is defined by AM_API_MUTEX_TIMEOUT_IN_SEC. If this flag is not defined then the mutex is locked indefinitely.