Customer Release Note

Linux QMI SDK 03.03.11

SIERRA WIRELESS®

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Document History

Version	Date	Updates
01.00	September 11, 2015	Creation

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1. Introduction

1.1. Document Scope

This document describes the content of the Linux QMI SDK 03.03.11 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
Device based image switching	Support device based image switching on MC/EM7455
Deprecated API replacement	Updated doxygen documentation for replacement API
LOC Update	- Callback for satellite report, setLocGnssSvInfoCallback - Set operating mode, SLQSLOCSetOpMode - Delete assist data, SLQSLOCDelAssData
Modem loopback	Add API for packet loopback - SLQSSGetLoopback - SLQSSSetLoopback
Carrier Aggregation	Get Carrier Aggregation state: - API, SLQSNASGetLTECPHYCaInfo - Callback, SetNasLTECphyCaIndCallback

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
EM73xx
MC73xx
MC77xx
MC78xx
MC83x5
MC9090
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 03.03.11.

Table 7. Modem and Firmware tested with the SDK

Modem	Firmware
EM7455	SWI9X30C_02.00.02.00
EM7305	SWI9X15C_05.05.61.00
EM7330	SWI9X15C_05.05.63.00
EM7355	SWI9X15C_05.05.58.00
MC7304	SWI9X15C_05.05.58.00
MC7305	SWI9X15C_05.05.64.00
MC7330	SWI9X15C_05.05.63.00
MC7350	SWI9C15C_05.05.58.01
MC7354	SWI9X15C_05.05.64.00
MC7355	SWI9X15C_05.05.58.00
MC7710	SWI9200X_03.05.29.03
MC9090	SWI6600U_02.04.04.00

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	03.03.11
Date of generation	2015/09/10
Binary archive name	SLQS03.03.11.bin.tar.gz
MD5 checksum	8c793bec31839ac34c2b28ffd9cc3158
Source code archive name	SLQS03.03.11.tar.gz
MD5 checksum	1432ff54675eba6bbdcd47ae3dfccee6
Processor compatibility	x86, ARM, PowerPC, MIPS
Linux kernel compatibility	2.6.18 to 3.13
USB drivers compatibility	S2.25N2.34

6. Software Changes Description

6.1. Validated Corrections/Improvements

ID	Description
DEV79495	[Linux QMI SDK] support TLV customization ID and customization List request in SLQSGetCustFeatures() and SLQSSetCustFeatures()
ANO79683	RSSIThresh structure does not match QMI specification
ANO79759	[SLQS_AVMS_013] firmware download does not restart sometimes after power cycle the module
DEV79804	Sync API with QMI latest specs [SDK-IMPROV-JUN15]
CUS80637	Linux SDK, QMI_NAS_CONFIG_SIG_INFO used for SLQSNasSigInfoCallBack is deprecated, please mark this callback as "deprecated" [SDK-IMPROV-JUN15]
DEV80938	SDK code can be optimized by removing duplicate/redundant code [SDK-IMPROV-JUN15]
DEV81603	Patch for usb path in SLQS Firmware Update
NEW81724	Linux SDK please add some warning message for QA test case t370 doSLQSSetSysSelectionPref [SDK-IMPROV-JUN15]
CUS81725	Linux SDK choose the current radio interface from SLQSGetServingSystem() radio interface list [SDK-IMPROV-JUN15]
CUS81726	SLQSGetServingSystem duplicates with SLQSNasGetSysInfo [SDK-IMPROV-JUN15]
DEV82013	MC9090 Download CWE fail
NEW82031	New API for SWI get current channel rate
ANO82243	doSLQSGetFirmwareInfo does not display correct firmware info for EM7455
NEW82289	Implement callback for QMI_LOC_EVENT_GNSS_SV_INFO_IND
ANO82386	SLQSNasGetCellLocationInfo() provides incorrect values.
DEV82611	InitiateNetworkRegistration() is deprecated, replace it with SLQSSetSysSelectionPref() and SLQSSetBandPreference() in SLQS_Tutorial_Application Sample App.
NEW82639	device based image switching
NEW82665	Add QMI_WDS_SWI_GET_DATA_LOOPBACK and QMI_WDS_SWI_SET_DATA_LOOPBACK
ANO82781	Spelling mistakes in SDK documentation [SDK-IMPROV-JUN15]
DEV82927	[Linux QMI SDK] Add TLV 0x22 Radio Access Technology (Manual PLMN) to API SLQSSetSysSelectionPref()
CUS82931	[Linux QMI SDK] API SLQSPerformNetworkScan() does not indicate if MNC < 100 includes PCS digit
ANO83225	CAT service id update 0x0A
DEV83228	APi for QMI_LOC_DELETE_ASSIST_DATA and QMI_LOC_SET_OPERATION_MODE
DEV83248	update deprecated APIs for 9x30

ID	Description
CUS83347	SDK 3.3.10 crashes during firmware download
CUS83416	SwiOTAMsg documentation is not complete
CUS83420	SLQSNasSwiOTAMessageCallback always returns NAS version and time as NULL
DEV83517	Update WDS_SWI_CREATE_PROFILE & QMI_WDS_SWI_GET/SET_CFG_ITEM
NEW83577	API for QMI_NAS_LTE_CPHY_CA_IND and QMI_NAS_GET_LTE_CPHY_CA_INFO

6.2. Known Issues

ID	Description
ANO83891	MC7350 cannot read SMS successfully on Verizon LTE without IMS service registered

6.3. New API

API	Comment
SLQSLOCSetOpMode	Used by the control point to tells the engine to use the specified operation mode while making the position fixes
SLQSLOCDelAssData	Used by the control point to delete the location engine assistance data
SetLocOpModeCallback	Callback for LOC operation mode change
setLocGnssSvInfoCallback	Callback for satellite report info
SetLocDeleteAssistDataCallback	Callback for delete assist data
SetNasLTECphyCaIndCallback	Callback for Carrier Aggregation status
SLQSSetCustFeaturesV2	This function sets the modem for a list of supported features. This function is for firmware version 2.0 and newer
SLQSGetCustFeaturesV2	This function queries the modem for a list of supported features. This function is for firmware version 2.0 and newer
SLQSSwiGetAllCarrierImages	List available images in device & host
SLQSNASGetLTECPHYCaInfo	This API Get LTE CPHY Carrier Info
SLQSGetCurrentChannelRate	This API Queries current bitrate of a packet data connection
SLQSSSetLoopback / SLQSSGetLoopback	This API to Enable/disable Data Loopback Mode and set the value of loopback multiplier

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
SLQSPerformNetworkScan	Added PCS Digit info on response structure
SLQSSetSysSelectionPref	Added RAT in request structure
SLQSSet3GPPConfigItem / SLQSGet3GPPConfigItem	Added LTE Attach Profile List

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.