Customer Release Note

Linux QMI SDK 04.00.02

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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Consult our website for up-to-date product descriptions, documentation, application notes, firmware upgrades, troubleshooting tips, and press releases: www.sierrawireless.com

Document History

Version	Date	Updates
01.00	September 30, 2016	Creation

Contents

List of Tables

1. Introduction

1.1. Document Scope

This document describes the content of the Linux QMI SDK 04.00.02 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

Lite APIs	• **New Wrappers**
	  ○ **NAS**
	  ▪ SLQSSwiGetLteSccRxInfo
	  ○ **DMS**
	  ▪ GetManufacturer
	  ▪ GetOfflineReason
	  ○ **UIM**
	  ▪ SLQSUIMPowerUp
	  ▪ SLQSUIMPowerDown
	  ○ **WDS**
	  ▪ GetPacketStatistics
	  ▪ GetByteTotals
	  ▪ SLQSGetCurrentChannelRate
	  ▪ SLQSSGetLoopback
	  ▪ SLQSSSetLoopback
	• **Enhancement**
	  ○ Add libsdp_set_log_func for setting custom log function
	  ○ Add “LTE Attach Profile” in unpack_wds_SLQSGet3GPPConfigItem and pack_wds_SLQSSet3GPPConfigItem_t

New API	• SLQSSetCrashStateCheckIgnore • SLQSSwiGetLteSccRxInfo
Miscellaneous	• Fix incorrect service id used in SetDHCPv4ClientLeaseChange • Includes ARM64 binaries • Add SQF filters for 9x30 • Fix scanning modem with 2 digits serial port number

1.4. Removed Features

Table 2. Removed features

Feature	Description

2. Abbreviations and Definitions

Table 3. 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 4. Related Documentation

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

4. Compatibility

Table 5. Hardware Compatibility

Devices Compatibility List
AR7554/AR7554RD
EM/MC73xx
MC77xx
MC83x5
MC/SL9090
WP71xx
MC/EM74xx
WP8548/7502/7504

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 6. 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 7. 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 04.00.02.

Table 8. Modem and Firmware tested with the SDK

Modem	Firmware
MC7430	SWI9X30C_02.22.00.00
EM/MC7455	SWI9X30C_02.22.00.00
MC7304	SWI9X15C_05.05.58.00
MC7354	SWI9X15C_05.05.67.00
MC7350	SWI9C15C_05.05.58.01
MC7355	SWI9X15C_05.05.58.00
MC7330	SWI9X15C_05.05.65.00
MC7305	SWI9X15C_05.05.58.00
MC7710	SWI9200X_03.05.29.06
MC9090	SWI6600U_02.04.05.00
EM7355	SWI9X15C_05.05.67.00
EM7330	SWI9X15C_05.05.65.00
EM7305	SWI9X15C_05.05.67.00
WP7502	SWI9X15Y_07.10.04.00
WP7504	SWI9X15Y_07.10.04.00
WP8548	SWI9X15Y_07.10.04.00

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

5. Software Release Description

Table 9. Release Information

Component	Content
SDK version	04.00.02
Date of generation	29/09/2016
Binary archive name	SLQS04.00.02.bin.tar.gz
MD5 checksum	e2b7d0514518f0161714ac51e7a655a9
Source code archive name	SLQS04.00.02.tar.gz
MD5 checksum	fae5868991275641aae3d5d0b0f5295d
Processor compatibility	x86, ARM, PowerPC, MIPS
Linux kernel compatibility	2.6.32 to 4.1
USB drivers compatibility	S2.26N2.38

6. Software Changes Description

6.1. Validated Corrections/Improvements

ID	Description
LXQMISDK-758	Custom logging function to be added in libSDP
LXQMISDK-745	[Linux] Firmware download sometimes return failure code 59405 E80D
LXQMISDK-737	SetDHCPv4ClientLeaseChange() uses wrong Service ID - causing invalid QMI command error
LXQMISDK-296	[Linux SDK] [EM7455] SLQS does not detect device when the ttyUSB port number goes over 10
LXQMISDK-724	Need API to retrieve Scell signal info for carrier aggregation
LXQMISDK-757	syslog to be replaced with libpack_log for printing SDK Lite license
LXQMISDK-743	[Linux QMI SDK] 04.00.01 unable to make -f pkgs.mak complete
LXQMISDK-738	SLQSGetFirmwareInfo does not work for WP x5xx devices
LXQMISDK-403	SLQSUIMVerifyPin returns Malformed or Correupted QMI msg error when encrypted PIN1 is specified
LXQMISDK-751	pack_wds_SLQSSet3GPPConfigItem_t to be updated to handle optional parameters
LXQMISDK-747	lite FW download tool to be updated to handle OEM PRI case correctly
LXQMISDK-733	update release script to tag libsdp & libpack
LXQMISDK-748	DM log filters packaged with SDK need to updated to support 9x30 modems
LXQMISDK-742	update release script to include arm64/mips libpack/libsdp binaries
LXQMISDK-731	update release script for Dev Studio 32/64bit binaries
LXQMISDK-740	[arm64bit] EM7455 remaining file size displayed is wrong during firmware download on arm64bit platform
LXQMISDK-749	Implement Lite APIs for WP support

ID	Description
LXQMISDK-763	SDK crash when starting Firmware_Download without device
LXQMISDK-764	[SLQS04.00.02_alpha] 9x30 image switching failure issue for DOCOMO and PTCRB using option 7 of MC7xxx image management sample application
LXQMISDK-765	Lite API doc update

6.2. Known Issues

ID	Description

6.3. New API

API	Comment
SLQSSetCrashStateCheckIgnore	This API is used to set whether ignore crash state checking before proceed firmware download using the API UpgradeFirmware2k()
SLQSSwiGetLteSccRxInfo	This API retrieves the LTE Secondary carrier Rx signal level information

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
pack_wds_SLQSSet3GPPConfigItem	Updated pack_wds_SLQSSet3GPPConfigItem_t to handle optional parameters

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.