



Linux QMI SDK 04.00.19

Customer Release Note



SIERRA
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Contact Information

Sales information and technical support, including warranty and returns	Web: sierrawireless.com/company/contact-us/ Global toll-free number: 1-877-687-7795 6:00 am to 5:00 pm PST
Corporate and product information	Web: sierrawireless.com

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1. Introduction

This document describes the contents of the Linux QMI SDK 04.00.17 release.

1.1. New Features/Enhancements

Table 1. New Features/Enhancements

Feature	Description
New API to get forbidden networks	<ul style="list-style-type: none"> QMI_NAS_GET_FORBIDDEN_NETWORKS implementation in full and lite SDK
New API to identify a debug bootloader	<ul style="list-style-type: none"> New API added in full and lite SDK to identify a debug bootloader
Support GCC8.0	<ul style="list-style-type: none"> Full and Lite SDK was updated to support GCC 8.0. Some full SDK callback function prototypes was updated
New API to get MT SMS encoding scheme	<ul style="list-style-type: none"> New helper function was added to get MT SMS encoding scheme.
Documentation update	<ul style="list-style-type: none"> SLQSInitiateNetworkRegistration and pack_nas_SLQSInitiateNetworkRegistration() was deprecated on 73xx and newer modems.
New API to support SIM auto switch	<ul style="list-style-type: none"> QMI_SWI_DMS_GET_EXT_UIM_SELECT and QMI_SWI_DMS_SET_EXT_UIM_SELECT implementation in full and lite SDK
Support eTLV_GET_BAND_PREF_EXT	<ul style="list-style-type: none"> Update full and lite API to retrieve LTE Band preference Extended TLV
Support QMI_NAS_NETWORK_REJECT_IND IOT	<ul style="list-style-type: none"> Update full SDK API and add new API in lite SDK to support this feature

1.2. Lite SDK APIs added

- pack_nas_SLQSNASGetForbiddenNetworks
- unpack_nas_SLQSNASGetForbiddenNetworks
- helper_isBootLoader_DebugEnabled
- sms_SLQSWCDMADecodeMTEncoding
- pack_dms_SLQSDmsSwiGetUimSelection
- unpack_dms_SLQSDmsSwiGetUimSelection
- unpack_nas_SLQSNasNetworkRejectCallback_Ind

1.3. Lite SDK APIs updated

- pack_nas_SLQSGetSysSelectionPrefExt
- unpack_nas_SLQSGetSysSelectionPrefExt

1.4. Full SDK APIs added

- SLQSNASGetForbiddenNetworks
- SLQSIIsBootloaderDebugEnabled
- SLQSWCDMADecodeMTEncoding
- SLQSDmsSwiGetUimSelection

1.5. Full SDK APIs updated

- SLQSSetDHCPv4ClientLeaseStatusCallback
- SLQSTmdMitigationLvIRptCallback
- SetLocGetServerCallback
- SetLocSetServerCallback
- SLQSGetSysSelectionPrefExt

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

- [1] Linux QMI SDK Application Developer's Guide
Reference number: 4110914
- [2] Linux QMI SDK Sanity Test Report
Reference number: 41112405
- [3] Linux QMI SDK Software Validation Test Report
Reference number: 41112406

4. Compatibility

Table 3. Hardware Compatibility

Compatible Devices
AR7554/AR7554RD
EM/MC73xx
MC77xx
MC83x5
MC/SL9090
MC/EM74xx
WP8548/7502/7504
WP7601/WP7603/WP7607/WP7608/WP7609
WP7702
EM7565/EM7511

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

To switch the 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 (PID) pairs supported by the Linux QMI SDK.

Table 4. Supported Application-Mode VID/PIDs

VID	1199	1199	1199	1199	1199	1199	1199	1199	1199	3F0	1199	1199	1199
PID	68A2	68C0	9011	9013	9015	9019	9041	9071	371D	9091	90B1	90C1	

Table 5. Supported Boot-Mode VID/PIDs

VID	1199	1199	1199	1199	1199	1199	1199	1199	1199	3F0	1199	1199	1199
PID	68A2	68C0	9010	9012	9014	9018	9040	9070	361D	9090	90B0	90C0	

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 any of the entries in the tables above, contact your FAE for support.

Following table enumerates the modules with their corresponding firmware that were tested with Linux QMI SDK **04.00.19**.

Table 6. Modem and Firmware tested with the SDK

Modem	Firmware
WP7603	SWI9X07Y_02.25.00.00
WP7607	SWI9X07Y_02.25.00.00
WP7608	SWI9X07Y_02.25.00.00
WP7609	SWI9X07Y_02.25.00.00
WP7702	SWI9X06Y_02.22.04.00
EM7565	SWI9X50C_01.08.04.00
EM7511	SWI9X50C_01.08.04.00
EM7455	SWI9X30C_02.32.02.00
MC7305	SWI9X15C_05.05.67.00
WP7502	SWI9X15Y_07.13.07.00

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

5. Software Release Description

Table 7. Release Information

SDK version	04.00.19
Date of generation	08/03/2019
Binary archive name	SLQS04.00.19.bin.tar.gz
Binary archive name	SLQS04.00.19-lite.bin.tar.gz
Source code archive name	SLQS04.00.19.src.tar.gz
Source code archive name	SLQS04.00.19-lite.src.tar.gz
Processor compatibility	x86, ARM, PowerPC, MIPS
Linux kernel compatibility	2.6.32 to 4.20
USB driver compatibility	S2.36N2.56

6. Software Changes

6.1. Validated Corrections/Improvements

Table 8. Validated Corrections/Improvements

ID	Description
LXQMISDK-1390	unpack_swiaavms_SLQSAVMSGetSettings causes segmentation fault if pAPNInfo in not NULL and it's parameters are 0
LXQMISDK-1386	LOC unpack indications out parameter not updated.
LXQMISDK-1385	unpack_nas_SLQSNasSysInfoCallback_ind out parameter not updated.
LXQMISDK-1384	missing qmUnpackdummy in qmTlvUnpackerItem map
LXQMISDK-1383	Support toolchain require --sysroot
LXQMISDK-1381	Add API for QMI_NAS_GET_FORBIDDEN_NETWORKS
LXQMISDK-1379	memory leak in SampleApps/lite-qmi-demo/src/helper_sms.c
LXQMISDK-1377	Create Lite SDK helper function to identify a debug bootloader
LXQMISDK-1376	Compilation errors and warning with GCC 8.2.0
LXQMISDK-1374	SDK cannot be launched when MBIM interface is detected
LXQMISDK-1373	Sending UNICODE SMS through SMS Sample application does not work
LXQMISDK-1372	SDK connect incorrect qcqmi when number of qcqmi is greater than 9
LXQMISDK-1371	add embedded sim switch into Lite SDK API auto test
LXQMISDK-1370	SDK firmware download tool to report "Secboot invalid cert chain." error
LXQMISDK-1368	Make split-sqf tool return error if any error occurred with filter writing
LXQMISDK-1367	SLQSInitiateNetworkRegistration() to be documented as deprecated
LXQMISDK-1365	support SIM auto-switch
LXQMISDK-1364	SLQS-lite.bin.tar.gz does not include "tools"
LXQMISDK-1362	[MC7430][SDK][TVU]Fail to upgrade with "SWI API: SDK process startup failed"
LXQMISDK-1361	decode tlv 0x23 in QMI_NAS_GET_SYSTEM_SELECTION_PREFERENCE
LXQMISDK-1323	SMS UNICODE encoding decoding is not correct
LXQMISDK-1321	fail to compile on gcc-7.3
LXQMISDK-1173	Support QMI_NAS_NETWORK_REJECT_IND IOT

6.2. Known Issues

Table 9. Known Issues

ID	Description
LXQMISDK-1394	[MBIM] LOC indication is not received on LOC sample application

6.3. Minor API Prototype Change

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

6.4. Macro Usage

Table 10. 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.