



Customer Release Note

Linux QMI SDK 04.00.08



SIERRA
WIRELESS®

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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
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Introduction

1.1. Document Scope

This document describes the content of the Linux QMI SDK 04.00.08 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
<p>Lite APIs</p>	<ul style="list-style-type: none"> • New Wrappers <ul style="list-style-type: none"> ○ Audio <ul style="list-style-type: none"> ▪ SLQSGetAudioProfile ▪ SLQSSetAudioProfile ▪ SLQSGetAudioPathConfig ▪ SLQSSetAudioPathConfig ▪ SLQSGetAudioVolTLBConfig ▪ SLQSSetAudioVolTLBConfig ○ SWIAUDIO <ul style="list-style-type: none"> ▪ SLQSGetM2MAudioProfile ▪ SLQSSetM2MAudioProfile ▪ SLQSGetM2MAudioVolume ▪ SLQSSetM2MAudioVolume ▪ SLQSSetM2MAudioAVCFG ▪ SLQSSetM2MAudioLPBK ▪ SLQSSetM2MAudioNVDef ▪ SLQSGetM2MSpkrGain ▪ SLQSSetM2MSpkrGain ▪ SLQSGetM2MAVMute ▪ SLQSSetM2MAVMute ○ IMS <ul style="list-style-type: none"> ▪ SLQSSetSIPConfig ▪ SLQSGetSIPConfig ▪ SLQSSetRegMgrConfig ▪ SLQSGetRegMgrConfig ▪ SLQSSetIMSSMSConfig ▪ SLQSGetIMSSMSConfig ▪ SLQSSetIMSUserConfig ▪ SLQSGetIMSUserConfig ▪ SLQSSetIMSVoIPConfig ▪ SLQSGetIMSVoIPConfig ▪ SLQSImsConfigIndicationRegister • Documentation Improvement for QMI Services: <ul style="list-style-type: none"> ○ DMS ○ UIM ○ SMS ○ RMS ○ SAR ○ IMSA ○ SWIAVMS ○ TMD ○ SWIOMA ○ SWIOMAEXT ○ WDS ○ VOICE <p>Fix issue on pack_nas_SLQSInitiateNetworkRegistration with big endian processor</p>
<p>Miscellaneous</p>	<ul style="list-style-type: none"> • WP760x Firmware Update (FireHose Protocol) <ul style="list-style-type: none"> ○ New API: SLQSUUpgradeFirmware9x07 ○ Fix issue on PowerPC (Big Endian) and ARM64 ○ 2k sector size support • Firmware_Download sample app <ul style="list-style-type: none"> ○ Added "9x07" as device selection (-d) ○ Added "-e" option for debug log on/off

1.4. Removed Features

Table 2. Removed features

Feature	Description
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1.5. Lite APIs Rename

In order to be consistent on naming convention, we have renamed libpack and libsdp to lite-qmi and lite-fw respectively.

Table 3. libSDP to lite-fw Structure name update

libSDP	lite-fw
libSDP_FirmwareInfo	litefw_FirmwareInfo

Table 4. libSDP to lite-fw Enum name update

libSDP	lite-fw
LIBSDP_CARRIER_PACKAGE_SKU	LITEFW_CARRIER_PACKAGE_SKU

Table 5. libSDP to lite-fw API name update

libSDP	lite-fw
libSDP_getFileType	litefw_getFileType
libSDP_ExtractFirmwareParametersByPath	litefw_ExtractFirmwareParametersByPath
libSDP_GetModelFamily	litefw_GetModelFamily
libSDP_CheckValidFirmwareInfo	litefw_CheckValidFirmwareInfo
libSDP_BuildImagesPreferenceRequest	litefw_BuildImagesPreferenceRequest
libSDP_CalculateImageMask	litefw_CalculateImageMask
libSDP_DownloadFW	litefw_DownloadFW
libsdp_set_log_func	litefw_set_log_func
libsdp_SetReadBlockSize	litefw_SetReadBlockSize

Note: We have added below translations at the end of lite-fw.h header for backward compatibility

```
#define libSDP_GetVersion litefw_GetVersion
#define libSDP_CalculateImageMask litefw_CalculateImageMask
#define libSDP_getFileType litefw_getFileType
```

```
#define libSDP_ExtractFirmwareParametersByPath
litefw_ExtractFirmwareParametersByPath

#define libSDP_GetModelFamily litefw_GetModelFamily

#define libSDP_CheckValidFirmwareInfo litefw_CheckValidFirmwareInfo
#define libSDP_BuildImagesPreferenceRequest
litefw_BuildImagesPreferenceRequest

#define libSDP_DownloadFW litefw_DownloadFW
#define libsdp_set_log_func litefw_set_log_func

#define libsdp_SetReadBlockSize litefw_SetReadBlockSize

#define LIBSDP_CARRIER_PACKAGE_SKU LITEFW_CARRIER_PACKAGE_SKU
#define LIBSDP_SKU_STRING_LENGTH LITEFW_SKU_STRING_LENGTH

typedef litefw_FirmwareInfo libSDP_FirmwareInfo;
typedef litefwlogger libsdplogger;
```

2.

Abbreviations and Definitions

Table 6. 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 7. Related Documentation

Ref. #	Doc. #	Document title
[R-1]	4110914	Linux QMI SDK Application Developer's Guide
[R-2]	41111276	Linux QMI SDK Sanity Test Report – 04.00.08
[R-3]	41111277	Linux QMI SDK Software Validation Test Report – 04.00.08

4.

Compatibility

Table 8. Hardware Compatibility

Devices Compatibility List
AR7554/AR7554RD
EM/MC73xx
MC77xx
MC83x5
MC/SL9090
MC/EM74xx
WP8548/7502/7504
WP7601/WP7603

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 (PID) pairs supported by the Linux QMI SDK.

Table 9. 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 10. 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 04.00.08.

Table 11. Modem and Firmware tested with the SDK

Modem	Firmware
MC7430	SWI9X30C_02.25.00.00
EM/MC7455	SWI9X30C_02.25.00.00
MC7304	SWI9X15C_05.05.67.00
MC7354	SWI9X15C_05.05.58.00
MC7350	SWI9C15C_05.05.58.01
MC7355	SWI9X15C_05.05.67.00
MC7330	SWI9X15C_05.05.65.00
MC7305	SWI9X15C_05.05.58.00
MC7710	SWI9200X_03.05.29.06
MC9090	SWI6600U_02.04.06.00
EM7355	SWI9X15C_05.05.67.00
EM7330	SWI9X15C_05.05.65.00
EM7305	SWI9X15C_05.05.58.00
WP7502	SWI9X15Y_07.12.09.00
WP7504	SWI9X15Y_07.12.09.00
WP8548	SWI9X15Y_07.12.09.00
WP7603	SWI9X07Y_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 12. Release Information

Component	Content
SDK version	04.00.08
Date of generation	07/07/2017
Binary archive name	SLQS04.00.08.bin.tar.gz
MD5 checksum	2b6ef11aed4c8875e552c76918561f60
Binary archive name	SLQS04.00.08-lite.bin.tar.gz
MD5 checksum	cb7abd714dec1b7656ef10d557578141
Source code archive name	SLQS04.00.08.tar.gz
MD5 checksum	26fade530e2410ca17c80c04cb600580
Processor compatibility	x86, ARM, PowerPC, MIPS
Linux kernel compatibility	2.6.32 to 4.8
USB drivers compatibility	S2.28N2.42



6. Software Changes Description

6.1. Validated Corrections/Improvements

ID	Description
LXQMISDK-929	[WP7603] [SLQS04.00.08 alpha] Firmware_Download sample application failed to download firmware for WP7603 on Marvel and PPC
LXQMISDK-925	Linux SDK qa test GetServingNetwork / GetServingSystem (t351) return corrupt pName
LXQMISDK-924	WP760x firmware update 2k sector support
LXQMISDK-923	Lite-fw downloader not support 9x07 when modem sector is 2K
LXQMISDK-920	pack_nas_SLQSInitiateNetworkRegistration() fails on big-endian processor
LXQMISDK-919	lite-fw-download does not handle scenario where modem does not need CWE and PRI
LXQMISDK-917	lite-fw-download did not exit at the end of firmware download for WP7603 on ARM64
LXQMISDK-912	check undocumented API/param on voice.h
LXQMISDK-911	check undocumented API/param on swioma.h
LXQMISDK-910	check undocumented API/param on swiomaext.h
LXQMISDK-909	check undocumented API/param on tmd.h
LXQMISDK-907	check undocumented API/param on swiavms.h
LXQMISDK-906	check undocumented API/param on sar.h
LXQMISDK-905	check undocumented API/param on rms.h
LXQMISDK-903	WP7603 firmware download failed using lite-fw-download sample application on Marvell
LXQMISDK-902	WP7603 firmware download failed on PPC platform
LXQMISDK-900	check undocumented API/param on sms.h

ID	Description
LXQMISDK-899	check undocumented API/param on uim.h
LXQMISDK-894	Documentation for rejCause in nas_LTESysInfo is not complete
LXQMISDK-875	check undocumented API/param on dms.h
LXQMISDK-874	check undocumented API/param on wds.h
LXQMISDK-866	Provide dynamic debugging option in Lite FW download
LXQMISDK-864	FW download app shall allow to choose protocol in serial mode
LXQMISDK-849	SDK Lite should provide information about valid unpacked optional parameters
LXQMISDK-787	Implement Lite APIs for swiaudio
LXQMISDK-779	Implement Lite APIs for IMS
LXQMISDK-776	Implement Lite APIs for Audio

6.2. Known Issues

ID	Description
----	-------------

6.3. New API

API	Comment
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6.4. Minor API prototype change

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

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.