



**Linux QMI SDK 04.00.26**

## **Customer Release Note**



**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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*Note: Some airlines may permit the use of cellular phones while the aircraft is on the ground and the door is open. Sierra Wireless modems may be used at this time.*

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Sales information and technical support, including warranty and returns	Web: <a href="http://sierrawireless.com/company/contact-us/">sierrawireless.com/company/contact-us/</a> Global toll-free number: 1-877-687-7795 6:00 am to 5:00 pm PST
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# 1. Introduction

This document describes the contents of the Linux QMI SDK **04.00.26** release.

## 1.1. New Features/Enhancements

Table 1. New Features/Enhancements

Feature	Description
<b>Add ARM hard floating-point support</b>	<ul style="list-style-type: none"><li>• Provide arm hard float binaries in full and lite SDK</li></ul>
<b>Removed CPU build flag</b>	<ul style="list-style-type: none"><li>• No CPU flag require on 32-bit and 64-bit build system</li></ul>
<b>Automatically detect EM74x1 on firmware download tools</b>	<ul style="list-style-type: none"><li>• Automatic detect device API to determinate EM74x1 in full and lite SDK</li></ul>
<b>Add timeout to firmware download tools</b>	<ul style="list-style-type: none"><li>• Add timeout mechanism on firmware download tools in full and lite SDK</li></ul>
<b>Support RC51xx firmware download</b>	<ul style="list-style-type: none"><li>• Support RC51xx firmware download in full and lite SDK</li></ul>
<b>Add ModemManager rules to ignore SWI modem</b>	<ul style="list-style-type: none"><li>• Add rules to ignore SWI modem in lite firmware download tool.</li></ul>

## 1.2. Lite SDK APIs added

- Nil

## 1.3. Lite SDK APIs updated

- `unpack_nas_SetNasLTECphyCalIndCallback_ind`
- `unpack_nas_SLQSNasPerformIncNetworkScanCallback_Ind`

## 1.4. Full SDK APIs added

- Nil

## 1.5. Full SDK APIs updated

- `UpkQmiCbkNasLteCphyCalInd`
- `UpkQmiCbkNasPerformIncNetworkScanInd`

## 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/EM7430 MC/EM7455
WP8548/7502/7504
WP76xx
WP7702
EM7511 EM7565
RC7611
EM74x1

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

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

Table 5. Supported Boot-Mode VID/PIDs

<b>VID</b>	1199	1199	1199	1199	1199	1199	1199	1199	3F0	1199	1199	1199
<b>PID</b>	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 **04.00.26**

**Table 6. Modem and Firmware tested with the SDK**

<b>Modem</b>	<b>Firmware</b>
WP7603	SWI9X07Y_02.37.03.00
WP7607	SWI9X07Y_02.37.03.00
WP7609	SWI9X07Y_02.37.03.00
WP7610	SWI9X07Y_02.37.00.00
WP7702	SWI9X06Y_02.34.00.00
EM7565	SWI9X50C_01.12.02.00
EM7511	SWI9X50C_01.12.02.00
EM7455	SWI9X30C_02.34.01.00
MC7355	SWI9X15C_05.05.58.00
RC7611	SWI9X07H_00.03.03.00
EM7421	SWI9X50C_01.13.01.00

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

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## 5. Software Release Description

Table 7. Release Information

<b>SDK version</b>	04.00.26
<b>Date of generation</b>	17/06/2020
<b>Binary archive name</b>	SLQS04.00.26.bin.tar.gz
<b>Binary archive name</b>	SLQS04.00.26-lite.bin.tar.gz
<b>Source code archive name</b>	SLQS04.00.26.src.tar.gz
<b>Source code archive name</b>	SLQS04.00.26-lite.src.tar.gz
<b>Processor compatibility</b>	x86, ARM, PowerPC, MIPS
<b>Linux kernel compatibility</b>	2.6.32 to 5.6
<b>USB driver compatibility</b>	S2.42N2.63

## 6. Software Changes

### 6.1. Validated Corrections/Improvements

Table 8. Validated Corrections/Improvements

ID	Description
<a href="#">LXQMISDK-716</a>	add arm hard float to binary release
<a href="#">LXQMISDK-1535</a>	SDK to use standard data types
<a href="#">LXQMISDK-1536</a>	UpgradeFirmware2k did not check error code eQCWWAN_ERR_SWIIM_FIRMWARE_NOT_DOWNLOADED
<a href="#">LXQMISDK-1545</a>	OEM API WDS test run is incomplete when at!netnum = 8
<a href="#">LXQMISDK-1547</a>	EM7411 EM7421 Firmware download auto detect failed.
<a href="#">LXQMISDK-1548</a>	Update documentaion EM74xx and MC74xx to specific model ID
<a href="#">LXQMISDK-1549</a>	Docuemention update
<a href="#">LXQMISDK-1550</a>	RC7611 firmware upgrade failed on Beaglebone platform
<a href="#">LXQMISDK-1551</a>	Add ModemManager rule to ignore SWI modem in lite-fw-download
<a href="#">LXQMISDK-1552</a>	NAS demo code unpack_func_item calling pack fuction.
<a href="#">LXQMISDK-1556</a>	lite-fw-download needs to timeout when fail to switch from Sahara modem to Firehose mode
<a href="#">LXQMISDK-1557</a>	TLV 0x10 field num_inst length QMI_NAS_PERFORM_INCREMENTAL_NETWORK_SCAN_IND_MSG not correct
<a href="#">LXQMISDK-1558</a>	incorrect byte length of scell_state in unpack_nas_SetNasLTECphyCalndCallback_ind
<a href="#">LXQMISDK-1559</a>	Update Linux QMI SDK developer's guide for EM74x1 support
<a href="#">LXQMISDK-1560</a>	Add auto-retry mechanism in firmware download tool
<a href="#">LXQMISDK-1561</a>	support firmware download for RC51xx
<a href="#">LXQMISDK-1565</a>	Please update ADG to use lite-fw-download

### 6.2. Known Issues

Table 9. Known Issues

ID	Description

### 6.3. Minor API Prototype Change

API	Comments

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

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## 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.