



**Linux QMI SDK 04.00.15**

## **Customer Release Note**



**SIERRA**  
WIRELESS®

41112349  
2.2  
June 22, 2018

## Important Notice

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.

## Safety and Hazards

Do not operate the Sierra Wireless modem in areas where cellular modems are not advised without proper device certifications. These areas include environments where cellular radio can interfere such as explosive atmospheres, medical equipment, or any other equipment which may be susceptible to any form of radio interference. The Sierra Wireless modem can transmit signals that could interfere with this equipment. Do not operate the Sierra Wireless modem in any aircraft, whether the aircraft is on the ground or in flight. In aircraft, the Sierra Wireless modem **MUST BE POWERED OFF**. When operating, the Sierra Wireless modem can transmit signals that could interfere with various onboard systems.

---

*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.*

---

The driver or operator of any vehicle should not operate the Sierra Wireless modem while in control of a vehicle. Doing so will detract from the driver or operator's control and operation of that vehicle. In some states and provinces, operating such communications devices while in control of a vehicle is an offence.

## Limitations of Liability

This manual is provided "as is". Sierra Wireless makes no warranties of any kind, either expressed or implied, including any implied warranties of merchantability, fitness for a particular purpose, or noninfringement. The recipient of the manual shall endorse all risks arising from its use.

The information in this manual is subject to change without notice and does not represent a commitment on the part of Sierra Wireless. SIERRA WIRELESS AND ITS AFFILIATES SPECIFICALLY DISCLAIM LIABILITY FOR ANY AND ALL DIRECT, INDIRECT, SPECIAL, GENERAL, INCIDENTAL, CONSEQUENTIAL, PUNITIVE OR EXEMPLARY DAMAGES INCLUDING, BUT NOT LIMITED TO, LOSS OF PROFITS OR REVENUE OR ANTICIPATED PROFITS OR REVENUE ARISING OUT OF THE USE OR INABILITY TO USE ANY SIERRA WIRELESS PRODUCT, EVEN IF SIERRA WIRELESS AND/OR ITS AFFILIATES HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES OR THEY ARE FORESEEABLE OR FOR CLAIMS BY ANY THIRD PARTY.

Notwithstanding the foregoing, in no event shall Sierra Wireless and/or its affiliates aggregate liability arising under or in connection with the Sierra Wireless product, regardless of the number of events, occurrences, or claims giving rise to liability, be in excess of the price paid by the purchaser for the Sierra Wireless product.

## Patents

This product may contain technology developed by or for Sierra Wireless Inc.

This product includes technology licensed from QUALCOMM®.

This product is manufactured or sold by Sierra Wireless Inc. or its affiliates under one or more patents licensed from MMP Portfolio Licensing.

## Copyright

© 2018 Sierra Wireless. All rights reserved.

## Trademarks

Sierra Wireless®, AirPrime®, AirLink®, AirVantage®, WISMO®, ALEOS® and the Sierra Wireless and Open AT logos are registered trademarks of Sierra Wireless, Inc. or one of its subsidiaries.

Watcher® is a registered trademark of NETGEAR, Inc., used under license.

Windows® and Windows Vista® are registered trademarks of Microsoft Corporation.

Macintosh® and Mac OS X® are registered trademarks of Apple Inc., registered in the U.S. and other countries.

QUALCOMM® is a registered trademark of QUALCOMM Incorporated. Used under license.

Other trademarks are the property of their respective owners.

## Contact Information

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
Corporate and product information	Web: <a href="http://sierrawireless.com">sierrawireless.com</a>

# Document History

Version	Date	Updates
1.0	February 28, 2018	Creation
2.0	April 11, 2018	Updated document reference number and template
2.1	April 27, 2018	Updated for 04.00.14
2.2	June 22, 2018	Updated for 04.00.15

# Contents

<b>1. INTRODUCTION .....</b>	<b>7</b>
1.1. New Features/Enhancements .....	7
1.2. Lite APIs Changed.....	7
<b>2. ABBREVIATIONS AND DEFINITIONS.....</b>	<b>8</b>
<b>3. RELATED DOCUMENTATION .....</b>	<b>9</b>
<b>4. COMPATIBILITY.....</b>	<b>10</b>
<b>5. SOFTWARE RELEASE DESCRIPTION.....</b>	<b>12</b>
<b>6. SOFTWARE CHANGES .....</b>	<b>13</b>
6.1. Validated Corrections/Improvements .....	13
6.2. Known Issues .....	13
6.3. Minor API Prototype Change.....	13
6.4. Macro Usage .....	14

## List of Tables

Table 1.	New Features/Enhancements .....	7
Table 2.	Abbreviations and Definitions .....	8
Table 3.	Hardware Compatibility .....	10
Table 4.	Supported Application-Mode VID/PIDs .....	10
Table 5.	Supported Boot-Mode VID/PIDs .....	10
Table 6.	Modem and Firmware tested with the SDK.....	11
Table 7.	Release Information .....	12
Table 8.	Validated Corrections/Improvements .....	13
Table 9.	Known Issues .....	13
Table 10.	Macro Usage .....	14

# 1. Introduction

This document describes the contents of the Linux QMI SDK 04.00.15 release.

## 1.1. New Features/Enhancements

Table 1. New Features/Enhancements

Feature	Description
<b>Add IOT support to QMI_NAS_SET_SYSTEM_SELECTION_PREFERENCE</b>	Add new API <ul style="list-style-type: none"> <li>• SLQSSetSysSelectionPrefExt</li> </ul>
<b>Add Support to QMI_LOC_SET_SERVER</b>	Add new API <ul style="list-style-type: none"> <li>• SLQSLOCSetServer</li> <li>• SetLocSetServerCallback</li> <li>• ClearLocSetServerCallback</li> </ul>
<b>Add IOT Support to QMI_NAS_GET_RF_BAND_INFO</b>	Add New API <ul style="list-style-type: none"> <li>• SLQSNasGetRFInfo</li> </ul>
<b>Ram dump tool update</b>	Add support to Secure boot enabled device
<b>Stress test for USB driver</b>	Add compile option in packingdemo to enable USB driver stress test.

Please refer to QMAP\_FullSDK.html and QMAP\_LiteSDK.html for QMAP test procedures.

## 1.2. Lite APIs Changed

- Nil

## 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: 41111983
- [3] Linux QMI SDK Software Validation Test Report  
Reference number: 41111984

## 4. Compatibility

Table 3. Hardware Compatibility

Compatible Devices
AR7554/AR7554RD
EM/MC73xx
MC77xx
MC83x5
MC/SL9090
MC/EM74xx
WP8548/7502/7504
WP7601/WP7603/WP7607/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

<b>VID</b>	1199	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.

=The following table enumerates the modules with their corresponding firmware that were tested with Linux QMI SDK 04.00.15.

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

<b>Modem</b>	<b>Firmware</b>
WP7603	SWI9X07Y_02.18.00.00
WP7607	SWI9X07Y_02.18.00.00
WP7608	SWI9X07Y_02.18.00.00
WP7609	SWI9X07Y_02.18.00.00
WP7702	SWI9X06Y_02.15.03.00
EM7565	SWI9X50C_01.07.02.00
EM7511	SWI9X50C_01.07.02.00
EM7455	SWI9X30C_02.29.04.00
MC7305	SWI9X15C_05.05.67.00

*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

<b>SDK version</b>	04.00.15
<b>Date of generation</b>	22/06/2018
<b>Binary archive name</b>	SLQS04.00.15.bin.tar.gz
<b>Binary archive name</b>	SLQS04.00.15-lite.bin.tar.gz
<b>Source code archive name</b>	SLQS04.00.15.tar.gz
<b>Processor compatibility</b>	x86, ARM, PowerPC, MIPS
<b>Linux kernel compatibility</b>	2.6.32 to 4.15
<b>USB driver compatibility</b>	S2.33N2.52

## 6. Software Changes

### 6.1. Validated Corrections/Improvements

Table 8. Validated Corrections/Improvements

ID	Description
<a href="#">LXQMISDK-1209</a>	unpack_swiavms_SLQSAVMSSetSettings returns eQCWWAN_ERR_NULL_TLV
<a href="#">LXQMISDK-1206</a>	stress test QMI and USBNET using lite API
<a href="#">LXQMISDK-1205</a>	SLQSNASGetLTECPHYCaInfo not consume all data in TLV 0x10
<a href="#">LXQMISDK-1204</a>	SLQSInitiateNetworkRegistration failed with Error Code 1048 (reason:A specified argument is invalid)
<a href="#">LXQMISDK-1203</a>	SLQSGetProfileSettings API failed with Error code: 1081(Reason: Extended Internal)
<a href="#">LXQMISDK-1202</a>	ramdump collection tool updates for Secure Boot enabled devices
<a href="#">LXQMISDK-1200</a>	SDK FMS service to implement DM reset as a fallback if QMI reset fails
<a href="#">LXQMISDK-1199</a>	Document update GetSignalStrengths API
<a href="#">LXQMISDK-1198</a>	IPCHANRATEEN is not available into SLQSSetCustFeatures API
<a href="#">LXQMISDK-1196</a>	Failed to start Linux Data connection IPV6 with default profile 1
<a href="#">LXQMISDK-1195</a>	SDK FMS service and lite-fw-download to implement DM reset as a fallback if QMI reset fails
<a href="#">LXQMISDK-1192</a>	Lite connection manager improvement
<a href="#">LXQMISDK-1191</a>	SUPPORT QMI_LOC_SET_SERVER
<a href="#">LXQMISDK-1180</a>	Add ability to differentiate standard LTE from Cat-M1 / NB-IoT
<a href="#">LXQMISDK-1165</a>	Support QMI_NAS_SET_SYSTEM_SELECTION_PREFERENCE IOT
<a href="#">LXQMISDK-1164</a>	Support QMI_NAS_GET_RF_BAND_INFO IOT

### 6.2. Known Issues

Table 9. Known Issues

ID	Description
QT19X07-940	Add QMI to change USB composition

### 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.