



# Customer Release Note

## Android Nougat 7.0.2.0 ARM 64 RIL



**SIERRA**  
WIRELESS®

41110477  
1.0  
January 9, 2017

## 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.

Customer understands that Sierra Wireless is not providing cellular or GPS (including A-GPS) services. These services are provided by a third party and should be purchased directly by the Customer.

**SPECIFIC DISCLAIMERS OF LIABILITY:** CUSTOMER RECOGNIZES AND ACKNOWLEDGES SIERRA WIRELESS IS NOT RESPONSIBLE FOR AND SHALL NOT BE HELD LIABLE FOR ANY DEFECT OR DEFICIENCY OF ANY KIND OF CELLULAR OR GPS (INCLUDING A-GPS) SERVICES.

## 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 InterDigital Group and MMP Portfolio Licensing.

## Copyright

© 2016 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 Desk:	Phone:	1-604-232-1488
	Hours:	8:00 AM to 5:00 PM Pacific Time
	Contact:	<a href="http://www.sierrawireless.com/sales">http://www.sierrawireless.com/sales</a>
Post:	Sierra Wireless 13811 Wireless Way Richmond, BC Canada V6V 3A4	
Technical Support:	<a href="mailto:support@sierrawireless.com">support@sierrawireless.com</a>	
RMA Support:	<a href="mailto:repairs@sierrawireless.com">repairs@sierrawireless.com</a>	
Fax:	1-604-231-1109	
Web:	<a href="http://www.sierrawireless.com/">http://www.sierrawireless.com/</a>	

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

# Document History

Version	Date	Updates
1.0	Oct 28, 2016	Creation
1.1	Dec 06, 2016	Updated with 'Preliminary' water mark. Added 'Beta' in the title of the release note
1.2	Jan 9, 2017	Update for V7.0.2.0



# Contents

<b>1. INTRODUCTION .....</b>	<b>6</b>
1.1. Document Scope .....	6
1.2. Supported Configurations and Modules .....	6
1.2.1. Supported Release Configuration .....	6
1.2.2. Supported AirPrime Modules .....	6
1.3. Terminology and Acronyms.....	7
1.4. Related document .....	7
<b>2. CHANGE SUMMARY .....</b>	<b>8</b>
2.1. Version 7.0.1.0 (Beta).....	8
2.2. Version 7.0.2.0 .....	8
<b>3. KNOWN LIMITATIONS .....</b>	<b>9</b>
<b>4. PLANNED FUTURE ENHANCEMENTS .....</b>	<b>10</b>



# 1. Introduction

## 1.1. Document Scope

This document describes the Sierra Wireless Android Nougat 7.0 ARM 64 RIL release.

## 1.2. Supported Configurations and Modules

### 1.2.1. Supported Release Configuration

This release note is applicable to release configuration:

#### **AndroidRIL\_V7.0.2\_ARM64\_7.0\_V1.0\_bin**

Android RIL version 7.0.2.0

ARM based processors for Android Nougat (7.0) 64-bit user space

Binary only release

### 1.2.2. Supported AirPrime Modules

The following table lists supported AirPrime modules and corresponding firmware versions.

Table 1. Supported AirPrime Modules and Firmware Versions

<b>AirPrime Module</b>	<b>Firmware Version</b>
AR7552	Firmware version SWI9X15A_07.10.08.00 r32399 (or newer)
EM7305	Firmware version SWI9X15C_05.05.16 (or newer)
EM7330	Firmware version SWI9X15C_05.05.22 (or newer)
EM8805	Firmware version SWI9X15C_05.05.16 (or newer)
HL7518	Firmware version HL75xx.2.13 (or newer)
HL7528	Firmware version AHL7528.2.6.151000 (or newer)
HL7538	Firmware version AHL7538.1.0.152100 (or newer)
HL7539	Firmware version AHL7539.1.0.152101 (or newer)
HL7548	Firmware version HL75xx.A.2.13 (or newer)
HL7549	Firmware version BHL7549.1.3.15200 (or newer)
HL7588	Firmware version AHL75xx.A2.6.151600 (or newer)
HL7618	Firmware version RHL7618.4.2.151600.201607210015.x7120_1 (or newer)
HL7648	Firmware version AHL7648.A.1.3.161601.201608091650.x7120m_1 (or newer)
HL7688	AHL75xx.A2.6.151600 (or newer)
HL7690	Firmware version AHL769x_TEST.0.0.154401 (or newer)
HL8518	Firmware version AHL85xx.5.13.2.3 (or newer)
HL8528	Firmware version AHL85xx.5.13.2.3 (or newer)
HL8529	Firmware version AHL85xx.5.13.2.3 (or newer)

AirPrime Module	Firmware Version
HL8548	Firmware version RHL85xx.5.5.12.0 (or newer)
HL8549	Firmware version RHL85xx.5.5.12.0 (or newer)
MC/EM7355	Firmware version SWI9X15C_05.05.16 (or newer)
MC/EM7455	Firmware version SWI9X30C_02.02.00.00 (or newer)
MC/EM7430	Firmware version SWI9X30C_02.23.00.00 (or newer)
MC7304	Firmware version SWI9X15C_05.04.02 (or newer)
MC7354	Firmware version SWI9X15C_05.04.02 (or newer)
MC7700	Firmware version SWI9200X_03.05.16.01 (or newer)
MC7710	Firmware version SWI9200X_03.05.16.01 (or newer)
MC7750	Firmware version SWI9600M_03.05.10.05 (or newer)
MC8305 (G3K)	Firmware version 1580 and 3.3
MC8355 (G3K)	Firmware version 1580 and 3.3
SL8092	Firmware version SWI6600P_02.00.01.01 (or newer)
SL909x	Firmware version 331403 (or newer)

Note that:

- MC7700 and MC7710 modules can be configured to operate in either “QMI mode” or “Direct-IP” mode; the MC7700 and MC7710 modules must be in “QMI mode” for the Android RIL to operate properly.
- MC73xx, MC7750, MC8305, MC8355 and SL909x modules only support QMI mode and so will work by default.
- MC73xx supports multi-PDN by default; it must be switched back to single PDN to work with the Android RIL.

## 1.3. Terminology and Acronyms

Term/Acronym	Definition
API	Application Programming Interface
OEM	Original Equipment Manufacturer
QMI	Qualcomm Modem Interface; Qualcomm MSM Interface
RIL	Radio Interface Layer

## 1.4. Related document

- [AirPrime - Android RIL Integration Guide.pdf](#)



## 2. Change Summary

### 2.1. Version 7.0.1.0 (Beta)

- Add Sierra USB driver supported on Hikey Android 7.0 ARM64 platform.
- Add Sierra RIL supported on Hikey Android 7.0 ARM64 platform.

### 2.2. Version 7.0.2.0

- Improve GobNet USB driver to handle raw ip / ethernet mode switching
- Turn network interface down after data call stopped
- Updated Android RIL Integration guide



## 3. Known Limitations

Known issues in the Android 7.0 RIL.

- None.

## 4. Planned Future Enhancements

The following features are planned to be supported in a future release of the Android RIL:

- In call UI support for Dialer
- OTASP/OMADM support for MC73xx