



Customer Release Note

Android Nougat 7.1.6.0 ARM 64 RIL



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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Document History

Version	Date	Updates
1.0	Apr 28, 2017	Creation
1.1	May 26, 2017	Update for 7.1.3.0 release
1.2	Jul 11, 2017	Update for 7.1.4.0 release
1.3	Sep 29, 2017	Update for 7.1.5.0 release
1.4	Nov 24, 2017	Update for 7.1.6.0 release



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1. Introduction

1.1. Document Scope

This document describes the Sierra Wireless Android Nougat 7.1 ARM RIL release.

1.2. Supported Configurations and Modules

1.2.1. Supported Release Configuration

This release note is applicable to release configuration:

AndroidRIL_V7.1.6_ARM64_bin

Android RIL version 7.1.6.0

ARM based processors for Android Nougat (7.1) 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

AirPrime Module	Firmware Version	RIL Type
AR7552	SWI9X15A_07.10.08.00 r32399 (or newer)	AR
EM7305	SWI9X15C_05.05.16 (or newer)	QMI
EM7330	SWI9X15C_05.05.22 (or newer)	QMI
EM8805	SWI9X15C_05.05.16 (or newer)	QMI
EM7565	SWI9X50C_01.02.01.00 (or newer)	QMI
HL7518	HL75xx.2.13 (or newer)	HL
HL7528	AHL7528.2.6.151000 (or newer)	HL
HL7538	AHL7538.1.0.152100 (or newer)	HL
HL7539	AHL7539.1.0.152101 (or newer)	HL
HL7548	HL75xx.A.2.13 (or newer)	HL
HL7549	BHL7549.1.3.15200 (or newer)	HL
HL7588	AHL75xx.A2.6.151600 (or newer)	HL
HL7618	RHL7618.4.2.151600.201607210015.x7120_1 (or newer)	HL
HL7648	AHL7648.A.1.3.161601.201608091650.x7120m_1 (or newer)	HL
HL7688	AHL75xx.A2.6.151600 (or newer)	HL
HL7690	AHL769x_TEST.0.0.154401 (or newer)	HL
HL7692	HL769x.2.24.173100.201709051100.x7120m_1(or newer)	HL

AirPrime Module	Firmware Version	RIL Type
HL8518	AHL85xx.5.13.2.3 (or newer)	HL
HL8528	AHL85xx.5.13.2.3 (or newer)	HL
HL8529	AHL85xx.5.13.2.3 (or newer)	HL
HL8548	RHL85xx.5.5.12.0 (or newer)	HL
HL8549	RHL85xx.5.5.12.0 (or newer)	HL
MC/EM7355	SWI9X15C_05.05.16 (or newer)	QMI
MC/EM7455	SWI9X30C_02.02.00.00 (or newer)	QMI
MC/EM7430	SWI9X30C_02.24.03.00 (or newer)	QMI
EM7430C	SWI9X30C_02.24.05.06 (or newer)	QMI
MC7304	SWI9X15C_05.04.02 (or newer)	QMI
MC7354	SWI9X15C_05.04.02 (or newer)	QMI
MC7700	SWI9200X_03.05.16.01 (or newer)	QMI
MC7710	SWI9200X_03.05.16.01 (or newer)	QMI
MC7750	SWI9600M_03.05.10.05 (or newer)	QMI
MC8305 (G3K)	1580 and 3.3	QMI
MC8355 (G3K)	1580 and 3.3	QMI
SL8092	SWI6600P_02.00.01.01 (or newer)	AT
SL909x	331403 (or newer)	QMI
WP7504	SWI9X15Y_07.12.09.00 (or newer)	QMI
WP7603	SWI9X07Y_02.00.01.0 (or newer)	QMI

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 7.1.6.0

- Add support firmware download for EM7565.
- Fix RIL cannot modify IP protocol for APN profile.
- Fix modules disconnection after wakeup from suspend.
- Fix GPS inUseFix mask incorrect usage.
- Fix GPS fix rate was 2s when configuration was 1s.

2.2. Version 7.1.5.0

- Add support to EM7565, HL7692 and EM7430C.
- Add support radio capability RIL request in QMI RIL.
- Improved firmware download and power up sequence on WP76xx.
- Fix DTMF slow response in HL RIL.
- Fix network time not update correctly in HL RIL.
- Fix InCallUI is missing in Dialer.
- Fix GPS time injection failed on WP76xx.
- Fix data connection failed with IPv4v6 profile.
- Fix GNSS memory issue if satellite number over 32.

2.3. Version 7.1.4.0

- Add firmware download support to WP76xx.
- Fix WP7603 not able to report NMEA data.
- Fix NITZ indication delay issue.
- Fix high probability get IP address failed.
- Fix WP7603-1 cannot detect in RIL.

2.4. Version 7.1.3.0

- Add support to WP7504 and WP7603
- Add support to Galileo and Beidou satellites
- Improve RIL task scheduler
- Improve Sierra GPS library stability
- Fix HL85xx 2G data session not working in India network

2.5. Version 7.1.2.0

- Add Sierra USB driver supported on Hikey Android 7.1 ARM64 platform.
- Add Sierra RIL supported on Hikey Android 7.1 ARM64 platform.



3. Known Limitations

Known issues in the Android 7.1 RIL.

- Android may not be able to restart data call after disabling airplane mode. Issue happened when connected module is EM7565 only.

4. Planned Future Enhancements

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

- OTASP/OMADM support for MC73xx