



Customer Release Note

Android Marshmallow 6.013.2 x86 64 RIL



SIERRA
WIRELESS®

41110647
1.0
February 24, 2017

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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	Jan 29, 2016	Initial version for V6.0.1.0
1.1	Mar 24, 2016	Update for V6.0.3.0
1.2	Apr 29, 2016	Update for V6.0.4.0
1.3	Jun 13, 2016	Update for V6.0.6.0
1.4	Jul 6, 2016	Update for V6.0.7.0
1.5	Aug 10, 2016	Update for V6.0.9.0
1.6	Sept 30, 2016	Update for V6.0.13.0
1.7	Oct 20, 2016	Update for V6.0.15.0
1.8	Nov 4, 2016	Update for V6.0.16.0
1.9	Feb 8, 2017	Update for V6.0.13.1
2.0	Feb 24, 2017	Update for V6.0.13.2



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1. Introduction

1.1. Document Scope

This document describes the Sierra Wireless Android Marshmallow 6.0 x86 RIL release.

1.2. Supported Configurations and Modules

1.2.1. Supported Release Configuration

This release note is applicable to release configuration:

AndroidRIL_V6.0.13.2_x86_64_6.0_V1.0_bin

Android RIL version 6.0.13.2

x86 based processors for Android Marshmallow (6.0) 64bit 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
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	Firmware version 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)

AirPrime Module	Firmware Version
HL8529	Firmware version AHL85xx.5.13.2.3 (or newer)
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)
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 6.0.13.2

- Improve NMEA port error handling
- Switched to new QMI object for radio technology switching
- Improve MT SMS receiving mechanism
- Add modem “heart beat” checking in RIL

2.2. Version 6.0.13.1

- Fix data call setup issue after input SIM pin

2.3. Version 6.0.16.0

- Fix USB driver may cause system suspend delay
- Fix SMS receive issue during system at start up stage
- Fix data call setup issue after input SIM pin

2.4. Version 6.0.15.0

- Add support to HL76xx series modem
- Fix UTC time report by HL series modem not correct issue
- Add PPP support in RIL

2.5. Version 6.0.13.0

- Fix time zone synchronize issue.
- Fix module performs manual search after reboot which doesn't match the user setting.

2.6. Version 6.0.9.0

- Fix invalid file descriptor after NMEA closed.
- Fix SierraFwDI7xxx report false modem status.

2.7. Version 6.0.7.0

- Improve USB driver release routine.
- Fix potential issue of incorrect memory initialization.
- Fix Android framework doesn't start data call after reboot.
- Fix local time synchronization failure in 3G mode.

- Fix indication cannot be disabled during suspend if modem have no SIM.
- Fix USB driver malfunction after long idle.

2.8. Version 6.0.6.0

- Fixed Linux SDK crash on GetPower API.
- Fixed RIL report incorrect error code after DHCP failed.
- Add QMI notification filter to GobiNet driver.

2.9. Version 6.0.4.0

- Fixed SierraFwDI7xxx -f parameter does not work with CWE image
- Fixed connected cell information does not update issue
- Fixed data connection may loss after long host idle issue
- Fixed the issue of modem may wake up host too often

2.10. Version 6.0.3.0

- Fixed EVDO signal strength strange default value.
- Fixed EM8805 module cannot recognized.
- Fixed SELinux permission issue of DHCP.
- Fixed SierraFwDI7xxx display incorrect image information of CWE image.
- Fixed data connection loss after host resume.
- Add support to MEP unlock.

2.11. Version 6.0.1.0

- Support Android 6.0.1 Marshmallow
- Fixed EVDO signal strength not report correctly on Verizon network



3. Known Limitations

Known issues in the Android 6.0 RIL.

- HL7618 NCM data call may cause modem crash
- HL7648/HL7688 MO/MT SMS fail on AT&T network

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