



Customer Release Note

AirPrime HL7518 Firmware 2.19



SIERRA
WIRELESS®

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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.

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

Document History

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Contents

1. INTRODUCTION	7
1.1. Document Scope	7
1.2. Document Audience	7
1.3. New Features/Enhancements	7
2. ABBREVIATIONS AND DEFINITIONS	8
3. RELATED DOCUMENTATION	9
4. COMPATIBILITY	10
5. SOFTWARE RELEASE DESCRIPTION	11
5.1. Release Identification	11
5.2. Software Tools Versions.....	11
5.3. Released Files and Download Processes	11
6. SOFTWARE CHANGES DESCRIPTION	12
6.1. Validated Corrections/Improvements	12
6.2. Interface Changes	13
7. RESTRICTIONS AND ADDITIONAL INFORMATION	14
8. TROUBLESHOOTING	15
9. CERTIFICATION DESCRIPTION.....	16



List of Tables

Table 1.	New Features/Enhancements	7
Table 2.	Abbreviations and Definitions	8
Table 3.	Related Documentation	9
Table 4.	Firmware Release Information	11
Table 5.	Software Tools Versions	11
Table 6.	Released Files	11
Table 7.	Validated Corrections and/or Improvements	12
Table 8.	Restrictions and Additional Information	14



1. Introduction

1.1. Document Scope

This document is the Firmware 2.19 customer release note of the AirPrime HL7518. Firmware 2.19 is a maintenance release based on Firmware 2.13.

1.2. Document Audience

This release note may be distributed to all direct and indirect customers and will be posted on [the Source](#).

1.3. New Features/Enhancements

Table 1. New Features/Enhancements

Feature	Description
Reliability enhancements and Memory protection	Firmware from 2.19, now embeds a backup and recovery mechanism of NV parameters and specific algorithm to allow bit corrections from memory corruption.
Local download	Firmware from 2.19 allows performing local firmware upgrade through Xmodem protocol.

2. Abbreviations and Definitions

Table 2. Abbreviations and Definitions

Abbreviation/Acronym	Definitions
ADC	Analog Digital Converter
AMS	AirVantage Management Services
FOTA	Firmware Over The Air
GPIO	General Purpose Input Output
PCM	Pulse Code Modulation
PS	Packet Switched
PWM	Pulse Width Modulation
SIM	Subscriber Identity Module
UART	Universal Asynchronous Receiver Transmitter
USB	Universal Serial Bus

3. Related Documentation

Table 3. Related Documentation

Ref. #	Doc. #	Rev.	Document Title
[R-1]	4115834	3.0	AirPrime HL7518 Product Technical Specification
[R-2]	4116303	6.0	AirPrime HL7518 and HL7548 AT Commands Interface Guide
[R-3]	4114877	5.0	AirPrime HL Series Development Kit User Guide



4. Compatibility

Firmware 2.19 is compatible with the AirPrime HL7518.

Note: *The firmware has to be downloaded twice when downgrading to an older firmware due to differences in the partition table.*

Caution: *Do not downgrade to firmware versions older than Firmware 2.2 as this will damage the module's configuration.*



5. Software Release Description

5.1. Release Identification

Table 4. Firmware Release Information

Description	Revision
Identification (ATI3)	RHL75xx.2.19.142600.201509211131.x7160_1
Date of generation	2015/09/21 11:31
Binary size	20003095
MD5 Checksum	C62C20E3A454206C1D2E250A090602C5
IMEI SV	05
Stack version	M2M_7160_VRZ_01.1426
Flash/RAM size	1Gb/512Mb

5.2. Software Tools Versions

Table 5. Software Tools Versions

S/W Tools Name	Version
FlashTool	v.4.140.3.66 DLL: v.4.140,0.0
Command Line FlashTool (DownloadTool.exe, dll)	v.1.37 DLL: v.4.140,0.0
USB Host Driver version	4.19

5.3. Released Files and Download Processes

Table 6. Released Files

Download Option	Files
All in one download executable	RHL75xx.2.19.142600.201509211131.x7160_1_signed.exe
All in one FLS file	RHL75xx.2.19.142600.201509211131.x7160_1_signed.flx



6. Software Changes Description

6.1. Validated Corrections/Improvements

Issues are sorted in alphabetical order of the Impacted Domain.

Table 7. Validated Corrections and/or Improvements

ID	Description	Impacted Domain	Impacted Sub-Domain	Fixed in
79068	On every registration the AirPrime initiates an AMS session that causes unwanted network traffic. After this change, AMS session only happens 3 times counting from boot up. Please refer to +HBHV=1 for more information.	AMS	AMS	2.19
82008	While performing AMS operations, AirPrime may output unwanted traces because of non-aligned memory pointers.	AMS	MONITORING	2.19
82490	AT+KCELL may return unwanted carriage-return-line-feed characters in its response.	AT	OTHER	2.19
82842	AT+KCELL=0 may return terminal OK response without any intermediate responses.	AT	OTHER	2.19
83247	The AirPrime would send an extra "NO CARRIER" when a PS call is terminated.	DATA	OTHER	2.19
83276	Dial up networking call could not be disconnected by ATH.	DATA	OTHER	2.19
79710	Occasionally, when power drop happens within 5 seconds after firmware is being upgraded using firmware files (.exe or .fls), the AirPrime may fail to boot up again and fail to start any further firmware download.	DWL	OTHER	2.19
82344	During the firmware download is in progress, an unexpected shutdown on the AirPrime may suspend the download and the download could not be resumed.	DWL	OTHER	2.19
78563	The AirPrime may reset by sending AT+WMANTSEL=0.	HWL	MODEM	2.19
83505	There may be high network PRB utilization at the operator when multiple AirPrimes are performing firmware upgrade concurrently.	LTE	OTHER	2.19
79670	After accelerated life testing, the AirPrime may fail to boot up again.	PROGRAM RELIABILITY	OTHER	2.19

6.2. Interface Changes

Command	Comment
+WDSO	This new command allows the download of an update package (in x-modem format) to the device using a local port
+NVBU	This new command allows automatic/manual backup/restore of NV.
+WPPP	The default type of authentication is changed to none.



7. Restrictions and Additional Information

The following table lists out firmware restrictions and other additional information.

Table 8. Restrictions and Additional Information

ID	Description	Impacted Domain	Impacted Sub-Domain
84556	Due to lack of bootcore upgrade support and change in partition table, AMS FOTA upgrade or upgrade using +WSDS from previous firmware (2.13) to current firmware (2.19) and AMS FOTA upgrade from current firmware to future firmware (2.20) is strongly not recommended. AMS FOTA upgrades & upgrade using +WSDS can be performed starting with FW 2.20.	AMS	AMS
75681	Unexpected CGCLASS switching takes place after GPRS has been attached.	AT	OTHER
76694	Extra carriage-return-line-feed characters have been sent in AT+CMGR response.	AT	OTHER
78531	The result by the test command AT+WMRXPOWER is slightly deviated when the input RF power is less than -80dBm.	HWL	RF
85511	The AirPrime cannot achieve high UL throughputs in MIMO 4x2 configuration in LTE Band 4 at 20MHz.	LTE	OTHER
85716	In some rare case, the AirPrime does not deactivate the PDN correctly, so that next time when the module activate the PDN, it will fail if the network operator does not allow multiple PDN connections for a given APN.	LTE	OTHER



8. Troubleshooting

Please contact Sierra Wireless customer service for support and debugging information.

>> | 9. Certification Description

The following table summarizes the certifications passed for this release.

Module	Verizon
AirPrime HL7518	Yes



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