



## Customer Release Note

### AirPrime HL6528x Firmware 3.00



**SIERRA**  
WIRELESS®

4116814  
1.0  
January 26, 2015

## 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

© 2015 Sierra Wireless. All rights reserved.

## Trademarks

Sierra Wireless®, AirPrime®, AirLink®, AirVantage®, WISMO® 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	January 26, 2015	Creation



# Contents

<b>1. INTRODUCTION .....</b>	<b>7</b>
1.1. Document Scope .....	7
1.2. Document Audience .....	7
1.3. New Features/Enhancements .....	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>11</b>
5.1. Release Identification .....	11
5.2. Software Tools Version .....	11
<b>6. SOFTWARE CHANGES DESCRIPTION .....</b>	<b>12</b>
6.1. Validated Corrections/Improvements .....	12
6.2. Interface Changes .....	13
<b>7. CERTIFICATION DESCRIPTION .....</b>	<b>14</b>
7.1. GCF-CC & PTCRB .....	14
<b>8. RESTRICTIONS AND ADDITIONAL INFORMATION .....</b>	<b>15</b>



# List of Tables

Table 1.	New Features/Enhancements .....	7
Table 2.	Abbreviations and Definitions .....	8
Table 3.	Hardware Compatibility .....	10
Table 4.	Firmware Release Information .....	11
Table 5.	Software Tools Version .....	11

# ➤➤ | 1. Introduction

## 1.1. Document Scope

The scope of this document is the Firmware 3.00 release description for the AirPrime HL6528x embedded module.

## 1.2. Document Audience

This customer 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
DSSS	Dual SIM Single Standby
HOT Plug	HOT SIM insertion/extraction on interface 1
SIM Detection	SIM cards insertion/extraction notification on both interfaces
AVMS Fallback	Firmware Over The Air (FOTA) fallback. AirVantage ready.



## 2. Abbreviations and Definitions

Table 2. Abbreviations and Definitions

Abbreviation/Acronym	Definitions
AEC	Acoustic Echo Cancellation
AT	Attention
AVMS	Air Vantage Management Services
DCE	Data Circuit Equipment
DTE	Data Terminal Equipment
DTMF	Dual-tone multi-frequency signaling
DTR	Data Terminal Ready
FTP	File Transfer Protocol
GPIO	Global Purpose Input Output
GPRS	Global Packet Radio Service
IMEI	International Mobile Equipment Identity
NR	Noise Reduction
LCP	Link Control Protocol
ME	Mobile Equipment
MS	Mobile Station
PDP	Packet Data Protocol
PLMN	Public Land Mobile Networks
PPP	Point-to-Point Protocol
SIM	Subscriber Information Module
STK	SIM Application Toolkit
TCP	Transmission Control Protocol
UART	Universal Asynchronous Receiver Transmitter
UDP	User Datagram Protocol



## 3. Related Documentation

- [1] AirPrime HL6 and HL8 Series AT Commands Interface Guide  
Reference: 4114680
- [2] HiloUpgrader User Guide  
Reference: 2174015
- [3] AirPrime HL6 and HL8 Series Development Kit User Guide  
Reference: 4114877
- [4] Air Prime HL6528x Dual SIM Dual Standby Application Note  
Reference: 2174048
- [5] AirPrime HL6 and HL8 Series Dual SIM Single Standby Application Note  
Reference: 2174034

## 4. Compatibility

Table 3. Hardware Compatibility

AirPrime Compatibility List
HL6528
HL6528-G
HL6528-2.8V
HL6528-G2.8V

# 5. Software Release Description

## 5.1. Release Identification

Table 4. Firmware Release Information

	Services (ATI3)	Comments
Identification	HL6N.003.00.200F	DSDS (Dual SIM Dual Standby)
Date of generation	2014-12-19 3:52:08 PM	
Binary Size	<ul style="list-style-type: none"> <li>Total RO Size (Code + RO Data) 5172168 (5050.95kB)</li> <li>Total RW Size (RW Data + ZI Data) 2373636 (2318.00kB)</li> <li>Total ROM Size (Code + RO Data + RW Data) 5222388 (5099.99kB)</li> </ul>	
Identification	HL6N.003.00.202F	DSSS (Dual SIM Single Standby)
Date of generation	2014-12-19 3:52:08 PM	
Binary Size	<ul style="list-style-type: none"> <li>Total RO Size (Code + RO Data) 5167720 (5046.60kB)</li> <li>Total RW Size (RW Data + ZI Data) 2373580 (2317.95kB)</li> <li>Total ROM Size (Code + RO Data + RW Data) 5217940 (5095.64kB)</li> </ul>	

## 5.2. Software Tools Version

Table 5. Software Tools Version

S/W Tools Name	Version
HiloUpgrader	6.0.0.2
SpyTracerV2	3.1.0
Hilo Starter Dev Tools	1.9.5 or higher

The upgrading tool and procedure are described in document [2] HiloUpgrader User Guide.

## 6. Software Changes Description

### 6.1. Validated Corrections/Improvements

ID	Description
ANO75515	[GPIO] Default GPIO should not been GPIO3
CUS75291	[DSDS][+KCELL] AT+KCELL=0 cannot get the cell information for SIM2
ANO76134	DSSS + KSIMDET GPIO Protection
NEW75162	[DSSS] Fast Sim Switch SLOT1/SLOT2 Feature
ANO75939	uSIM card can't be detected on SLOT1
CUS75379	[HL6528][DTR] Set AT&D2, and then releasing DTR will always result in "NO CARRIER"
ANO75973	[GNSS] +GPSSLEEP? returns wrong value
ANO74856	[AVMS] bad management of ERROR 654
ANO74859	[AVMS] wrong AT+WDSS syntactic checks
ANO74716	[GNSS] IOT GPSSTART & COPS=?
ANO74721	[GNSS] at+gpspvt=1,after some minutes, the module reboot.
NEW74723	[CR] antenna detection ADC value modify
ANO74733	[GNSS] NMEA frames on UART1 & ending voice call -> NO CARRIER
ANO74761	At command +CREG= syntax
ANO74797	[SYScs80053]No RING URC for all call
ANO74827	[UICC][IT3][CERTIF] SLOT1 Test 102 230 Failed
CUS74829	[+CCLK]<AT+CCLK?> causes module freeze after a reset
NEW74833	[CR][AVMS] IMSI data sent by module is not well formatted: short operator name is missing
ANO74854	[AVMS] AT+WDSI value not taken into account after reboot
ANO75277	[AVMS] No question after a reset before answer to user agreement
ANO74886	[HL6528][+KFTPCFG] to change the max length of URL and username to 40
ANO74922	[AVMS]: Delay the download fail
ANO75408	[GNSS] AT+GPSTTFF answer : a \r\n is missing
ANO75463	[AVMS] AT+wdsa syntax test error.
CUS76402	[+CPMS]response is wrong for <AT+CPMS?>
ANO76446	KJAM returns always ERROR at activation of jamming detection
ANO75974	[GNSS] AT+GPSTTFF syntactic checks
ANO76078	[AVMS] after AT+WDSC=3,0 the module is frozen
ANO76102	[AVMS] Hard reset after downloading FW, the installation isn't launching.
ANO76624	KSIMDET - 0 SIM - when inserting SIM in SIM1 -> wrong URC and module not camped
ANO75164	[AVMS]AT+WDSF? syntax error.
ANO75806	[DSDS] after upgrade with some SIM cards, SIM not detected
ANO75843	SIM1&SIM2 receive the same SMS but display different
ANO75845	[AVMS] bad error code on WDSF=0 and WDSF=3
ANO75868	Data call URC is wrong for SIM2
ANO75879	[GNSS] AT+GPSSTART can be executed in RUNNING state
ANO76157	Random reboot when outputting NMEA frames on I2C

ID	Description
ANO76179	[DSSS] after upgrade modules doesn't detect any SIM card
ANO76209	SIM Detection: module does not register network
ANO76215	[DSSS] unexpected URC +KSREP: 1,0 after AT+KSIMSEL=0
ANO76232	[DSSS] after some actions, can't register on network anymore
DEV75111	[AUTO][GNSS] Firmware shall support new NumType for automotive product
ANO75131	[AVMS]: +WDSF upgrade the software
ANO75152	[AVMS] When a voice is active, install a new version, the module reboot.
ANO75315	[AVMS] User refusal to download a package not taken into account after a reboot
ANO75321	[AVMS] change user agreement during a AVMS connection freezes the module
ANO75337	[AVMS] refuse a download then allow it then connection to AVMS server freezes the module
ANO75340	[DSDS][AVMS] AT+KSS then AT+WDSC only the first URC has DS suffix
DEV75364	[AVMS] Development of session abort
ANO75365	[AVMS] No resume after an event during the download firmware
ANO75652	[ICC][IT3][CERTIF] Slot1 test 51 010 27.17.1.5.7 and 27.17.1.5.8 failed
ANO75671	at*psgcnt=3 syntax is error.
ANO76264	[+KTEMPMON]: When action mode is 2,write command is not available with the same GPIO
ANO76295	IMEI changed to IMEI2 when just insert a SIM in SLOT2
ANO76317	[AVMS]: an upgrade was delayed, a URC "+WDSI: 3" should display
ANO76340	DSDS, when with no SIM card, creg, cgreg are not displayed.
ANO76852	[DSSS] after some actions, can't register on network anymore
ANO75518	[PSFLASH-HFDA] Optimization of Memory Persistency to Flash
ANO75520	[AVMS] polling mode doesn't work after a switch off
ANO75561	AT+KSYNC returns MEMORY FAILURE in AT+CFUN=4
ANO75572	[AVMS] Delay install is failed.
ANO75928	[AVMS],after AT+WDSC=0,1, the module is frozen.
ANO75008	[AVMS] Connection when a wrong APN is used failed on timeout
ANO75051	[AVMS]:Device Services Fallback not completely
ANO75063	[AVMS] When set AT+WDS=5, the install will not be executed.

## 6.2. Interface Changes

For changes to AT commands, refer to document [1] AirPrime HL6 and HL8 Series AT Commands Interface Guide.

## 7. Certification Description

### 7.1. GCF-CC & PTCRB

The following table summarizes the certifications inherited from previous release.

<b>Module</b>	<b>GCF-CC (Lab Conformance only)</b>	<b>PTCRB</b>
AirPrime HL6528x	Release 3.52.1	NAPRD.03 v5.18



## 8. Restrictions and Additional Information

This section lists out important known issues.

Issue ID	Description (What/When)	Impacted Domain	Impacted Sub-Domain
76873 / 76894 / 76841 / 76893 / 76916 / 76890 / 76870	Jamming detection feature (+KJAM)	NETWORK	CONTROL



**SIERRA**  
WIRELESS®