



Customer Release Note

AirPrime HL6528x Firmware 7.01



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

Document History

Version	Date	Updates
1.0	April 15, 2016	Creation
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1. Introduction

1.1. Document Scope

The scope of this document is the Firmware 7.01 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 corporate web site under the Support/Private area.

1.3. New Features/Enhancements

Table 1. New Features/Enhancements

Feature	Description
Possibility to change the parity of serial link	The parity of the serial link communication can be set (+KUART)
SMS notification on serial link during GPRS	During GPRS transfer, the NULL character is sent on serial link when an SMS is received (+CNMI)
Ring Indicator pulse duration control	The pulse duration can now be changed (+KRIC)
+KFSFILE read file operation: adding of an offset parameter	Possibility to read part of a file by indicating an offset (+KFSFILE)
GPS fix reliability	New fields in \$PSWI frame allow to get indicative fix reliability (+GPSNMEA)



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 Rev13.1
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
HL6528-2.8V
HL6528-G
HL6528-G2.8V



5. Software Release Description

5.1. Release Identification

Table 4. Firmware Release Information

	Services (AT13)	Comments
Identification	HL6N_007_01_20CF	DSDS (Dual Sim Dual Standby)
Date of generation	2016/05/26	
Binary Size	Total RO Size (Code + RO Data) 5242520 (5119.65kB) Total RW Size (RW Data + ZI Data) 2385864 (2329.95kB) Total ROM Size (Code + RO Data + RW Data) 5293024 (5168.97kB)	

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
85789 86879 77404	[AVMS] HL6 delta update procedure with power outage ¹
87513	[CLVL] In some cases CLVL=0 does not mute the voice
87027	[VIC1 specific] AT+CGATT returns a wrong value
82811	EHPLMN file from the SIM is not managed by the firmware
84915	USIM EF file PSLOCI not updated
86590	[KTCPCNX]: Cannot start TCP connection in the case "TCP session on non default SIM suspended, start TCP from default SIM"
87003	incoherence between IMSI read on the module (+CIMI) and IMSI read on the usim (+CRSM) when network registration state is in limited service
87043	STK is activated and module is in Limited service: if proactive SIM (MBQT) send a refresh proactive command , the terminal answer that currently unable to process CMD
87116	[WESHUTDOWN]Response "OK" when activate emergency shutdown with value out of range for <gpio_index>
87259	[HL6528][GPSPTFC]Wrong response received an incorrect default value of the +GPSPTFC command
87317	AT+GPSNMEA displays no frame and triggers a reboot
88971	can't read records from MBQT SIM card
87996	HL6528 PPP NACK is not taken into account on ACCM
89549	HL6 KTCPSTART command is not supported in Server mode
89877	[KRIC] Response "OK" received when set pulse duration with value out of range
90273	[KTCPSTART] impossible to use server mode if +KCNXCFG parameter <cnx_cnf> is different from 0
90153	[KFSFILE] when use offset greater than file size, module reboot
90280	+CCID should return ERROR if no SIM is inserted
90862	SMS notification on Serial Link during GPRS connection not working after SMS reading
90149	[AVMS][WDSG]wrong response of at+wdsg after refuse download
92034	[GNSS] Sometimes NMEA frames are empty after cold start

¹ The new implementation slightly increases the flashing time for FOTA. Please see recommended application timeouts in section 17 in *AirPrime HL6 and HL8 Series AT Commands Interface Guide Rev13.2*

6.2. Interface Changes

For changes to AT commands, refer to document [1] AirPrime HL6 and HL8 Series AT Commands Interface Guide Rev13.2



7. Certification Description

7.1. GCF-CC & PTCRB

The following table summarizes the certifications inherited from previous release.

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



8. Restrictions and Additional Information

This section lists out important known issues or limitations.

Issue ID	Description (What/When)	Impacted Domain	Impacted Sub-Domain
84901	GNSS: In cold start, a constant 400-500 meters error position is observed during several minutes before converging to real position ²	GNSS	GNSS
79547	[HTTPS] if server request client certificate, module answers with ALERT NO CERTIFICAT (then session is closed)	PROTOCOL	HTTPS
76890/76873	Jamming detection feature (+KJAM)	NETWORK	CONTROL
81578/81721	+CPAS URC notifications	ME	STATUS
86609	PPP connection disconnected and can not download file or a picture after Inactive and Active DTR	PROTOCOL	PPP
86590	Can not start TCP connection in the case "TCP session on non default SIM suspended, start TCP from default SIM"	DSDS	TCP
90280	If KSIMDET feature is activated, +CCID does not answer at AT interface is frozen	SIM	SIM
90284	Reading EF_LOCIGPRS on a USIM should return ERROR : FILE NOT FOUND	SIM	SIM
90235	SIM not more properly detected after inserting and taking it out multiple times	SIM	SIM
91079	AT+CNUM command: with some SIM, last digit of MSISN is missing	SIM	SIM
90268	IMSI changes after each software reset if used with only one SIM and KSIMSLOT=1	SIM	Connectivity
90090	At the power ON , EFLOCI file not updated with UPDATE BINARY when staying on the same network	SIM	Connectivity
91098	After 2 soft resets, module stays in +CREG: 3 even 30 min after	SIM	Connectivity
91523	module can't register anymore after loss/retrieval of network coverage	SIM	Connectivity
90391	Not able to perform any IP/TCP frame exchange after 24 hours	PROTOCOL	PPP
89365	Echo cancellation is not working in PCM	AUDIO	PCM
92321	Rarely, instability of the module when activating GPS AT+GPSSTART=2 and NMEA traces on I2C	GNSS	GNSS
92035	Sometimes, a click is heard on remote side when at commands is sent	AUDIO	AT
91284	With some SIM card, AT+COPS? returns half of the network provider name instead of full name	SIM	AT

² This issue can happen when using both GPS and GLONASS constellations. Using GPS only might improve situations when this issue is observed. More information can be found in the GNSS Technical Note.

Issue ID	Description (What/When)	Impacted Domain	Impacted Sub-Domain
92164	When updating FPLMN with +CRSM in SIM2, the device reboots	SIM	SIM2
90235	When removed and inserted multiple times (about 10), SIM is no more properly detected	SIM	SIM

This version is not compatible with the Sierra Wireless advanced SIM Connectivity feature.