



Customer Release Note

AirPrime HL6528x Firmware 5.00



SIERRA
WIRELESS®

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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	October 5, 2015	Creation
2.0	November 3, 2015	<ul style="list-style-type: none">- §5.1 DSSS <-> DSDS- Syntax corrections
3.0	November 16, 2015	<ul style="list-style-type: none">- §4 GNSS compatibility removed



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1. Introduction

1.1. Document Scope

The scope of this document is the Firmware 5.00 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 corporate web site under the Support/Private area.

1.3. New Features/Enhancements

Table 1. New Features/Enhancements

Feature	Description
SIM Lock	DSDS SIMLOCK Support
DTMF Decoding	DTMF decoding Support
Codec selection	Codec selection through AT commands
PCM On/Off	PCM Signal management
AVMS Monitoring	AirVantage Ready Monitoring feature
NTP	Network Time Protocol feature
SIM BIP Support	SIM BIP (B earer I ndependent P rotocol)
Timing Advance	Timing advance localization
Recording Audio	Recording an Audio from microphone to flash



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
HL6528-2.8V



5. Software Release Description

5.1. Release Identification

Table 4. Firmware Release Information

	Services (AT13)	Comments
Identification	HL6N_005_00_200B	DSDS (Dual Sim Dual Standby)
Date of generation	2015/10/5	
Binary Size	Total RO Size (Code + RO Data) 5230900 (5108.30kB) Total RW Size (RW Data + ZI Data) 2383264 (2327.41kB) Total ROM Size (Code + RO Data + RW Data) 5281284 (5157.50kB)	

5.2. Variants lookup table

Firmware	Parameters identifier	Description
HL6N_005_00_200B_p7264A.pac	FDP-HL6-7264-A	HL6528 2.8V
HL6N_005_00_200B_p7265B.pac	FDP-HL6-7265-B	HL6528 1.8V

5.3. 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
78847	[VIC0001HL] DCD signal need to follow EWM100 implementation
76527	Inaccurate errors returned in GNSS start sequence
74803	[GNSS][CR] New ROM update v5.2.6 for Sirfstar Ve
83795	NO CARRIER returned by ATH for a CSD call
83639	No AT Commands response for long period of time on some CMUX channels.
82852	[HL6528] AT+COPS? returns half of the network provider name instead of full name.
82640	HL6528 with FW HL6N,003.00.200F.7176A cannot communicate with Taiwan SIM
82475	NMEA rate not respecting AT+GPSNMEA when NO FIX
82455	[MUX]When set MUX maxframe as 98 bytes, module will crash(BD: C0010902) when receive 1024 bytes of data
81722	at command frozen when sending +CPAS command in loop during a call
79800	[HL6][SIM] Some SIM cards from Movistar are not recognized
79343	[STK][SYSs81219] Impossible to display the ROOT menu after proactive SIM session is closed
78996	Genius – CSD call
78963	[HL6][SMS] Strange behavior for the incoming message of class 0
78863	[SYSs81244][HL6][SMS] unexpected change in the message when 8-bit encoding is used
78804	[KFSFILE]Should report <D> instead of <F> for directory
78415	AT+CEER doesn't give the PDP reject cause after an attempt to open a PPP session between uC and HL6
78402	[STK][SYSs81219] Impossible to display the ROOT menu after REJECTED commands
78326	[SYSs81236][VIC0001HL] AT+CGATT=1 returns ERROR after CSD call terminated
78183	[+KFTPSND]Module cannot connect with some FTP server.
77493	[GNSS]The altitude in PVT frame is always zero(+0000m). Is it normal?
77395	[GPSAID] GPSAID always failed with ERROR -18 after a first fix
77358	[DSDS]Sometimes, after Remove/Insert SIM1, <AT+KSDS=?> does not consistent with SIM status any more
77144	[GNSS]When no SIM inserted, ATO cannot return to data mode for NMEA output from UART
76761	[TCP] Not possible to use 2 different networks for TCP connections
76599	[SYSs81165] PPP attempt fails at the first try then works
76465	[+WMAUDIOLOOP][CRM 490690-4039460632][f/w, Doc] not consistent behavior of AT manual and firmware, and poor information in AT manual
76440	[AT+VIP] Hands-free configuration causes single-ended signal on SPKR
74847	[DOC or CODE] AT+CPOF returns ERROR
82231	[+CFUN]+CFUN=4,0 not working well
82163	[AVMS] AT+WDSM=0,1 doesn't work
82156	[BIP] 27.22.4.27.2 OPEN CHANNEL SEQ 2.5 TC fails
81873	AT+KNTP quite often triggers a module reboot

ID	Description
81822	AT+KNTP freezes the module if port is not listened by NTP server
81760	[STK] GET ITEM LIST has strange behaviour
81758	[STK] can't select menus with SFR SIM card
81719	[STK] POLL INTERVAL - test 00.03 fails
81685	[DSDS] AT+CGSN doesn't work when change default sim
81683	[STK] REGRESSION - all SETUP MENU tests fail
81586	[DSDS] not KSUP:1 notification after AT+CFUN=1,1
80709	[DSDS][DSIMEI] Move DIGIT mode AT_C to ASCII
80674	[AVMS] 13 reboots occurred during an AVMS & FTP endurance
79695	[AVMS] module crashed during an upgrade
79659	[LMSqc95525][DSSS] Memory Leak Crash when swapping from SIM to the using KSIMSEL
79658	[AVMS] local DL endurance with GNSS activated - several reboots
79568	[GNSS] AT+GPS=2,4 returns error
79384	[GNSS] GPSPTFC seems not awake GPS chip as expected
79312	[GNSS] AT+GPSPTFC uart connection can't be changed
79257	\$PSWI,SA frame is missing
79000	[STK] DISPLAY TEXT - 02.01 & 07.01 fail (Bugzilla 3935)
78943	[SYScs81245] Symbols not displayed correctly in SMS
78902	[STK] module frozen when executing AT*PSSTK="MENU SELECTION"
78701	[SYScs81247]NO CREG: 0 urc notif after AT+CFUN=4 or AT+CFUN=4,0
78700	[DSSS] Sometimes SIM not detected after a plug/ unplug SIM , switch between holders and reboot
78699	[SYScs81246][DSSS] remove SIM during a voice call , NO CREG: 0 urc notif
78686	[GNSS] sometimes GPSAID=2,1 doesn't trigger any URC
78466	[AVMS] Fallback fails if the changes between the 2 FW are only parameters
78369	[GNSS] following sequence triggers a module reboot
78265	[STK] module frozen when executing AT*PSSTK="MENU SELECTION"
77741	FTPSND doesn't go back in command mode, or doesn't display OK, or
77544	[SIMLOCK] locked software inconsistent KSREP report
77357	[DSDS]After a voice call with SIM2 (Remove/insert SIM1) Sometimes AT+KSDS=? will freeze module
77297	[AUDIOREC] At+KAUDREC=x syntax error
77288	[eCall] when PSAP requests MSD retransmission, module displays an error
77238	KSLEEP=1 any character wakes up module (happens on module DB01)
77233	after some tests 1 module doesn't enter sleep mode anymore
77218	[DSSS] swap Sim after a voice call, module freezes
77096	[AVMS][DSDS] change SIM after certifcat check freezes the module
77078	[AVMS][DSDS] wake up SMS on non default SIM (SIM1) triggers connexion, but DS suffix is missing
77077	[AVMS][DSDS] wake up SMS on non default SIM (SIM2) doesn't trigger connexion
77022	Sometimes HL6528G produces GNSS events ending with "DS"
77000	[GNSS] Memory crashes during GNSS endurance tests
76999	[DSSS] module freezes after AT+KCELLSCAN=2
76948	[DSSS] modules freezes after AT+KNETSCAN=2

ID	Description
76944	[SYScs81182] Orange network: failure when opening a socket every 7 minutes
76942	AT+KSIMDET no URC +SIM 2,1 when inserting SIM only in SIM2 slot
76927	GPIO3 can be used by KSIMDET and KJAM at same time
76893	[KJAM] GPIO doesn't set to low if jammed
76873	[KJAM & KNETSCAN] KJAM displays an intermediate result then nothing
76870	KJAM, DSDS & CFUN no more network on default SIM
76841	[KJAM] AT+KJAM=1,0,1 gives back only result on one band only
76808	ATD*99***1# fail when only insert a SIM card in SLOT2.
76719	[GNSS] +GPS ERROR: 12345 returns by GPSAID=2,x in GPS_SLEEP and GPS_INITIALIZED state
76687	AT+KRIC RI becomes off during the incoming call notification
76460	[DSSS] when swapping from SIM to the using KSIMSEL, after 10 or 15 times, SIM are not detected anymore
76237	[DSSS] change SIM during voice call freezes the module
76138	[GNSS] Multiple GPGSV empty frames and no GLGSV NMEA frames displayed before satellite fix is performed
76105	[AVMS] lost connection by AT command (WDSS=1,0) doesn't work during FW downloading
75562	[AVMS] Device indicated WDSC: 11 (Not enough space) take place a new request for user agreement for download
74845	[CR][HL6] Change the default GPIO used as input by the antenna detection to 5
74795	[DSDS][SYScs79779] SIM removal is not detected during voice call
74738	[GNSS] AT+GSPPVT syntaxes checks
74737	[GNSS] AT+GPSNMEA syntaxes checks
74734	[GNSS] [DOC or CODE] +GPSCONF syntaxe inconsistencies

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.

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.

Issue ID	Description (What/When)	Impacted Domain	Impacted Sub-Domain
82154/82156/82157/84029	[BIP] 27.22.4.27.2 OPEN CHANNEL SEQ 2.3/2.5/2.7b TC fails	SIM/USIM	STK
83176	PPP connection fails initially.	DATA	PPP
79547	[HTTPS] if server request client certificate, module answers with ALERT NO CERTIFICAT (then session is closed)	PROTOCOL	HTTPS
76890/76916/76873	Jamming detection feature (+KJAM)	NETWORK	CONTROL
83602	DSDS: TCP client in direct flow not receiving data when on SIM2	SIM/USIM	DATA
81578/81721	+CPAS URC notifications	ME	STATUS
82851	[HL6528] AT+KHTTPGET returns "string too long" error	PROTOCOL	HTTP
85311	Not able to get a GNSS fix when using the latest 5.0 build and AT+GPSINIT=41 (only in the 2V8 version)	GNSS	GNSS