Customer Release Notes for Firmware L23c

AirPrime WS Series

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.*

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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	May 2, 2013	Creation

Contents

1. Introduction

1.1. Scope of this Document

The scope of this document is the Firmware **L23c** release description for the AirPrime WS Series of Intelligent Embedded Modules including WISMO218 and WISMO228.

Firmware **L23c** is a maintenance firmware, based on the Firmware **L23a** of AirPrime WS Series.

1.2. Audience of this Document

This 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. Release Feature List

1.3.1. Main Features of AirPrime WISMO218

Features List
GSM/GPRS class 10 capable wireless standard modem
900/1800 MHz bands
AT commands interface on UART port
Debug interface on SPI bus
User configurable GPIOs
Audio features
TCP/IP AT commands

1.3.2. Main Features of AirPrime WISMO228

Features List
GSM/GPRS class 10 capable wireless standard modem
850/900/1800/1900 MHz quad-band
AT commands interface on UART port
Debug interface on SPI bus
User configurable GPIOs
Audio features
TCP/IP AT commands

1.4.   New Features/Enhancements

Feature	Description
Non-blocking socket	While executing commands to manage TCP/UDP connection, AT commands remain available.

2. Related Documents

[1]   AirPrime WS Series Firmware L23c AT Commands Interface Guide
       Reference: 4112935

[2]   AirPrime WISMO218 Product Technical Specification and Customer Design Guidelines
       Reference: 4111957

[3]   AirPrime WISMO228 Product Technical Specification and Customer Design Guidelines
       Reference: 4111958

[4]   ADWL-Light Downloader User Guide
       Reference: WA_DEV_WISMO_UGD_005

3. Abbreviations and Definitions

Abbreviation/Acronym	Description
ACCM	Async-Control-Character-Map
AT	Attention
DCE	Data Circuit Equipment
DTE	Data Terminal Equipment
DTMF	Dual-tone multi-frequency signaling
DTR	Data Terminal Ready
GPIO	Global Purpose Input Output
GPRS	Global Packet Radio Service
IMEI	International Mobile Equipment Identity
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

4. Hardware Compatibility

4.1. Sierra Wireless Standard Modem Compatibility

Firmware Version	Sierra Wireless Standard Modem Compatibility List
L23c00gg	AirPrime WISMO218
L23c00gg	AirPrime WISMO228

5. Software Release Description

5.1. Release Identification

Software Specification	AirPrime WISMO228	AirPrime WISMO218
Software Identification (ATI3 response)	L23c00gg.WISMO228	L23c00gg.WISMO218
Date of generation	2013-04-18	2013-04-18
Binary Size (bytes)	2664696 bytes	2664696 bytes
Checksum	0xE25A120D	0xB361A6FC
IMEI SV	13	12
Flash/RAM type	32/16 Mbits	32/16 Mbits

5.2. Released Files and Download Processes

As this Firmware includes the Security System, which locks the embedded software to the hardware of the module, the download must be done by Sierra Wireless only.

For any reason, should Firmware L23c be downloaded on the WISMO module, the download procedure is shown in document [4] ADWL-Light Downloader User Guide.

Download Option	Files	
Download through Flash loader	AirPrime WISMO218	WISMO218 L23c00gg 180413.cla
	AirPrime WISMO228	WISMO228 L23c00gg 180413.cla

5.3. Software Tools Version

This section presents the last tools version to be used with AirPrime WS Series of Embedded module.

Software Tools Name	Version	Resource file
Adwl-Light Downloader	5.3.3.5	flash_nor_16bits_hwasic_default_490x_V2.hex
SpyTracerV2	2.7.2	WISMO218 L23c00gg 180413.def WISMO218 L23c00gg 180413.str WISMO228 L23c00gg 180413.def WISMO228 L23c00gg 180413.str

6. Software Description

6.1. Validated Corrections / Improvements

This section presents all corrections or improvements integrated in Firmware L23c.

Issues are sorted by alphabetical order of Impacted Domain.

ID	Description (What/When)	Impacted Domain	Impacted Sub-Domain
62022	The AirPrime may not wake up on the alarm time after AT+CPOF is entered.	AT	OTHER
64656	+WIPPING does not accept hostnames longer than 15 characters.	AT	OTHER
64659	If the AirPrime connects to an unreachable host over a CMUX channel, "CME ERROR: 842" may not be received and the channel may remain blocked.	AT	OTHER
65513	If the PLMN list of the inserted SIM is full, the AirPrime cannot update the PLMN by AT+CPOL command.	AT	OTHER
65716	The AirPrime has wrong +CGREG indicator when it is powered up.	AT	OTHER
66989	Without SIM insertion, the AirPrime could not read ADC value by AT*PSADC.	AT	OTHER
64663	The AirPrime cannot handle Class0 SMS.	AT	SMS
64664	The AirPrime may reset sometimes if SMS is accessed by AT+CMGD, while a GPRS data session is active.	AT	SMS
64665	SMS may be sent twice if Ctrl-Z is issued twice through AT+CGMS	AT	SMS
64666	AT+CMGL does not list short messages inside READ and UNREAD boxes in ascending order of <index>	AT	SMS
66870	+CME ERROR 831 will be received if the AirPrime re-connects a closed TCP socket, when the socket still has data.	DATA	OTHER
64657	AT+CPOL? may return +CME ERROR: 24 when issued through a CMUX channel.	DEVICE	CMUX
64658	+CLCC response does not show the phone number of a Mobile Terminated data call	GSM	CC
64654	TLLI value is not randomly generated when random value is requested, so GPRS ATTACH may be unsuccessful in some case, when no valid P-TMSI is present in SIM card.	GSM	OTHER
64668	The AirPrime does not register to the network, after switching from AT+CFUN=4 to AT+CFUN=1 mode	GSM	OTHER
64655	Audio signal level in hands free mode cannot be changed by AT+VGT.	HWL	AUDIO
64661	Data loss will occur or the AirPrime may reset if the last packet received in a TCP transmission has FIN, PSH & ACK flags enabled.	OTHER	OTHER

6.2.   Other Interface Changes

Some other changes have been performed on the following commands. Please refer to document [1] AirPrime WS Series Firmware L23c AT Commands Interface Guide for more information.

6.2.1.   Updated AT Commands

This section presents the commands that have been modified in Firmware L23c. For more information, refer to the command description in document [1] AirPrime WS Series Firmware L23c AT Commands Interface Guide.

Command	Comment
+COPN	The table containing the operators name has been updated as per latest SE.13 list dated 11th March 2013.

7. Certification Description

7.1. GCF-CC & PTCRB

The following table summarizes the certifications passed for this release.

Module	GCF-CC (Lab Conformance only)	NAPRD.03
AirPrime WISMO218	V3.49.0	Not Applicable
AirPrime WISMO228	V3.49.0	5.15

8. Additional Information/Restrictions

This section presents additional information or restrictions that must be taken into account regarding Firmware L23c. Issues are sorted by alphabetical order of Impacted Domain.

ID	Description (What / When)	Impacted Domain	Sub-functionality
56399	CMUX does not work when DTR is connected to PC.	AT	OTHER
58675	If AirPrime is network-locked to a particular PLMN, when a MO call is made with a SIM not connecting that PLMN, it will return OK, instead of +CME ERROR 40.	AT	OTHER
64206	AT&S1 could not set DSR inactive.	AT	OTHER
59533	GSM 7 bit special character cannot be read and sent when bit 2 of <dcs> is not set to 1.	AT	SMS
58496	When multiple sockets are open, +WIPPEERCLOSE unsolicited response is not returned when socket is closed by peer.	DATA	OTHER
66262	+CME ERROR 831 will be received if the AirPrime re-connects a closed TCP socket, when the socket does not have any data.	DATA	OTHER
66232	PPP connection over CMUX is not functional if maximum frame size, N1 is 31 (default value as per 27.010) or higher than 760. Recommended value of N1 on AirPrime WS Series: 35-255	DEVICE	CMUX
61461	CMUX session is not restored if AirPrime with active CMUX session is reset.	DEVICE	CMUX
66233	If RTS is de-asserted, modem cannot enter sleep mode if AT commands are issued on UART	DEVICE	V24
66234	ATD*99 (IP over PPP) does not return an error when the stack has been turned off by AT+CFUN=4.	GPRS	OTHER
66185	When AirPrime is doing GPRS attachment, AT+CGATT=0 could not abort it.	GPRS	OTHER
65819	AirPrime cannot operate in CGCLASS "CC" (CS only) and "CG" (PS only) modes	GSM	OTHER
63839	On real networks, +CSQ always reports channel bit error rate of 99.	GSM	RR
59490	DTMF tone durations may be incorrect when multiple DTMFs are sent in a single command AT+VTS.	HWL	AUDIO