



# Firmware L10a02 Customer Release Note

## AirPrime WISMO228



**SIERRA**  
WIRELESS

WA\_DEV\_W228\_CRN\_015  
003  
June 14, 2010

## 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 blasting is in progress, where explosive atmospheres may be present, near medical equipment, near life support equipment, or any equipment which may be susceptible to any form of radio interference. In such areas, the Sierra Wireless modem **MUST BE POWERED OFF**. 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.

# Patents

Portions of this product may be covered by some or all of the following US patents:

5,515,013	5,629,960	5,845,216	5,847,553	5,878,234	5,890,057	5,929,815	6,169,884
6,191,741	6,199,168	6,339,405	6,359,591	6,400,336	6,516,204	6,561,851	6,643,501
6,653,979	6,697,030	6,785,830	6,845,249	6,847,830	6,876,697	6,879,585	6,886,049
6,968,171	6,985,757	7,023,878	7,053,843	7,106,569	7,145,267	7,200,512	7,295,171
7,287,162	D442,170	D459,303	D599,256	D560,911			

and other patents pending.

This product includes technology licensed from QUALCOMM® 3G



Manufactured or sold by Sierra Wireless or its licensees under one or more patents licensed from InterDigital Group.

# Copyright

© 2010 Sierra Wireless. All rights reserved.

# Trademarks

AirCard® and Watcher® are registered trademarks of Sierra Wireless. Sierra Wireless™, AirPrime™, AirLink™, AirVantage™ and the Sierra Wireless logo are trademarks of Sierra Wireless.

**WAVECOM**™, ™, ™, inSIM®, WAVECOM®, WISMO®, Wireless Microprocessor®, Wireless CPU®, Open AT® are filed or registered trademarks of Sierra Wireless S.A. in France and/or in other countries.

Windows® and Windows Vista® are registered trademarks of Microsoft Corporation.

Macintosh and Mac OS 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 the respective owners.

# Contact Information

Sales Desk:	Phone:	1-604-232-1488
	Hours:	8:00 AM to 5:00 PM Pacific Time
	E-mail:	<a href="mailto:sales@sierrawireless.com">sales@sierrawireless.com</a>
Post:	Sierra Wireless 13811 Wireless Way Richmond, BC Canada V6V 3A4	
Fax:	1-604-231-1109	
Web:	<a href="http://www.sierrawireless.com">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
001	March 10, 2010	Creation
002	June 10, 2010	Reformatted document in the rebranded SWI template and updated chapters 5, 6 and 9.
003	June 14, 2010	Introduction section update.



# Contents

<b>1. INTRODUCTION .....</b>	<b>6</b>
1.1. Scope of this Document.....	6
1.2. Audience of this Document .....	6
1.3. Release Feature List.....	6
1.3.1. Main Features Reminder.....	6
1.4. New Features / Evolutions .....	6
<b>2. RELATED DOCUMENTS .....</b>	<b>7</b>
<b>3. ABBREVIATIONS AND DEFINITIONS .....</b>	<b>8</b>
<b>4. HARDWARE COMPATIBILITY .....</b>	<b>9</b>
4.1. Sierra Wireless Standard Modem Compatibility.....	9
<b>5. SOFTWARE RELEASE DESCRIPTION .....</b>	<b>10</b>
5.1. Release Identification.....	10
5.2. Released Files and Download Processes .....	10
5.3. Software Tools Version.....	10
<b>6. SOFTWARE DESCRIPTION .....</b>	<b>11</b>
6.1. Validated Corrections / Improvements.....	11
6.2. Integrated but Not Validated Corrections / Improvements .....	12
6.3. Other Interface Changes.....	12
6.3.1. Updated AT Commands.....	12
6.3.2. Deprecated AT Commands.....	12
<b>7. FEATURE DESCRIPTION .....</b>	<b>13</b>
<b>8. CERTIFICATION DESCRIPTION .....</b>	<b>14</b>
8.1. GCF-CC & PTCRB .....	14
<b>9. ADDITIONAL INFORMATION/RESTRICTIONS .....</b>	<b>15</b>



# 1. Introduction

## 1.1. Scope of this Document

The scope of this document is the Firmware **L10a02** release description for AirPrime WISMO228. Firmware **L10a02** is a maintenance firmware, based on the Firmware **L10\_**.

## 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

For more details regarding features please refer to section 7 Feature Description.

### 1.3.1. Main Features Reminder

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
AT&T features
TCP/IP AT commands

## 1.4. New Features / Evolutions

No new features have been added in this release.



## 2. Related Documents

- [1] WISMO228 AT Commands Manual  
Reference: WA\_DEV\_W228\_UGD\_004
- [2] WISMO228 TCP/IP AT Commands Manual  
Reference: WA\_DEV\_W228\_UGD\_002
- [3] WISMO228 - Product Technical Specification and Customer Design Guideline  
Reference: WA\_DEV\_W228\_PTS\_002
- [4] Adwl-Light Downloader User Guide  
Reference: WA\_DEV\_WISMO\_UGD\_005



### 3. Abbreviations and Definitions

Abbreviation/Acronym	Description
AT	Attention
AMR	Adaptive Multi-Rate
AMR-HR	AMR Half Rate
CSD	Circuit Switched Data
DCE	Data Circuit Equipment
DTE	Data Terminal Equipment
GPIO	Global Purpose Input Output
GPRS	Global Packet Radio Service
HLR	Home Location Register
IMEI	International Mobile Equipment Identity
ME	Mobile Equipment
MS	Mobile Station
MO	Mobile Originated
MT	Mobile Terminated
PDP	Packet Data Protocol
PIN	Personal Identification Number
PLMN	Public Land Mobile Networks
SIM	Subscriber Information Module
STK	SIM Application Toolkit
TA	Terminal Adaptor
TCP	Transmission Control Protocol
TE	Terminal Equipment
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
L10a02	AirPrime WISMO228

## >> 5. Software Release Description

### 5.1. Release Identification

Software Specification	AirPrime WISMO228
Software Identification	L10a02gg.WISMO228
Date of generation	10 <sup>th</sup> March, 2010
Binary Size	2639437 bytes
Checksum	0x B0E2F297
IMEI SV	0x04
Flash type	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 L10a02 be downloaded on the WISMO module, the download procedure is shown in document [4] Adwl-Light Downloader User Guide.

### 5.3. Software Tools Version

This section gives the last tools versions to be used with AirPrime WISMO228.

Software Tools Name	Version
Adwl-Light Downloader	5.3.3.3a
SpyTracerV2	2.7.2

## 6. Software Description

### 6.1. Validated Corrections / Improvements

This section gives the list of all corrections or improvements integrated in Firmware L10a02.

Issues are sorted by alphabetical order of Impacted Domain.

ID	Description (What/When)	Impacted Domain
ANO56349	AT+COPN causes a reset	AT
CUS56153	+CUSD response returns HEX instead of ASCII data on Vodacom Network	AT
ANO57651	Dialing "*" <1-digit> or "#0" does not initiate normal MO call	AT
ANO57262	+PSUTTZ reports incorrect Daylight Saving Time	AT
ANO56222	All parameters except <host> are now optional for AT+WIPPING	AT
ANO56452	After issuing AT+CFUN=1,1 Hardware power-off does not work	DEVICE
ANO56244	IP address does not reset to 0.0.0.0 after the bearer is stopped	GPRS
ANO57048	Call waiting tone not heard on the handset	GSM
ANO56281	Short mute (100ms) seen during handover when switching between different codecs	GSM
ANO56377	Voice channel established before issuing ATA for a MT call	GSM
ANO56536	Audio quality not good after handover from AMR-HR to HR	GSM
ANO56552	<dcs> value incorrect in the response of AT+CUSD with Smartone SIM in Hong Kong when GSM character set selected using AT+CSCS	GSM
ANO56370	IOT measurement report test cases failure	GSM
ANO56451	IOT AMR enhanced measurement report test cases failure	GSM
NEW57044	Enable automatic answer feature of STK	SIM
ANO56409	Module comes out to command mode when <ETX> is received during TCP communication	TCP/IP
ANO55631 ANO55453	Unable to transfer over 100kB of ASCII data over TCP/UDP connection	TCP/IP
ANO56050	WIPPING with <repeat>, <interval> and <timeout> set to 2 causes module to hang.	TCP/IP
ANO56393	Module hangs if client socket is created to in incorrect server port	TCP/IP
ANO56397	+WIPPEERCLOSE response missing after client socket closed using AT+WIPCLOSE	TCP/IP
ANO55649	Unable to receive any data over UDP connection in unmapped mode	TCP/IP
ANO55385	Incorrect CME ERROR returned when connecting bearer with invalid APN	TCP/IP

## 6.2. Integrated but Not Validated Corrections / Improvements

ID	Description (What/When)	Impacted Domain
N/A	All integrated corrections/improvements were validated	N/A

## 6.3. Other Interface Changes

Some other changes have been performed on the following commands. Please refer to document [1] WISMO228 AT Commands Manual for more information.

### 6.3.1. Updated AT Commands

This section lists the commands that have been modified in Firmware L10a02. For more information, refer to the command description in document [1] WISMO228 AT Commands Manual.

Command	Comment
AT*PSSTKI	Updated to enable auto answer for some SIM Toolkit commands. This option is enabled by default.
AT+WIPPING	All parameters except <host> are optional

### 6.3.2. Deprecated AT Commands

This section lists the commands that are no more available in Firmware L10a02. For more information, refer to the command description in document [1] WISMO228 AT Commands Manual.

Command	Comment
None	



## 7. Feature Description

This section normally lists the features added in this release.  
No new features have been added to this particular release.

## >> 8. Certification Description

### 8.1. GCF-CC & PTCRB

The following table summarizes the certifications passed for this release.

Module	GCF-CC	NAPRD.03
AirPrime WISMO228	v3.36.0	v5.1



## 9. Additional Information/Restrictions

This section lists additional information or restrictions that must be taken into account regarding Firmware L10a02.

Id	Description (What / When)	Submit Date
ANO57041	Module does not go back to automatic PLMN search, after manual registration is rejected with GMM cause #17. Also, there is no prompt for manual selection of network.	01/22/2010 11:25
CUS56831	Unable to activate PDP context if operator requires input of username and password	12/31/2009 19:11
ANO56800	Data loss seen when large amount of data (>1MB) received over TCP connection	12/28/2009 04:53
CUS56737	After setting the IMEI value, module needs to be reset to display the correct checksum	12/17/2009 14:09
CUS57286 ANO56627	WIPDATA unsolicited response not returned when switching between AT Command mode and Data mode repeatedly. Data transfer is also not possible in this scenario.	12/02/2009 17:28
ANO56617	NO TCP data transfer possible after sending <DLE> character in continuous mode	12/01/2009 18:50
ANO56614	Transfer of UDP datagram of size larger than 5182 bytes leads to data loss	12/01/2009 12:27
ANO56599	When UDP socket is created without peer IP and port, data mode escape happens when large amount of data is received	11/29/2009 12:26
ANO56595 ANO56734 ANO56735 CUS57157	Hardware flow control is not fully functional	11/27/2009 17:28
ANO56405	Default side tone gain cannot be set	11/10/2009 11:36
CUS56204	Audio level almost totally lowered when AEC is enabled with AT+WMECHO=1,0	10/20/2009 16:56
ANO56039	Module is blocked if STK 'Setup Menu' is responded with an incorrect 'Item selection' value	10/07/2009 11:22
ANO56302 ANO57569	AT+CMGL="REC UNREAD" does not list all unread message at once	10/30/2009 16:44
ANO55874	Cannot change the mailbox number of only 1 <line id> on SIM using AT*PSMBNB. The mailbox number will impact all <line id>s	09/17/2009 06:31
ANO55825	+CGREG indication is not updated when performing GPRS attach to NMO1 (network mode of operation) cell for the 1st time GPRS attach	09/14/2009 16:55
ANO55574	AT+CPBR returns +CME ERROR: 22 when reading the empty record	08/25/2009 01:06
ANO55516	+CREG indication incorrect when module powered off and powered on in AT+CFUN=4 mode	08/21/2009 12:29
RDDT-03351 ANO56253 ANO57026 ANO55437	Module hangs when sleep mode invoked using Sierra Wireless MuxConf Tool	08/17/2009 05:05
ANO55179	Response of ATV contains additional <CR> and <LF> characters	07/24/2009 11:41
ANO54852	Sidetone cannot be heard without AT+VGR	06/30/2009 18:23



**SIERRA**  
WIRELESS