



Sierra Wireless WP76xx R16.3

Customer Release Notes



SIERRA
WIRELESS®

41114609
Rev. 2

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 product are used in a normal manner with a well-constructed network, the Sierra Wireless product 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 product, or for failure of the Sierra Wireless product to transmit or receive such data.

Safety and Hazards

Do not operate the Sierra Wireless product 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 product **MUST BE POWERED OFF**. The Sierra Wireless product can transmit signals that could interfere with this equipment.

Do not operate the Sierra Wireless product in any aircraft, whether the aircraft is on the ground or in flight. In aircraft, the Sierra Wireless product **MUST BE POWERED OFF**. When operating, the Sierra Wireless product 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 products may be used at this time.

The driver or operator of any vehicle should not operate the Sierra Wireless product 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.

Limitation of Liability

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

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 MMP Portfolio Licensing.

Copyright © 2023 Sierra Wireless. All rights reserved.

Trademarks Sierra Wireless[®], AirLink[®], AirVantage[®] and the Sierra Wireless logo are registered trademarks of Sierra Wireless.

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 information and technical support, including warranty and returns	Web: sierrawireless.com/company/contact-us/ Global toll-free number: 1-877-687-7795 6:00 am to 5:00 pm PST
Corporate and product information	Web: sierrawireless.com

Revision History

Revision number	Release date	Changes
1.0	December 2022	Creation
1.1	December 2022	Minor edits
2.0	June 2023	Updated file names for Sierra firmware

>> Contents

1: About this Document	5
1.1 Compatibility	5
1.1.1 Hardware Compatibility	5
2: SWI9X07Y Release 16.3	6
2.1 Software Release Description	6
2.1.1 Release Identification	6
2.1.2 Software Tools Version	6
2.1.3 Released Files	7
2.1.4 Available Memory Flash	8
2.1.5 Boot Time	9
2.2 Software Changes Description	9
2.3 Known Issues	10
2.4 Major Configuration Changes	10
Appendix	12
A.1 Abbreviations and Definitions	12
A.2 Related Documentation	12

>> 1: About this Document

This document describes WP76xx firmware releases. These release notes may be distributed to all direct and indirect customers.

1.1 Compatibility

1.1.1 Hardware Compatibility

Product Compatibility List
WP7605 – LTE Cat-4, LTE bands 1/3/8/11/18/19/21, WCDMA bands 1,6,19
WP7605-1 – LTE Cat-1, LTE bands 1/3/8/11/18/19/21, WCDMA bands 1,6,19
WP7607 - LTE Cat-4, LTE bands 1/3/7/8/20/28, WCDMA bands 1/8, GSM900/1800
WP7607-1 - LTE Cat-1, LTE bands 1/3/7/8/20/28, WCDMA bands 1/8, GSM900/1800
WP7608 - LTE Cat-4, LTE bands 1/3/5/8/40/41(partial) WCDMA bands 1/8, GSM900/1800
WP7608-1 - LTE Cat-1, LTE bands 1/3/5/8/40/41(partial) WCDMA bands 1/8, GSM900/1800
WP7609 - LTE Cat-4, LTE bands 1/3/5/7/8/28, WCDMA bands 1/5/8, GSM900/1800
WP7610 - LTE Cat-4, LTE bands 2/4/5/12/13/14/17/66, WCDMA bands 2/4/5
WP7611 – LTE Cat-4 LTE bands 2/4/5/12/13/14/25/26/66/71, WCDMA bands 2/4/5
WP7611-1 – LTE Cat-1, LTE bands 2/4/5/12/13/14/25/26/66/71, WCDMA bands 2/4/5

>> 2: SWI9X07Y Release 16.3

Release 16.3 is a minor release from Release 16.0.1.

Release 16.3 includes some new features and minor bug corrections. It is targeted for WP7605, WP7607, WP7607-1, WP7608, WP7608-1, WP7609, WP7611 and WP7611-1.

2.1 Software Release Description

2.1.1 Release Identification

Component	Revision
Modem Firmware	SWI9X07Y_02.37.06.05
Linux Firmware	SWI9X07Y_02.37.10.02
MCU Firmware	002.015 (embedded as a binary in the Linux image, not applicable for modules without embedded MCU)
Legato Application Framework	19.11.6_225ac9b7882467c5c7f9e0bf4cdb5523
Binary Size	61 MB (compressed one-click Generic exe)
IMEI SV	18
Qualcomm Stack Version	MDM9607.LE.2.0-00182-STD.PROD-1.264397.2
Linux Kernel Version	Linux version 3.18.140 (oe-user@oe-host) (gcc version 7.3.0 (GCC)) #1 PREEMPT Tue Aug 3 08:17:34 UTC 2021
Supported H/W	WP7605, WP7607, WP7607-1, WP7608, WP7608-1, WP7609, WP7611, WP7611-1

2.1.2 Software Tools Version

S/W Tools Name	Version
Windows Driver Package	B4956
Windows SDK	None
Skylight	None
Linux Drivers	S2.42N2.63
Linux SDK	SLQS04.00.26

Available in <https://source.sierrawireless.com>

2.1.3 Released Files

File	Carrier	Modem Firmware	Config	Linux Distribution	Base Legato System	Comment
WP7605 Approved Packages						
WP76xx_Release16.3_DOCOMO.exe	DOCOMO	SWI9X07Y_02.28.03.05	001.024_001	SWI9X07Y_02.37.10.02	19.11.6	DOCOMO Approved
WP76xx_Release16.3_SOFTBANK.exe	SoftBank	SWI9X07Y_02.28.03.05	001.028_001	SWI9X07Y_02.37.10.02	19.11.6	SoftBank Approved
WP76xx_Release16.3_KDDI.exe	KDDI	SWI9X07Y_02.28.03.05	001.026_002	SWI9X07Y_02.37.10.02	19.11.6	KDDI Approved
WP7607, WP7607-1 Approved Packages						
WP76xx_Release16.3_GENERIC.exe	GENERIC	SWI9X07Y_02.37.06.05	002.121_002	SWI9X07Y_02.37.10.02	19.11.6	GCF Approved
WP76xx_Release16.3_SIERRA.exe	SIERRA	SWI9X07Y_02.37.06.05	001.072_000	SWI9X07Y_02.37.10.02	19.11.6	R2C Approved
WP7608, WP7608-1 Approved Packages						
WP76xx_Release16.3_GENERIC.exe	GENERIC	SWI9X07Y_02.37.06.05	002.121_002	SWI9X07Y_02.37.10.02	19.11.6	GCF Approved
WP76xx_Release16.3_SIERRA.exe	SIERRA	SWI9X07Y_02.37.06.05	001.072_000	SWI9X07Y_02.37.10.02	19.11.6	R2C Approved
WP7609 Approved Packages						
WP76xx_Release16.3_TELSTRA.exe	TELSTRA	SWI9X07Y_02.28.03.05	001.058_001	SWI9X07Y_02.37.10.02	19.11.6	Telstra Approved
WP76xx_Release16.3_GENERIC.exe	GENERIC	SWI9X07Y_02.37.06.05	002.121_002	SWI9X07Y_02.37.10.02	19.11.6	GCF Approved
WP76xx_Release16.3_LGU.exe	LGU	SWI9X07Y_02.32.03.01	001.026_001	SWI9X07Y_02.37.10.02	19.11.6	LGU Approved
WP7611, WP7611-1 Approved Packages						
WP76xx_Release16.3_ATT.exe	ATT	SWI9X07Y_02.37.03.05	002.126_000	SWI9X07Y_02.37.10.02	19.11.6	AT&T Approved
WP76xx_Release16.3_GENERIC.exe	GENERIC	SWI9X07Y_02.37.06.05	002.121_002	SWI9X07Y_02.37.10.02	19.11.6	PTCRB Approved
WP76xx_Release16.3_VERIZON.exe	Verizon	SWI9X07Y_02.37.06.05	002.123_000	SWI9X07Y_02.37.10.02	19.11.6	Verizon Approved

WP76xx_Release16.3_TMO.exe	TMO	SWI9X07Y_02.35.02.00	001.017_001	SWI9X07Y_02.37.10.02	19.11.6	TMO Approved
WP76xx_Release16.3_SIERRA.exe	SIERRA	SWI9X07Y_02.37.06.05	001.072_000	SWI9X07Y_02.37.10.02	19.11.6	R2C Approved

Function	Files
Firmware components	9999999_9907152_SWI9X07Y_02.37.06.05_00_GENERIC_002.121_002.spk 9999999_9909268_SWI9X07Y_02.35.02.00_00_TMO_001.017_001.spk 9999999_9907255_SWI9X07Y_02.37.06.05_00_VERIZON_002.123_000.spk 9999999_9908843_SWI9X07Y_02.28.03.05_00_DOCOMO_001.024_001.spk 9999999_9909287_SWI9X07Y_02.32.03.01_00_LGU_001.026_001.spk 9999999_9907256_SWI9X07Y_02.37.03.05_00_ATT_002.126_000.spk 9999999_9908844_SWI9X07Y_02.28.03.05_00_SOFTBANK_001.028_001.spk 9999999_9908043_SWI9X07Y_02.28.03.05_00_TELSTRA_001.058_001.spk 9999999_9908845_SWI9X07Y_02.28.03.05_00_KDDI_001.026_002.spk 9999999_9908787_SWI9X07Y_02.37.06.05_00_SIERRA_001.072_000.spk linux-SWI9X07Y_02.37.10.02.cwe legato-19.11.6.cwe
Available in https://source.sierrawireless.com	

2.1.4 Available Memory Flash

Name	Partition	Allocation (kb)	Image Size (kb)	Usage
Linux Kernel	mtdd12 (boot)	14336	9523	66%
Linux Rootfs	mtdd13 (system)	60416	23552	38%
Legato Framework	mtdd14 (lefwkro)	17664	6400	36%
SWIRW	mtdd15 (swirw)	15872		
USERAPP	mtdd16 (userapp)	133120		

2.1.4.1 RAM

76700 kB*

*Value is read from the MemAvailable parameter in /proc/meminfo after boot.

Note: Memory availability in Flash and RAM are for reference only and may vary depending on when it is measured and on the configurations made by the customer.

2.1.5 Boot Time

The following table lists the different service ready times since the first boot message.

The result was measured from WP7611-1 loaded with the Generic package. The boot time is for reference only and may vary depending on the configuration made by the customer.

Service ready	Time since first boot message	Description
Legato service ready	21 seconds	Legato framework and services have been fully initialized.
AT & QMI service ready	28 seconds	External host processor is now able to communicate with modules through AT commands (USB and UART) and/or QMI messages.
Legato application start	32 seconds	Customer Legato application starts running.

2.2 Software Changes Description

The following are changes in Release 16.3 since Release 16.0.1

Table 2-1: Major Bug Fixes

ID	Description	Impacted Domain
QT19X07-4953	[LwM2M][VZW] Store and resume observe requests over power cycle	Modem
QT19X07-4956	[LwM2M][VZW] AET support	Modem
QT19X07-5557	WP7611 failing Motive OOB FOTA	Modem
QT19X07-4955	[LwM2M][VZW] Update Root CA certs	Modem
QT19X07-5686	WP7611 LwM2M FOTA registration fail	Modem
QT19X07-5688	Continuous handover between cells causes PS connection unstable when only main antenna (1RX) is configured - Single Rx mode.	Modem
QT19X07-5693	Not enough number of observations (Expected Observations: 28 / Actual Observations: 1)	Modem
QT19X07-5694	LwM2M fails with "Download Failed, error code 4"	Modem
QT19X07-5701	Parse wrong hostname from DL-URL cause Motive FOTA download shows error code 4	Modem
QT19X07-5702	LwM2M get net policy interface is wrong if have 2 clients use same PID	Modem
QT19X07-5706	FOTA download restarts several times and eventually fails.	Modem

2.3 Known Issues

The following table presents the known issues in this release.

ID	Description	Impacted Domain
QT19X07-3655	Firmware update using xmodem protocol over USB modem interface is not successful. Firmware installation eventually failed after the firmware is successfully downloaded. This issue has been fixed in modem firmware SWI9X07Y_02.37.07.00, but this modem firmware is not included in any firmware release packages.	System
QT19X07-4942	On Linux Android platform, while data call is active, USB connection disconnects momentarily with USB suspend/resume enabled.	USB
QT19X07-4912	With R2C SIM V5.x, EF_OPLMNwAct has not been taken into account after SIM REFRES.	R2C
QT19X07-4928	Customers' le_mrc API calls for any operations, regarding preferred cellular operator (like getting, adding and removing), would fail and shows the "unsupported" error.	Legato
LE-8872	The value of object /7/0/0 (SMS Tx counter) is not updated when using AT Command to send SMS.	Legato

2.4 Major Configuration Changes

This section presents the major carrier configuration changes in this release.

Table 2-2: Generic

Approve FW	Configuration	ID	Description
SWI9X07Y_02.37.06.05	v002.121_002	OEMPRI-26386	Update Firmware to SWI9X07Y_02.37.06.05
SWI9X07Y_02.37.06.00	v002.098_000	OEMPRI-14761	Update Firmware to SWI9X07Y_02.37.06.00

Table 2-3: Sierra

Approve FW	Configuration	ID	Description
SWI9X07Y_02.37.06.05	v001.072_000	OEMPRI-26386	Update Firmware to SWI9X07Y_02.37.06.05
SWI9X07Y_02.37.06.04	v001.069_000	OEMPRI-23918	Global APN for Sierra connectivity
SWI9X07Y_02.37.06.00	v001.058_000	OEMPRI-14761	OEMPRI-14761 - Update Firmware to SWI9X07Y_02.37.06.00

Table 2-4: Verizon

Approve FW	Configuration	ID	Description
SWI9X07Y_02.37.06.05	v002.123_000	OEMPRI-26386	Update Firmware to SWI9X07Y_02.37.06.05
SWI9X07Y_02.37.06.04	v002.120_000	OEMPRI-26252	[9X07][VzW] Add AL_TESTMODE_ENABLE to persist list
SWI9X07Y_02.37.06.00	v002.107_000	OEMPRI-14761	Update Firmware to SWI9X07Y_02.37.06.00

>> A: Appendix

A.1 Abbreviations and Definitions

Abbreviation / Acronym	Definitions
AT	Access Terminal, Attention
CS	Circuit Switched
EDL	Emergency Download
FDT	Firmware Download Tool
GCF	Global Certification Forum
LK	Little Kernel Linux bootloader
MCU	Microcontroller Unit – An onboard MCU enables Ultra Low Power modes of operation
MR	Maintenance Release
PSM	Power Saving Mode
QMI	Qualcomm Messaging Interface
SDP	Software Download Protocol
ULPM	Ultra Low Power Mode

A.2 Related Documentation

- WP76xx - Product Technical Specification
Reference number: 4119652
- WPx5xx-76xx-77xx AT Command Reference
Reference number: 4118047
- WP Series - Preparing Your Devices for Deployment
Reference number: 41110380
- WPX5-76-77 Scalability Guide
Reference number: 41110866
- WP Series - Secure Boot
Reference number: 41112164