



# **WP8548 and WP750x**

## **Customer Release Notes**

### **Release 12.2**

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Rev	R01.12
Date	2016/09/23

# Document History

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01.00	2015/08/21	Creation - Release 5	RK
01.01	2015/10/06	Release 6	RK
01.02	2015/10/22	Release 6 upgrade instructions	RK
01.03	2015/11/13	Release 7	RK
01.04	2015/12/15	Release 8	KW
01.05	2016/02/16	Release 9	RK
01.06	2016/02/29	Release 9 upgrade instructions URL change	RK
01.07	2016/04/12	Release 10	RK
01.08	2016/05/06	Release 10.1	RK
01.09	2016/06/07	Release 11	RK
1.10	2016/08/22	Release 12	SA
1.11	2016/09/23	Release 12.2	SA

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## 1 Introduction

### 1.1 Scope of this document

*This document describes changes in the SWI9X15Y 7.0 line of firmware.*

### 1.2 Audience of this document

*These release notes may be distributed to all direct and indirect customers.*

## 2 Abbreviations and definitions

Abbreviation/Acronym	Definitions
AT	Access Terminal, Attention
LK	Little Kernel Linux bootloader
FDT	Firmware Download Tool
QMI	Qualcomm MSM Interface, Qualcomm Modem Interface

## 3 Related documentation

Ref. #	Doc. #	Document title
[R-1]	4117452	SWI9X15Y 6.0 Customer Release Notes

## 4 Compatibility

### Hardware compatibility

Product compatibility list
WP8548
WP7504
WP7502



## 5 SWI9X15Y 7.0 Release 12.2

Release 12.2 is a modem-only update from Release 12 primarily to address remaining AT&T certification issues. Note that a preliminary Release 12.1 was available for a limited time, but has now been replaced with Release 12.2. Release 12.1 will not be supported going forward.

### 5.1 Software Release Description

#### 5.1.1 Release identification

Component	Revision
Boot loader	SWI9X15Y_07.11.11.00 2016/09/20 16:36:44
Modem	SWI9X15Y_07.11.11.00 2016/09/20 16:36:44
No change from Release 12 for components below:	
Yocto	SWI9X15Y_07.11.09.00 2016-08-11_20:51:24
Kernel	3.14.29ltsi-c14b887744_0c284d02b3
Legato	16.07.0_cd4985660a55cc9a6f9a2ed28bcc757e
MCU	001.005
Binary Size	55MB (compressed binaries)
IMEI SV	42
Qualcomm Stack Version	M9615ACETWMLZD551351013.1.63410.1.65027.1
Supported H/W	WP8548, WP7504, WP7502

#### 5.1.2 Software Tools Versions

S/W Tools Name	Version	Resource file
Windows Driver Package	B4484	
Windows SDK	None	
Skylight	4567	
Linux Drivers	S2.25N2.37	
Linux SDK	04.0.01	

#### 5.1.3 Released Files and Download Processes

Download Option	Files
Windows	The Windows Driver package is available directly through your Sierra Wireless FAE or can be downloaded from: <a href="http://source.sierrawireless.com/">http://source.sierrawireless.com/</a>
CWE/NVU files	Various PRI Packages
Windows Firmware and Configuration upgrade tools	Firmware and configuration download instructions are available at <a href="http://source.sierrawireless.com/">http://source.sierrawireless.com/</a>



## 5.2 Software Changes Description

This section describes significant changes since SWI9X15Y 7.0 Release 12.

### 5.2.1 Validated Corrections / Improvements

ID	Title	Description	Impacted Domain
WP8548/7504 AT&T Certification – no known issues remaining.			
QT19X1555-813	SSL handshake failing with Mformation OMA-DM Server on AT&T WCDMA	Resolved SSL issue on AT&T for ODIS.	AT&T Certification
QT19X1555-254	+CSVM not returning voicemail number	Return voicemail number from SIM on AT+CSVM?	AT&T Certification
QT19X1555-718	[31.121][8.4] - 8.4 UICC presence detection - failed on 2nd slot	TC 8.4 fails on second SIM slot.	PTCRB Certification
WP7502 GCF Certification – Still open issues. See Known Issues section			
QT19X1555-786	[WP7502][WP8548][51.010-4][27.22.2] SAT Terminal Profile : Enable item 3.5 and 8.8 if Voice enabled	UICC Terminal Profile for 2G corrected when voice enabled.	GCF Certification
Data connectivity			
QT19X1555-764	Fails to make a data connection if a username and password is included in startdatasession2	If user modifies the APN or profile authentication info with SINGLEAPNSWITCH feature enabled, a data connection will fail. Windows customers are impacted by this if they change the APN using Windows VANUI and find that they are unable to connect to the new APN.	Data
AirVantage			
QT19X1555-696	LWM2M Observe: Implement sequence number for Observe notifications	Previously sequence number of 0 was always used cause observe feature to end unexpectedly in some situations.	AirVantage
QT19X1555-645	Time Series (AirVantage - application data)	Allow external host to specify content-format in QMI Notification message. Note that further development is required in other components for this feature to be complete at a system level.	AirVantage
QT19X1555-795	AVC interpret server's WRITE (using COAP_POST) as CREATE command	Interpretation of COAP POST messages from the server was incorrect causing CoAP POST on the Legato object instance to trigger a LWM2M CREATE which is rejected.	AirVantage
QT19X1555-780	[LWM2M] When the device connects to the server, the supported object list is not correct for object 9 (software management)	Remove prefix "lwm2m" from FW version in object 9.	AirVantage
QT19X1555-818	[LWM2M] Application uninstall could need to stop and start the session	Stop and start the session on AirVantage uninstall.	AirVantage

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### 5.3 Known Issues

This section presents all known issues in this release.

ID	Title	Description	Impacted Domain
WP7502 - GCF cert			
QT19X1555-759	[WP7502][GCF] UE Crashes during reselection to 2G	Crashing on TS 34.121-1 TC 8.2.3.1/8.2.3.2/8.2.3.3 This issue has been fixed and will be available in a later release.	RF
Various	[WP7502] RF and protocol issues	Under investigation with chip vendor	RF
Stability			
QT19X1555-690	I2C stops working during stress test for MCU ULPM / ADC2,3	After ~100+ iterations of ULPM execution or ADC2,3 read, the I2C bus locks up and MCU communication is lost until reset. This issue has been resolved and the fix may be applied with an updated MCU image (MCU version 001.007) if required. This fix will be included in Release 13.	I2C
I/O			
QT19X1555-161 QT19X1555-630	System Clock conflict with audio	If the system clock is configured to be permanently on, i.e. AT+WEXTCLK=1,1, the clock is disabled at the termination of audio activity. Conversely, if audio is active and the system clock is disabled, audio will stop until reinitiated.	System clock
QT19X1555-466	USB Audio interfaces do not load correctly on Windows when ECM is enabled	In Windows a Yellow Bang is observed on the USB Audio interfaces when ECM is enabled. This is caused by conflicting USB compliance versions between the ECM and Audio drivers. This issue prevents the Windows host from entering Selective Suspend on the USB bus. This issue is being avoided by removing Audio from the USB composition in this release.	USB
LE-4624	TI wl18xx WiFi IoT module support consumes external GPIO42	The WiFi module driver configures GPIO42 and prevents it from being used for other purposes, even if the WiFi module is not present.	GPIO
QT19X1555-753	GPIO strange behaviour	Inconsistent behavior was observed on GPIO2, 13, 33 during functional test of supported GPIOs. In particular, GPIO2 was found to only be able to operate properly as an output if it was first configured as input with pull up.	GPIO

## 6 SWI9X15Y 7.0 Release 12

This section describes the changes since the previous release.

### 6.1 Software Release Description

#### 6.1.1 Release identification

Component	Revision
Boot loader	SWI9X15Y_07.11.09.00 2016/08/11 18:03:20
Modem	SWI9X15Y_07.11.09.00 2016/08/11 18:03:20
Yocto	SWI9X15Y_07.11.09.00 2016-08-11_20:51:24
Kernel	3.14.29ltsi-c14b887744_0c284d02b
Legato	16.07.0_cd4985660a55cc9a6f9a2ed28bcc757e
MCU	001.005
Binary Size	55MB (compressed binaries)
IMEI SV	42
Qualcomm Stack Version	M9615ACETWMLZD551351013.1.63410.1.65027.1
Supported H/W	WP8548, WP7504, WP7502

#### 6.1.2 Software Tools Versions

S/W Tools Name	Version	Resource file
Windows Driver Package	B4484	
Windows SDK	None	
Skylight	4567	
Linux Drivers	S2.25N2.36	
Linux SDK	03.3.16	

#### 6.1.3 Released Files and Download Processes

Download Option	Files
Windows	The Windows Driver package is available directly through your Sierra Wireless FAE or can be downloaded from: <a href="http://source.sierrawireless.com/">http://source.sierrawireless.com/</a>
CWE/NVU files	Various PRI Packages
Windows Firmware and Configuration upgrade tools	Firmware and configuration download instructions are available at <a href="http://source.sierrawireless.com/">http://source.sierrawireless.com/</a>

### 6.2 Software Changes Description

This section describes significant changes since SWI9X15Y 7.0 Release 11.

### 6.2.1 Validated Corrections / Improvements

ID	Title	Description	Impacted Domain
Various	Legato 16.07.0	This release package includes and was validated with Legato 16.07.0. Legato release notes are available at <a href="http://www.legato.io">http://www.legato.io</a> .	Legato AF
Certification			
MOLWP9X15-7	WP7504 GCF Certification	GCF Certification Received	GCF Certification
MOLWP9X15-2	WP7504 Sprint Certification	All known WP7504 Sprint certification issues have been addressed in preparation for Sprint Lab entry.	Carrier Certification
MOLWP9X15-4	WP8548/WP7504 PTCRB Certification	Various items identified during lab and field testing for WP8548/WP7504 PTCRB certification. See section on known issues for outstanding issues.	PTCRB Certification
MOLWP9X15-3 MOLWP9X15-5	WP8548/WP7504 AT&T Certification	Various carrier-specific certification items identified during lab and field testing for WP8548 and WP7504 AT&T certification. See section on known issues for outstanding issues.	Carrier Certification
MOLWP9X15-67	WP7502 GCF Certification	Various items identified during lab and field testing for WP7502 GCF certification. See section on known issues for outstanding issues.	GCF Certification
Various	Voice improvements	Busy tone generation. Various voice call improvements identified during audio stress testing. See section on known issues for outstanding issues.	Audio Certification
AirVantage			
QT19X1555-101 QT19X1555-125	Server connection reliability	Failure to register under certain circumstances corrected.	AirVantage
QT19X1555-653 QT19X1555-695	Observe feature improvements	LWM2M TLV length 255 handling fixed. MCU firmware version added to AV rev string	AirVantage
Various	FOTA reliability	Several FOTA failure scenarios addressed.	AirVantage
QT19X1555-714 QT19X1555-731	AVMS Stability	AVMS client crashes under certain corner cases fixed.	AirVantage
Image switch			
QT19X1555-697 QT19X1555-669	Image switch support	Added support for image switch on customer built images	Image switch
I/O Interfaces			
LXSWI9X1517-45	uSD card support	A conflict between uSD card and WiFi card added in Release 11 is corrected allowing boot time detection of uSD card.	uSD
QT19X1555-69	UART2 disable	Disable UART2 when AT!MAPUART is 0 to conform to AT command spec	UART
QT19X1555-673 QT19X1555-668	ADC support	ADC0 – 3 are now all fully supported via AT!MADC, QMI, or Legato. Value returned in mV (decimal).	ADC
QT19X1555-337	External antenna control	External antenna control lines are now supported when enabled with AT!CUSTOM="BANDSELEN" and AT!ANTSEL	RF

ID	Title	Description	Impacted Domain
QT19X1555-676	GPIO6 modem support	When configured for modem control via AT+WIOCFG=6,4, GPIO6 is now available as a GPIO to the modem and not used by the apps kernel for RESET_OUT_N (e.g. for mangOH). The default configuration will continue to be under apps kernel control.	GPIO
QT19X1555-757	Fix modem RI functionality on modem side	Fix persistence of AT!RIOWNER=0 so that it doesn't have to be executed after every boot to take effect.	Modem Ring Indicator
QT19X1555-536	RF sensitivity improvements	APT/internal GPIO64 was inadvertently programmed to generate a PWM signal which degraded diversity and GLONASS sensitivity. This has been corrected.	RF
AT / QMI Interfaces			
QT19X1555-512	W_DISABLE pin notification	The state of the W_DISABLE pin is now accurately represented in QMI.	QMI
QT19X1555-412	Get MSISDN	Fixed a bug with DMS_GET_MSISDN that incorrect length is returned for ISMI field.	QMI
QT19X1555-553	QMI on USB	Fix an issue where device cannot send and respond to USB traffic through EP0 that has packet size of n*64 bytes	QMI
QT19X1555-155	AT!GSTATUS?	Fix an issue that causes AT!GSTATUS to show incorrect band and channel in a 1xRTT only network when !SELRAT is not set to 09 (CDMA only)	AT
MOLWP9X15-33	AT!POWERDOWN	Add support for AT!POWERDOWN to power off MDM (lowest power state of WP module). To power the module back on, assert reset or toggle power switch from off to on. Also, asserting RESET with power switch off performs emergency power off.	AT / Power control
GPS			
QT19X1555-67	DR_SYNC	Fix GPS DR_SYNC signal generation	GPS
QT19X1555-411	GNSS Assistance Data	Clear TTFF on AT!GPSCLRASSIST=0,0,0,0 to assist in testing warm/hot start scenarios	GPS
QT19X1555-641	GNSS performance	Update some GPS NV default settings for WP7504 to pass 3GPP2 CS0036	GPS

### 6.3 Known Issues

This section presents all known issues in this release.

ID	Title	Description	Impacted Domain
WP8548/WP7504 - PTCRB			
QT19X1555-718	[31.121][8.4] - 8.4 UICC presence detection - failed on 2nd slot	TC 8.4 fails on second SIM slot. A resolution has been verified and will be available in the next release.	SIM
WP8548/WP7504 – AT&T Cert			
QT19X1555-266	[WP7504][AT&T][LTE-BTR-1-9062] - PS Start Value was missing from WCDMA UE Capability Info	Test case applicability being debated.	RF
QT19X1555-742	[WP7504][WP8548][AT&T] - Some AMR tests are failing due to low MOS score	Uplink MOS score below that required in some test cases. Audio calibration optimization being reviewed.	Audio Certification
WP7502 - GCF cert			
QT19X1555-725	[51.010-1][20.7] UE connects to wrong cell in 2G	May be a test procedure issue. Retest pending.	RF
QT19X1555-759	[WP7502][GCF] UE Crashes during reselection to 2G	Crashing on TS 34.121-1 TC 8.2.3.1/8.2.3.2/8.2.3.3	RF
I/O			
QT19X1555-161 QT19X1555-630	System Clock conflict with audio	If the system clock is configured to be permanently on, i.e. AT+WEXTCLK=1,1, the clock is disabled at the termination of audio activity. Conversely, if audio is active and the system clock is disabled, audio will stop until reinitiated.	System clock
QT19X1555-466	USB Audio interfaces do not load correctly on Windows when ECM is enabled	In Windows a Yellow Bang is observed on the USB Audio interfaces when ECM is enabled. This is caused by conflicting USB compliance versions between the ECM and Audio drivers. This issue prevents the Windows host from entering Selective Suspend on the USB bus. This issue is being avoided by removing Audio from the USB composition in this release.	USB
QT19X1555-690	I2C stops working during stress test for MCU ULPM / ADC2,3	After ~100+ iterations of ULPM execution or ADC2,3 read, the I2C bus locks up and MCU communication is lost until reset. Some progress is being made on this issue, but a complete solution is not yet available.	I2C
LE-4624	TI wl18xx WiFi IoT module support consumes external GPIO42	The WiFi module driver configures GPIO42 and prevents it from being used for other purposes, even if the WiFi module is not present.	GPIO
QT19X1555-753	GPIO2, 13 and 33 strange behaviour	Inconsistent behavior was observed on GPIO2, 13, 33 during functional test of supported GPIOs. In particular, GPIO2 was found to only be able to operate properly as an output if it was first configured as input with pull up.	GPIO



## 7 SWI9X15Y 7.0 Release 11

This section describes the changes since the previous release.

### 7.1 Software Release Description

#### 7.1.1 Release identification

Component	Revision
Boot loader	SWI9X15Y_07.10.04.00 2016/06/01 20:30:40
Modem	SWI9X15Y_07.10.04.00 2016/06/01 20:30:40
Yocto	SWI9X15Y_07.10.04.00 2016/06/02 06:32:28
Kernel	3.14.29ltsi-c14b887744_39dcf2256d
Legato	16.04.0_63633d9200de787b7c2a6dca03d2cff3
Binary Size	55MB (compressed binaries)
IMEI SV	41
Qualcomm Stack Version	M9615ACETWMLZD551351010.1
Supported H/W	WP8548, WP7504, WP7502

#### 7.1.2 Software Tools Versions

S/W Tools Name	Version	Resource file
Windows Driver Package	B4484	
Windows SDK	None	
Skylight	None	
Linux Drivers	S2.25N2.36	
Linux SDK	03.03.16	

#### 7.1.3 Released Files and Download Processes

Download Option	Files
Windows	The Windows Driver package is available directly through your Sierra Wireless FAE or can be downloaded from: <a href="http://source.sierrawireless.com/">http://source.sierrawireless.com/</a>
CWE/NVU files	Various PRI Packages
Windows Firmware and Configuration upgrade tools	Firmware and configuration download instructions are available at <a href="http://source.sierrawireless.com/">http://source.sierrawireless.com/</a>

### 7.2 Software Changes Description

This section describes significant changes since SWI9X15Y 7.0 Release 10.1.

## 7.2.1 Validated Corrections / Improvements

ID	Title	Description	Impacted Domain
Various	Legato 16.04.0	This release package includes and was validated with Legato 16.04.0. Legato release notes are available at <a href="http://www.legato.io">http://www.legato.io</a> .	Legato AF
90537	Legato AF Secure Filesystem APIs	Fixed firmware support of Legato Secure Filesystem APIs.	Legato AF
91342 91526 91622	Legato AF QMI compatibility improvements	Improved Legato AF QMI compatibility with Linux and Modem images by statically linking QMI libraries in Legato AF This improves the independence of Legato AF from the Linux and Modem images.	Legato AF
Various	UBIFS support for USERRW partition	UBIFS support is added for the user read/write partition, mtd4. The mtd4 partition now defaults to UBIFS on next boot if erased entirely. The partition is unaffected if not erased.	Linux FS
Various	Sprint Certification improvements	Various carrier-specific certification items identified during lab and field testing	Carrier Certification
Various	AT&T Certification improvements	Various carrier-specific certification items identified during lab and field testing	Carrier Certification
Various	Audio certification improvements	Various voice call improvements identified during lab and field testing	Audio Certification
91943 92288	Fastboot Support in Linux LK	Fastboot support in the Linux bootloader can be configured with AT commands via the "FASTBOOTEN" customization: <b>Level 2 Unlock command:</b> AT!ENTERCND="A710" <b>Enable:</b> AT!CUSTOM="FASTBOOTEN",01 <b>Disable:</b> AT!CUSTOM="FASTBOOTEN",00	Linux LK
Various	UART1 4-wire Operation	Added HS serial driver to support 4-wire operation on UART1	Linux, UART
90263 91943	USB Composition improvements	USB composition configuration is now more flexible, configured by bitmask for supported interfaces. Refer to AT!USBCOMP=? for details.	USB
89334	LWM2M Observe Feature	Added support for LWM2M Observe functionality	AVMS
91307	LWM2M Block Transfer Mode	Added support for LWM2M Block Transfer Mode	AVMS
90678	Improved FOTA component management	Improved FOTA model to support the independent upgrade of system components	AVMS
88831	ADC Support	Added AT and QMI support for all four WP external ADC interfaces.	Linux, AT, QMI
91122	Optimized sleep mode power consumption	Optimized sleep mode power consumption by configuring internal GPIO correctly in the sleep state.	BSP
89766	Add support to handle LK compression in CWE	LK Compression is now supported when downloading a CWE packaged by the SWICWE tool	CWE
91829	Fix modem RI functionality on modem side	Add support for Modem Ring Indicator functionality on UART1 RI when AT!RIOWNER=0	Modem Ring Indicator

ID	Title	Description	Impacted Domain
92231	Fix intermittent external 19.2MHz System Clock when configured to be on by AT+WEXTCLK	System clock was being disabled during Modem sleep mode. This solution overrides a failure in the voting mechanism by forcing the clock and XO core on during sleep mode. <i>Limitation: The clock is shared with the external PCM interface, and will be disabled at the termination of a voice call as the PCM interface is disabled. This issue remains under investigation (4729).</i>	System Clock
90622	Galileo Support is enabled by default	Galileo support is enabled on new devices starting from this release.	GPS
4508	Fixed support of mounting a peripheral USB drive	Mounting a peripheral USB drive was inadvertently disabled in the previous release.	Peripheral USB
Various	Audio is enabled in applicable Carrier configurations for this release	AT&T and Generic carrier configurations support the Audio feature	Audio
90400	I2C Reliability during repetitive ULPM stress testing	Fixed an intermittent I2C failure which caused a failure to re-enter ULPM mode until the next power cycle or software reset.	ULPM
4592	Fixed a crash observed while attempting to mount from an absent microSD	A crash was resolved when attempting to mount an unplugged microSD card. <i>Note: See known issues below – microSD support is not supported in this release.</i>	SD
86131	Fix support of Antenna Control pins	External Antenna Control functionality is restored by isolating these pins from the Sound driver for the WP platform. <i>Note: This fix is pending validation</i>	ANT_CNTL

### 7.3 Known Issues

This section presents all known issues in this release.

ID	Title	Description	Impacted Domain
88818	Remove POWER_ON_N signal requirement from power-on conditions when ULPM mode is supported	The assertion of the POWER_ON_N signal consumes 0.828mA due to internal circuitry of WP8548/WP7502/WP7504. To achieve minimal ULPM power consumption, the requirement for this signal at power-up must be removed.  In this release, the customer may implement the POWER_ON_N signal as a pulse in order to satisfy the power-on condition, then restore the minimal power consumption mode by de-asserting the signal once the device has powered up.	ULPM
4729	System Clock disabled at completion of voice call	If the system clock is configured to be permanently on, i.e. AT+WEXTCLK=1,1, the clock is disabled at the termination of a voice call.	System clock
86145	TX_ON not configured with valid thresholds	TX_ON configuration needs to be updated in order to assert the signal on presence of transmit power.	TX_ON



ID	Title	Description	Impacted Domain
88878	DR_SYNC default configuration is not valid	Commands to enable/disable DR_SYNC operation do not adequately configure the feature, and the DR_SYNC pin is not generating a pulse.	DR_SYNC
92410	Busy tone generation not supported in voice calls	The busy tone is not generated	Audio, GCF, PTCRB
4595	USB Audio interfaces do not load correctly when ECM is enabled	In Windows a Yellow Bang is observed on the USB Audio interfaces when ECM is enabled. This is caused by conflicting USB compliance versions between the ECM and Audio drivers. This issue prevents the Windows host from entering Selective Suspend on the USB bus. This issue is being avoided by removing Audio from the USB composition in this release.	USB
5072	TI wl18xx WiFi IoT module support conflicts with microSD interface	The WiFi module driver uses resources required by the SDIO interface and prevents the mangOH microSD slot from functioning even if the WiFi module is not present.	SDIO
4815	TI wl18xx WiFi IoT module support consumes external GPIO42	The WiFi module driver configures GPIO42 and prevents it from being used for other purposes, even if the WiFi module is not present.	GPIO
Various	WiFi applications are not built when Legato is built within the Yocto environment	Legato AF WiFi applications are not included when the Yocto legato-af recipe is used. The applications are included when the Legato AF is built separately from the Yocto environment. Future releases of the Legato AF will not compile within this version of the Yocto environment, but will be supported in corresponding new Yocto releases.	Legato AF, WiFi

## 8 SWI9X15Y 7.0 Release 10.1

This section describes the changes since the previous release.

### 8.1 Software Release Description

#### 8.1.1 Release identification

Component	Revision
Boot loader	SWI9X15Y_07.09.02.00 2016/03/31 20:05:28
Modem	SWI9X15Y_07.09.02.00 2016/03/31 20:05:28
Yocto	SWI9X15Y_07.09.02.02 2016/04/15 02:39:24
Kernel	3.14.29ltsi-13c67b16ff_922830eb31
Legato	16.01.2_9e91388c2b14980a4d419259910a4d65
Binary Size	53MB (compressed binaries)
IMEI SV	41
Qualcomm Stack Version	M9615ACETWMLZD551351007.1
Supported H/W	WP8548, WP7504, WP7502

Template #:	4117965	Revision:	01.11
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### 8.1.2 Software Tools Versions

S/W Tools Name	Version	Resource file
Windows Driver Package	B4484	
Windows SDK	None	
Skylight	None	
Linux Drivers	S2.25N2.36	
Linux SDK	03.03.15	

### 8.1.3 Released Files and Download Processes

Download Option	Files
Windows	The Windows Driver package is available directly through your Sierra Wireless FAE or can be downloaded from: <a href="http://source.sierrawireless.com/">http://source.sierrawireless.com/</a>
CWE/NVU files	Various PRI Packages
Windows Firmware and Configuration upgrade tools	Firmware and configuration download instructions are available directly through your Sierra Wireless FAE.

## 8.2 Software Changes Description

This section describes significant changes since SWI9X15Y 7.0 Release 10.

### 8.2.1 Validated Corrections / Improvements

ID	Title	Description	Impacted Domain
Various	Added Linux support for MangOH WiFi reference design	Linux support is added for MangOH reference design with TI wl18xx WiFi IoT module	MangOH / WiFi

## 8.3 Known Issues

This section presents all known issues in this release.

ID	Title	Description	Impacted Domain
Various	Audio is not supported	Audio is not supported in this release. Voice call control functionality is disabled. The USB audio interface is exposed by default.	Audio
86131	Antenna Control pins not working	External Antenna Control functionality is broken	ANT_CNTL
86145	TX_ON not configured with valid thresholds	TX_ON configuration needs to be updated in order to assert the signal on presence of transmit power.	TX_ON
81378	ADC Support	External ADC interfaces are supported in sysfs only.	ADC

ID	Title	Description	Impacted Domain
88818	Remove POWER_ON_N signal requirement from power-on conditions when ULPM mode is supported	The assertion of the POWER_ON_N signal consumes 0.828mA due to internal circuitry of WP8548/WP7502/WP7504. To achieve minimal ULPM power consumption, the requirement for this signal at power-up must be removed.  In this release, the customer may implement the POWER_ON_N signal as a pulse in order to satisfy the power-on condition, then restore the minimal power consumption mode by de-asserting the signal once the device has powered up.	ULPM
90400	I2C Failure observed during repetitive ULPM stress testing	An intermittent I2C failure causes a failure to re-enter ULPM mode until the next power cycle or software reset.	ULPM
90537	Legato secure file system backup not supported	A storage location for the secure file system backup routines is not yet implemented for the WP, causing Legato backup routines to fail.	Legato / SFS
4595	USB Audio interfaces do not load correctly when ECM is enabled	In Windows a Yellow Bang is observed on the USB Audio interfaces when ECM is enabled.	USB
4508	Mounting a peripheral USB drive is not supported	Mounting a peripheral USB drive was inadvertently disabled.	Peripheral USB
4173	4-Wire UART on UART1 is not supported	An HS 4-wire UART driver is not yet included in this release.	UART
TBD	Fastboot is disabled	Fastboot is disabled due to an inflexible USB configuration limiting the ability to enable Fastboot independently. Fastboot is to be supported in future releases.	Fastboot
4592	Crash while mounting from an absent microSD	A crash occurs when attempting to mount an unplugged microSD card.	SD
90622	Galileo Support is not enabled by default	Galileo support is not enabled in this release.	GPS

## 9 SWI9X15Y 7.0 Release 10

This section describes the changes since the previous release.

### 9.1 Software Release Description

#### 9.1.1 Release identification

Component	Revision
Boot loader	SWI9X15Y_07.09.02.00 2016/03/31 20:05:28
Modem	SWI9X15Y_07.09.02.00 2016/03/31 20:05:28
Yocto	SWI9X15Y_07.09.02.00 2016/03/31 22:35:29
Kernel	3.14.29ltsi-13c67b16ff_922830eb31
Legato	16.01.2_9e91388c2b14980a4d419259910a4d65
Binary Size	45MB (compressed binaries)
IMEI SV	41

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Component	Revision
Qualcomm Stack Version	M9615ACETWMLZD551351007.1
Supported H/W	WP8548, WP7504, WP7502

### 9.1.2 Software Tools Versions

S/W Tools Name	Version	Resource file
Windows Driver Package	B4484	
Windows SDK	None	
Skylight	None	
Linux Drivers	S2.25N2.36	
Linux SDK	03.03.15	

### 9.1.3 Released Files and Download Processes

Download Option	Files
Windows	The Windows Driver package is available directly through your Sierra Wireless FAE or can be downloaded from: <a href="http://source.sierrawireless.com/">http://source.sierrawireless.com/</a>
CWE/NVU files	Various PRI Packages
Windows Firmware and Configuration upgrade tools	Firmware and configuration download instructions are available directly through your Sierra Wireless FAE.

## 9.2 Software Changes Description

This section describes significant changes since SWI9X15Y 7.0 Release 9.

### 9.2.1 Validated Corrections / Improvements

ID	Title	Description	Impacted Domain
Various	Legato 16.01.2	This release package includes and was validated with Legato 16.01.2. Legato release notes are available at <a href="http://www.legato.io">http://www.legato.io</a> .	Legato
90183	Qualcomm M9615ACETWMLZD551351007.1	Notable fix for stability issue observed in Release 9: CR 764733: Fix intermittent crash observed on WP7504 during operation with CDMA and UMTS/GSM enabled simultaneously	Modem
80393 2865 4075 4491	Add support for USB Selective Suspend	USB Selective Suspend is supported, additionally adding handling of /dev/usb_link wakelock, allowing the system to enter the power collapse state (sleep mode) and reach minimal power consumption.	USB

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ID	Title	Description	Impacted Domain
4370	Clean up USB audio gadget on restart	Sound PCM devices were not properly closed when the audio gadget was disabled, causing the kernel to busy-loop while trying to open a previously unclosed PCM device.	USB
89234	GCF TC 27.22.4.29.1/1 - PDP not open when the SIM requires	Fix STK Terminal Profile to adapt to whether voice call support is enabled or disabled	GCF
90234	WP7504 - Add RF driver support for LTE Band 17	Added LTE Band 17 support for WP7504	RF
88837	WP7502 - ILPC, Open Loop Power and PRACH power on WCDMA B1, B8 and LTE B7	Default calibration updates for WP7502 to improve ILPC, Open loop power, and PRACH power on WCDMA B1, B8, and LTE B7	RF
88838	Fix Power Control state machine to prevent device from remaining in Low Power Mode after returning from critical low temperature	The modem enters Low Power Mode when the temperature falls below a critical threshold. This fixes a bug in the state machine where the modem was incorrectly stuck in Low Power Mode after the temperature rose back to within the normal range.	Power Control
Various	Update AirVantage Agent	Various stability and performance updates to the AirVantage agent	AirVantage
89693	Wakeup from ULPM on timer fails intermittently	When timer-based ULPM wakeup was enabled, an intermittent timer configuration issue resulted in the device remaining in ULPM until the next power cycle.	ULPM
None	User updates of GPIO configuration are lost when updating to latest release	The GPIO configuration was previously forced to predefined values in every release. The accompanying configuration files with this release will maintain the customer's GPIO configuration.	GPIO

### 9.3 Known Issues

This section presents all known issues in this release.

ID	Title	Description	Impacted Domain
Various	Audio is not supported	Audio is not supported in this release. Voice call control functionality is disabled. The USB audio interface is exposed by default.	Audio
86131	Antenna Control pins not working	External Antenna Control functionality is broken	ANT_CNTL
86145	TX_ON not configured with valid thresholds	TX_ON configuration needs to be updated in order to assert the signal on presence of transmit power.	TX_ON
81378	ADC Support	External ADC interfaces are supported in sysfs only.	ADC



ID	Title	Description	Impacted Domain
88818	Remove POWER_ON_N signal requirement from power-on conditions when ULPM mode is supported	The assertion of the POWER_ON_N signal consumes 0.828mA due to internal circuitry of WP8548/WP7502/WP7504. To achieve minimal ULPM power consumption, the requirement for this signal at power-up must be removed.  In this release, the customer may implement the POWER_ON_N signal as a pulse in order to satisfy the power-on condition, then restore the minimal power consumption mode by de-asserting the signal once the device has powered up.	ULPM
90400	I2C Failure observed during repetitive ULPM stress testing	An intermittent I2C failure causes a failure to re-enter ULPM mode until the next power cycle or software reset.	ULPM
90537	Legato secure file system backup not supported	A storage location for the secure file system backup routines is not yet implemented for the WP, causing Legato backup routines to fail.	Legato / SFS
4595	USB Audio interfaces do not load correctly when ECM is enabled	In Windows a Yellow Bang is observed on the USB Audio interfaces when ECM is enabled.	USB
4508	Mounting a peripheral USB drive is not supported	Mounting a peripheral USB drive was inadvertently disabled.	Peripheral USB
4173	4-Wire UART on UART1 is not supported	An HS 4-wire UART driver is not yet included in this release.	UART
TBD	Fastboot is disabled	Fastboot is disabled due to an inflexible USB configuration limiting the ability to enable Fastboot independently. Fastboot is to be supported in future releases.	Fastboot
4592	Crash while mounting from an absent microSD	A crash occurs when attempting to mount an unplugged microSD card.	SD
90622	Galileo Support is not enabled by default	Galileo support is not enabled in this release.	GPS

## 10 SWI9X15Y 7.0 Release 9

This section describes the changes since the previous release.

### 10.1 Software Release Description

#### 10.1.1 Release identification

Component	Revision
Boot loader	SWI9X15Y_07.08.02.00 2016/02/05 23:29:29
Modem	SWI9X15Y_07.08.02.00 2016/02/05 23:29:29
Yocto	SWI9X15Y_07.08.02.00 2016/02/06 02:38:29
Kernel	3.14.29ltsi-5d7a6bf7c6_ed88cc68b5
Legato	16.01.0.Beta_aa0684bddf31f5ea2d457b53d2218972
Binary Size	45MB (compressed binaries)

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Component	Revision
IMEI SV	41
Qualcomm Stack Version	M9615ACETWMLZD5513404.1.42262.1
Supported H/W	WP8548, WP7504, WP7502

### 10.1.2 Software Tools Versions

S/W Tools Name	Version	Resource file
Windows Driver Package	B4431	
Windows SDK	None	
Skylight	None	
Linux Drivers	S2.25N2.36	
Linux SDK	03.03.14	

### 10.1.3 Released Files and Download Processes

Download Option	Files
Windows	Install Driver B4431
CWE/NVU files	Various PRI Packages
Windows Firmware and Configuration upgrade tools	Firmware and configuration download instructions are available at <a href="http://source.sierrawireless.com/resources/legato/wpfirmwareupgrade/">http://source.sierrawireless.com/resources/legato/wpfirmwareupgrade/</a>

## 10.2 Software Changes Description

This section describes significant changes since SWI9X15Y 7.0 Release 8.

### 10.2.1 Validated Corrections / Improvements

ID	Title	Description	Impacted Domain
Various	Legato 16.01.0.Beta	This release package includes and was validated with Legato 16.01.0.Beta. Legato release notes are available at <a href="http://www.legato.io">http://www.legato.io</a> .	Legato
Various	Legato Installation Improvements	Legato installation is significantly faster. An installation failure observed while testing unexpected power removals during installation is also resolved.	Legato/ Installation
3466	Improve decoupling of Legato QMI PA and Modem firmware	Legato no longer must be compiled with the identical QMI libraries as the modem firmware	Legato/ QMI PA/ Compatibility
Various	Added support for Ultra Low Power Modes (ULPM)	Legato APIs are provided in this release to control the ULPM behaviour, including support for timer- and GPIO-based wakeup triggers.	ULPM

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ID	Title	Description	Impacted Domain
Various	Added Device Tree support	Enabled Device Tree to ease the effort to add new drivers for external customers/developers.	Yocto
3543	Do not provide unsupported image types for WP75/WP85	Removed 2k.yaffs2 from Yocto rootFS image generation. These images were not supported by the release, but were made available for download.	Yocto
87729	Yocto support on WP7502/WP7504	A bug in a Release 8 user application was attempting to mount the root FS partition with a new format shortly after the first power up, causing the partition to be erased.	Yocto
85089	CWE/SPK files can be loaded by directly using Legato fwupdate tool	A previous limitation requiring a FOTA package for the fwupdate tool has been removed, and CWE/SPK files can be loaded directly.	fwupdate
3927	ECM interface is enabled and routed by default	The ECM interface was previously enumerated but required further steps to enable the connection. This change provides an IP address to the host by default on the ECM interface, when enumerated.	ECM
88405	Qualcomm stack baseline	Update Qualcomm stack baseline to M9615ACETWMLZD5513404.1.42262.1 <ul style="list-style-type: none"> <li>Significant improvement for GSM sensitivity.</li> <li>Multiple stability and security fixes identified by Qualcomm.</li> </ul>	Modem
88639	Stability with Sprint configuration	Heap exhaustion was observed frequently with a Sprint carrier configuration. Extra allocation is expected and the heap was increased to accommodate the requirement.	Modem Stability
Various	AirVantage	Various LWM2M updates for AirVantage	AirVantage
85796	On-board Image Switching	Added initial on-board image switching capability	Image Switching
Various	RF Drivers for WP75xx	Updated RF drivers and default configuration for WP7502/WP7504.	RF

### 10.3 Known Issues

This section presents all known issues in this release.

ID	Title	Description	Impacted Domain
80393	USB Selective Suspend not supported	USB Selective Suspend is not supported yet. Additional side effect of this asserts <code>/dev/usb_lnk wakelock</code> , preventing the system from entering power collapse state and reaching minimal power consumption.	USB
Various	Audio is not supported	Audio is not supported in this release. Voice call control functionality is disabled. The USB audio interface is exposed by default.	Audio
Various	FOTA	FOTA support is added in this release, but due to limitations of previous releases, FOTA cannot be used to upgrade a device to this release.	FOTA

ID	Title	Description	Impacted Domain
88767	Crash observed during multimode operation on WP7504.	An intermittent crash has been observed when testing on lab test equipment with multimode enabled. The issue can be avoided by disabling CDMA, but is rarely observed even with CDMA enabled	Stability/ WP7504
86131	Antenna Control pins not working	External Antenna Control functionality is broken	ANT_CNTL
86145	TX_ON not configured with valid thresholds	TX_ON configuration needs to be updated in order to assert the signal on presence of transmit power.	TX_ON
81378	ADC Support	External ADC interfaces are supported in sysfs only.	ADC
88035	GCF TC 27.22.4.29.1/1 - PDP not open when the SIM requires	SIM Toolkit related test case failure blocking GCF certification on this release	GCF
88818	Remove POWER_ON_N signal requirement from power-on conditions when ULPM mode is supported	<p>The assertion of the POWER_ON_N signal consumes 0.828mA due to internal circuitry of WP8548/WP7502/WP7504. To achieve minimal ULPM power consumption, the requirement for this signal at power-up must be removed.</p> <p>In this release, the customer may implement the POWER_ON_N signal as a pulse in order to satisfy the power-on condition, then restore the minimal power consumption mode by de-asserting the signal once the device has powered up.</p>	ULPM

In Addition to the listed known issue, the following features have not been tested.  
 Firmware download over UART  
 Internal RTC  
 VGPIO pin



## 11 SWI9X15Y 7.0 Release 8

This section describes the changes since the previous release.

### 11.1 Software Release Description

#### 11.1.1 Release identification

Component	Revision
Boot loader	SWI9X15Y_07.05.01.00 2015/12/08 01:28:58
Modem	SWI9X15Y_07.05.01.00 2015/12/08 01:28:58
Yocto	SWI9X15Y_07.05.01.00 2015/12/08 01:28:58
Kernel	3.14.29ltsi-bfda7d39c8_b6c4f16553
Legato	15.10.1.Beta_6b0f919f6d57fc5af6930499ec253a0b
Binary Size	45MB (compressed binaries)
IMEI SV	40
Qualcomm Stack Version	M9615ACETWMLZD5513303
Supported H/W	WP8548, WP7504

#### 11.1.2 Software Tools Versions

S/W Tools Name	Version	Resource file
Windows Driver Package	B4382	
Windows SDK	None	
Skylight	None	
Linux Drivers	S2.25N2.36	
Linux SDK	03.03.13	

#### 11.1.3 Released Files and Download Processes

Download Option	Files
Windows	Install Driver B4382
CWE/NVU files	Various PRI Packages



Download Option	Files
Windows Firmware and Configuration upgrade tools	<p>Instructions:</p> <ol style="list-style-type: none"> <li>1) This procedure assumes the module is starting from Release 7. If the module is running something older than Release 7, please follow the upgrade instructions from that release first.</li> <li>2) This procedure involves simple executables run on a Windows operating system. The module must enumerate a "DM" serial port over USB to execute this procedure. If the module is enumerating as an ECM device only (i.e. Ethernet over USB), please use the command "configEcm off" on the Linux shell to allow DM to enumerate in the USB composition.</li> <li>3) Download the Carrier configuration packages from the link below.</li> <li>4) Run the Carrier configuration tool: 9999999_9904559_SWI9X15Y_07.05.01.00_00_GENERIC_001.013_000-field.exe NOTE: This tool includes the modem and application processor firmware and carrier specific configuration. The modem will boot in Online mode following the application of this configuration.</li> <li>5) Run the Legato upgrade tool: legato-15.10.1.exe</li> <li>6) Optional: If ECM-only enumeration is desired, access the A5 console via UART, Ethernet, or USB (ADB), and issue command "configEcm on". Alternatively use "configEcm" to list optional parameters for the ECM configuration.</li> </ol> <p>Links:</p> <ol style="list-style-type: none"> <li>1) Carrier Configurations: Generic Carrier <a href="http://downloads.sierrawireless.com/legato/1510/wp85/9999999_9904559_SWI9X15Y_07.05.01.00_00_GENERIC_001.013_000-field.exe">http://downloads.sierrawireless.com/legato/1510/wp85/9999999_9904559_SWI9X15Y_07.05.01.00_00_GENERIC_001.013_000-field.exe</a></li> <li>2) Legato: <a href="http://downloads.sierrawireless.com/legato/1510/wp85/legato-15.10.1.exe">http://downloads.sierrawireless.com/legato/1510/wp85/legato-15.10.1.exe</a></li> </ol>

## 11.2 Software Changes Description

This section describes significant changes since SWI9X15Y 7.0 Release 7.

### 11.2.1 Validated Corrections / Improvements

ID	Title	Description	Impacted Domain
85659 / 86259 / 3633	Product Name update	Remove -G from product name	System
3572	Remove WP71 target	Remove wp71 build target	System
Various	WP750x	Add initial support for WP750x hardware variants	System
Various	Legato 15.10.1.Beta	This release package includes and was validated with Legato 15.10.1.Beta.	Legato
86447	Legato version string	Updated file location to retrieve Legato version	Legato

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ID	Title	Description	Impacted Domain
86312	Qualcomm stack baseline	Update Qualcomm stack baseline to M9615ACETWMLZD5513303	Modem
Various	AirVantage	Various LWM2M updates for AirVantage	AirVantage
85609 / 3588	GSM high band desense	Fix issues with desense during voice call in high band GSM Rx path	RF
86096	UART2	Service map to UART2 should return ERROR	AT
85575	AT!LTEINFO	Add support for AT!LTEINFO	AT

### 11.3 Known Issues

This section presents all known issues in this release.

ID	Title	Description	Impacted Domain
80393	USB Selective Suspend not supported	USB Selective Suspend is not supported yet. Additional side effect of this asserts <code>/dev/usb_link</code> wakelock, preventing the system from entering power collapse state and reaching minimal power consumption.	USB
Various	ADC Support	Some ADC interfaces (2-3) are not implemented	ADC
Various	On-board Image Switching	On-board Image Switching is not supported in this release. Host-based Image Switching is supported. A Generic carrier configuration will be provided.	Image Switching
Various	Audio is not supported	Audio is not supported in this release. The USB audio interface is exposed by default, and call control functionality is supported, but sound is not functional.	Audio
Various	Firmware upgrade via Developer Studio is not supported in this release	Customer cannot use Developer Studio to upgrade to this release.	Developer Studio
Various	YAFFS2 Not supported for rootfs	YAFFS2 is not supported for rootfs image, but is available when building the WP85 release from source. If loading rootfs directly, use the squashfs "2k.ubi" image, example: <code>mdm9x15-image-minimal-swi-mdm9x15.2k.ubi</code>  The CWE files generated by the build process contain the squashfs image.	rootfs format
None	FOTA	FOTA is not yet officially supported	FOTA

In Addition to the listed known issue, the following features have not been tested.

Firmware download over UART

Internal RTC

VGPIO pin



## 12 SWI9X15Y 7.0 Release 7

This section describes the changes since the previous release.

### 12.1 Software Release Description

#### 12.1.1 Release identification

Component	Revision
Boot loader	SWI9X15Y_07.04.06.00 2015/10/30 10:49:23
Modem	SWI9X15Y_07.04.06.00 2015/10/30 10:49:23
Application	SWI9X15Y_07.04.06.00 2015/10/30 13:25:12
Legato	15.10.0.Beta
Binary Size	45MB (compressed binaries)
IMEI SV	40
Qualcomm Stack Version	AMSS 9x15 5.5.1.32 Post CS (M9615ACETWMLZD55132)
Supported H/W	WP8548-G – DV2 and above

#### 12.1.2 Software Tools Versions

S/W Tools Name	Version	Resource file
Windows Driver Package	B4368	
Windows SDK	None	
Skylight	None	
Linux Drivers	S2.25N2.35	
Linux SDK	03.03.12	

#### 12.1.3 Released Files and Download Processes

Download Option	Files
Windows	Install Driver B4368
CWE/NVU files	Various PRI Packages

Download Option	Files
Windows Firmware and Configuration upgrade tools	<p>Instructions:</p> <ol style="list-style-type: none"> <li>7) This procedure involves simple executables run on a Windows operating system. The module must enumerate a "DM" serial port over USB to execute this procedure. If the module is enumerating as an ECM device only (i.e. Ethernet over USB), please use the command "configEcm off" on the Linux shell to allow DM to enumerate in the USB composition.</li> <li>8) Download the Customer and Carrier configuration packages from the links below.</li> <li>9) Run the applicable Customer configuration tool (see Links below for instructions): 1102621_9904889_WP8548-G_07.04.06.00_00_Generic_001.000_000-field.exe Or 9101011_5501011_WP8548-G_07.04.06.00_00_DevKit_001.013_000-field.exe NOTE: This tool includes the full Release 7 firmware, including Legato 15.10.0.Beta, and several important platform related configuration. The modem will boot in Airplane mode if this is the first application of this configuration.</li> <li>10) Run the Carrier configuration tool: 9999999_9904559_SWI9X15Y_07.04.06.00_00_GENERIC_001.010_000-field.exe NOTE: This tool includes the modem and application processor firmware and carrier specific configuration. The modem will boot in Online mode following the application of this configuration.</li> <li>11) Optional: If ECM-only enumeration is desired, access the A5 console via UART, Ethernet, or USB (ADB), and issue command "configEcm on". Alternatively use "configEcm" to list optional parameters for the ECM configuration.</li> </ol> <p>Links:</p> <ol style="list-style-type: none"> <li>3) Customer Configurations: Select the appropriate customer configuration to upgrade your device. Execute AT command AT!PRIID? to determine the correct upgrade path. <ol style="list-style-type: none"> <li>i. "PRI Part Number: 9904889" - Beta release generic configuration <a href="http://downloads.sierrawireless.com/legato/1510/wp85/1102621_9904889_WP8548-G_07.04.06.00_00_Generic_001.000_000-field.exe">http://downloads.sierrawireless.com/legato/1510/wp85/1102621_9904889_WP8548-G_07.04.06.00_00_Generic_001.000_000-field.exe</a></li> <li>ii. "PRI Part Number: 5501011" - Early sample configuration <a href="http://downloads.sierrawireless.com/legato/1510/wp85/9101011_5501011_WP8548-G_07.04.06.00_00_DevKit_001.013_000-field.exe">http://downloads.sierrawireless.com/legato/1510/wp85/9101011_5501011_WP8548-G_07.04.06.00_00_DevKit_001.013_000-field.exe</a></li> </ol> </li> <li>4) Carrier Configurations: Generic Carrier <a href="http://downloads.sierrawireless.com/legato/1510/wp85/9999999_9904559_SWI9X15Y_07.04.06.00_00_GENERIC_001.010_000-field.exe">http://downloads.sierrawireless.com/legato/1510/wp85/9999999_9904559_SWI9X15Y_07.04.06.00_00_GENERIC_001.010_000-field.exe</a></li> </ol>

## 12.2 Software Changes Description

This section describes significant changes since SWI9X15Y 7.0 Release 6.

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### 12.2.1 Validated Corrections / Improvements

ID	Title	Description	Impacted Domain
Various	Legato 15.10.0.Beta	This release package includes and was validated with Legato 15.10.0.Beta.	Legato
84306	Fixed GPIO configuration preventing system from entering LPM	An incorrect GPIO configuration caused a Wake lock to be held indefinitely on the application processor, preventing the processor from entering low power mode	Sleep
Various	Fixed Data connectivity failures observed with Linux SDK 03.03.11	Data Connectivity is resolved in Linux SDK release 03.03.12. SWI9X15Y Release 7 was validated with SDK 03.03.12.	Linux SDK
85171	Added default support for ECM Interface	ECM Interface may be enumerated by default, depending on customer preference.	USB
85410	Fixed modem instability when LWM2M Observe feature is enabled on the AVMS server	When a specific AVMS feature is enabled on the server, devices without this fix will reset upon connecting to the AVMS server. The AVMS feature is not enabled on the server at the time of this release, but will be enabled in the future. Devices with AVMS connectivity in the field must have this fix when the feature becomes active.	AVMS/ Stability
3423	Fixed device selection for YAFFS2 at mount time	Fixed assumption that the device passed to mount command is always mtd device. This issue led to file system erasure if the device passed to mount command was not mtd device.	Storage/ Stability

### 12.3 Known Issues

This section presents all known issues in this release.

ID	Title	Description	Impacted Domain
80393	USB Selective Suspend not supported	USB Selective Suspend is not supported yet. Additional side effect of this asserts /dev/usb_link wakelock, preventing the system from entering power collapse state and reaching minimal power consumption.	USB
Various	ADC Support	Some ADC interfaces (2-3) are not implemented	ADC
Various	On-board Image Switching	On-board Image Switching is not supported in this release. Host-based Image Switching is supported. A Generic carrier configuration will be provided.	Image Switching
Various	Audio is not supported	Audio is not supported in this release. The USB audio interface is exposed by default, and call control functionality is supported, but sound is not functional.	Audio
Various	Firmware upgrade via Developer Studio is not supported in this release	Customer cannot use Developer Studio to upgrade to this release.	Developer Studio

ID	Title	Description	Impacted Domain
3234	Module does not fully boot if no UART is available to the A5	<p>Default configuration assigns UART2 to the A5 console. If the UART mapping is modified to assign neither UART to the A5, the boot process does not complete, and the device cannot be re-configured to remove the faulty configuration.</p> <p>Recovery from this issue requires a firmware image to be downloaded containing a solution for the root cause, which is not available yet.</p> <p>UART allocation is modified using AT!MAPUART. <b>Please do not modify the UART allocation via AT commands with this release due to this issue.</b></p>	Stability
Various	YAFFS2 Not supported for rootfs	<p>YAFFS2 is not supported for rootfs image, but is available when building the WP85 release from source. If loading rootfs directly, use the squashfs "2k.ubi" image, example: mdm9x15-image-minimal-swi-mdm9x15.2k.ubi</p> <p>The CWE files generated by the build process contain the squashfs image.</p>	rootfs format
None	MangOH Ethernet and USB type A in GSM mode	<p>During GSM transmit bursts an LDO on MangOH DV2 may signal poor power quality, which triggers a short (1.5msec) pulse on the RESET_IN and System_Reset signals.</p> <p>The System_Reset pulse triggers a reset of the USB3503 and LAN9514 devices on MangOH, putting them out of sync with the WP8548-G, and connectivity of the Ethernet port and USB Type A connector is lost.</p> <p>MangOH DV3 resolves this issue by removing R402 based on findings that the LDO's power quality assessment is not valid for this use. Users of MangOH DV2 may intermittently experience loss of Ethernet/USB Type A connection during and after GSM transmit.</p>	MangOH/HSIC

In Addition to the listed known issue, the following features have not been tested.  
 Firmware download over UART  
 Internal RTC  
 VGPIO pin



## 13 SWI9X15Y 7.0 Release 6

This section describes the changes since the previous release.

### 13.1 Software Release Description

#### 13.1.1 Release identification

Component	Revision
Boot loader	SWI9X15Y_07.04.01.01 2015/10/01 17:45:03
Modem	SWI9X15Y_07.04.01.01 2015/10/01 17:45:03
Application	SWI9X15Y_07.04.01.01 2015/10/01 20:53:40
Legato	15.09.0.Beta
Binary Size	45MB (compressed binaries)
IMEI SV	40
Qualcomm Stack Version	AMSS 9x15 5.5.1.32 Post CS (M9615ACETWMLZD55132)
Supported H/W	WP8548-G – DV2

#### 13.1.2 Software Tools Versions

S/W Tools Name	Version	Resource file
Windows Driver Package	B4368	
Windows SDK	None	
Skylight	None	
Linux Drivers	S2.24N2.34	
Linux SDK	03.03.10	

#### 13.1.3 Released Files and Download Processes

Download Option	Files
Windows	Install Driver B4368
CWE/NVU files	Various PRI Packages



Download Option	Files
Windows Firmware and Configuration upgrade tools	<p>Instructions:</p> <p>12) Download the Customer and Carrier configuration packages from the links below.</p> <p>13) Run the Customer configuration tool: 9101011_5501011_WP8548-G_07.04.01.01_00_DevKit_001.012_000-field.exe NOTE: This tool includes the full Release 6 firmware, including Legato 15.09.0.Beta, and several important platform related configuration changes. The modem will boot in Airplane mode following the application of this configuration.</p> <p>14) Run the Carrier configuration tool: 9999999_9904559_SWI9X15Y_07.04.01.01_00_GENERIC_001.009_000-field.exe NOTE: This tool includes the modem and application processor firmware and carrier specific configuration. The modem will boot in Online mode following the application of this configuration.</p> <p>Links:</p> <p>5) Generic Customer Configuration <a href="http://downloads.sierrawireless.com/legato/1509/wp85/9101011_5501011_WP8548-G_07.04.01.01_00_DevKit_001.012_000-field.exe">http://downloads.sierrawireless.com/legato/1509/wp85/9101011_5501011_WP8548-G_07.04.01.01_00_DevKit_001.012_000-field.exe</a></p> <p>6) Generic Carrier Configuration <a href="http://downloads.sierrawireless.com/legato/1509/wp85/9999999_9904559_SWI9X15Y_07.04.01_01_00_GENERIC_001.009_000-field.exe">http://downloads.sierrawireless.com/legato/1509/wp85/9999999_9904559_SWI9X15Y_07.04.01_01_00_GENERIC_001.009_000-field.exe</a></p>

## 13.2 Software Changes Description

This section describes significant changes since SWI9X15Y 7.0 Release 5.

### 13.2.1 Validated Corrections / Improvements

ID	Title	Description	Impacted Domain
83943	Add Qualcomm M9615ACETWMLZD55132	Add Qualcomm M9615ACETWMLZD55132	Modem
Various	Legato 15.09.0.Beta	This release package includes and was validated with Legato 15.09.0.Beta.	Legato
2739	Ring Indicator (RI) APIs	Ring Indicator GPIO is provided in sysfs with alias "gpioRI" for all supported product types, to provide a single interface to Legato RI APIs.	BSP
82928	Safe Power Remove pin	Added support for the Safe Power Remove pin (SAFE_PWR_REMOVE)	BSP
83726	Wake on WWAN pin	Added support for Wake on Wireless WAN feature (WAKE_ON_WWAN pin)	BSP
80448	TX_ON pin	Added support for TX_ON feature, disabled by default. Currently configurable per SKU – no customer configurability available yet.	BSP
83414	Fixed intermittent crash observed during Application-Over-the-Air (AOTA) download from AVMS	Resolved unreleased resources leading to possibility of insufficient flash client availability during AOTA	Stability
83465	Add customization to control kernel boot messages on console	Kernel boot time can be reduced by disabling debug messages on console. Default configuration for samples enables boot messages for debugging support.	Kernel

Template #:	4117965	Revision:	01.11
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ID	Title	Description	Impacted Domain
Various	Firmware Over the Air	FOTA will be supported when upgrading from this release to a newer release. Upgrading to this release from a previous release may fail to complete due to multiple known issues with previous releases, and will result in the AVMS job being stuck in progress.	AVMS FOTA
None	Validated Clock outputs	Validated System and Sleep clock outputs	External Clocks

### 13.3 Known Issues

This section presents all known issues in this release.

ID	Title	Description	Impacted Domain
80393	USB Selective Suspend not supported	USB Selective Suspend is not supported yet. Additional side effect of this prevents the system from entering power collapse state and reaching minimal power consumption.	USB
Various	ADC Support	Some ADC interfaces (2-3) are not implemented	ADC
Various	On-board Image Switching	On-board Image Switching is not supported in this release. Host-based Image Switching is supported. A Generic carrier configuration will be provided.	Image Switching
Various	Audio is not supported	Audio is not supported in this release. The USB audio interface is exposed by default, and call control functionality is supported, but sound is not functional.	Audio
84306	Incorrect GPIO configuration preventing system from entering LPM	An incorrect GPIO configuration causes a Wake lock to be held indefinitely on the application processor, preventing the processor from entering low power mode	Sleep
Various	Data connectivity failures with Linux SDK 03.03.11	Data Connectivity failures observed with Linux SDK release 03.03.11. SWI9X15Y Release 6 was validated successfully with SDK 03.03.10.	Linux SDK
Various	Firmware upgrade via Developer Studio is not supported in this release	Customer cannot use Developer Studio to upgrade to this release.	Developer Studio
85171	ECM Interface	ECM Interface is not enumerated by default	USB

In Addition to the listed known issue, the following features have not been tested.

Firmware download over UART

Internal RTC

VGPI0 pin

Template #:	4117965	Revision:	01.11
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## 14 SWI9X15Y 7.0 Release 5

This section describes the initial external SWI9X15Y 7.0 release.

### 14.1 Software Release Description

#### 14.1.1 Release identification

Component	Revision
Boot loader	SWI9X15Y_07.03.03.00 2015/08/19 14:47:45
Modem	SWI9X15Y_07.03.03.00 2015/08/19 14:47:45
Application	SWI9X15Y_07.03.03.00 2015/08/19 19:05:12
Legato	15.08.0.Beta.rc2
Binary Size	45MB (compressed binaries)
IMEI SV	40
Qualcomm Stack Version	AMSS 9x15 5.5.1.31 Post CS (M9615ACETWMLZD55131)
Supported H/W	WP8548-G – DV2

#### 14.1.2 Software Tools Versions

S/W Tools Name	Version	Resource file
Windows Driver Package	B4323	
Windows SDK	None	
Skylight	None	
Linux Drivers	S2.24N2.33	
Linux SDK	03.03.10	

#### 14.1.3 Released Files and Download Processes

Download Option	Files
Windows	Install Driver B4323
CWE/NVU files	Various PRI Packages

### 14.2 Software Changes Description

This section describes significant changes since SWI9X15Y 6.0 Release 4.1 [R-1].

#### 14.2.1 Validated Corrections / Improvements

ID	Title	Description	Impacted Domain
Various	Linux kernel 3.14.29	Upgrade kernel to Linux swi-mdm9x15 3.14.29ltsi-yocto-standard	OS



ID	Title	Description	Impacted Domain
80974	Partition table allocates 256MB flash for Linux (previously)	Partition table update applies to new samples only. Field upgrade devices retain the original Linux flash partition sizes.	Storage
81984	W_DISABLE polarity is inversed	W_DISABLE switch polarity was implemented incorrectly in SWI9X15Y 6.0. After upgrading devices, the switch will need to be inverted in order for the modem to enable the radio (i.e. disable Airplane Mode)	W_DISABLE
3108	WP8548-G GPIO support in sysfs	Add support for external GPIO in GPIO class driver, allowing for a sysfs entry in /sys/class/gpio/ for external GPIO pins accessible by the application processor	GPIO
81833	DR_SYNC Support	Add support for GPS Dead Reckoning	DR_SYNC
81376	Update Reset Pin debounce time to match PTS documentation	Reset Pin debounce time is 32msec as per PTS	RESET_IN
81640	Enable modem voice call control	Modem call control is supported in this release. See Known Issues for limitations.	Voice
81379	Disable unsolicited notifications on the AT port	Sierra unsolicited notifications on the AT interface are disabled by default.	AT

### 14.3 Known Issues

This section presents all known issues in this release.

ID	Title	Description	Impacted Domain
80393	USB Selective Suspend not supported	USB Selective Suspend is not supported yet. Additional side effect of this prevents the system from entering power collapse state and reaching minimal power consumption.	USB
80448	TX_ON Indicator is not supported	TX_ON Indicator is not supported	TX_ON
Various	ADC Support	Some ADC interfaces (2-3) are not implemented	ADC
Various	On-board Image Switching	On-board Image Switching is not supported in this release. Host-based Image Switching is supported. A Generic carrier configuration will be provided with initial samples.	Image Switching
2739	Ring Indicator Legato APIs not supported	Ring Indicator pin is not exposed to Legato for use with Legato APIs.	Legato PA
82928	Safe Power Remove pin	Safe Power Remove pin is not implemented	BSP
Various	Audio is not supported	Audio is not supported in this release. The USB audio interface is exposed by default, and call control functionality is supported, but sound is not functional.	Audio
83414	Intermittent crash observed during Application-Over-the-Air (AOTA) download from AVMS	Intermittent crash observed during AOTA download from AVMS.	Stability

In Addition to the listed known issue, the following features have not been tested.

Field upgrade support from SWI9X15Y 6.0 Releases

Firmware download over UART

Internal RTC

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VGPIO pin  
Clock output pins  
External antenna control  
WAKE pin

## 15 Troubleshooting

Please contact customer service for support and debug

## 16 Certification Description

None

## 17 Restrictions and Additional Information

This section presents additional information or restrictions that must be taken into account.

ID	Description (What/When)	Impacted Domain