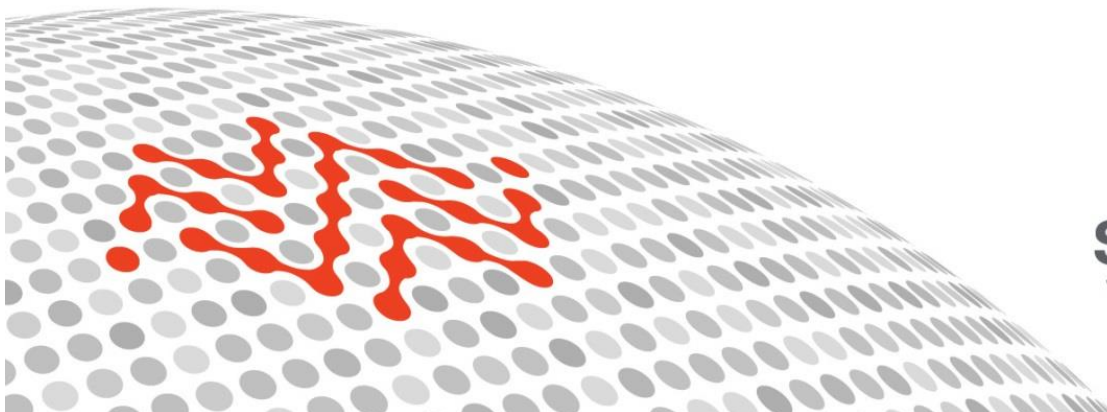# Legato Release Notes

Release 15.10 Beta

Important Notice

Due to the nature of wireless communications, transmission and reception of data can never be guaranteed. Data may be delayed, corrupted (i.e., have errors) or be totally lost. Although significant delays or losses of data are rare when wireless devices such as the Sierra Wireless modem are used in a normal manner with a well-constructed network, the Sierra Wireless modem should not be used in situations where failure to transmit or receive data could result in damage of any kind to the user or any other party, including but not limited to personal injury, death, or loss of property. Sierra Wireless accepts no responsibility for damages of any kind resulting from delays or errors in data transmitted or received using the Sierra Wireless modem, or for failure of the Sierra Wireless modem to transmit or receive such data.

Safety and Hazards

Do not operate the Sierra Wireless modem in areas where cellular modems are not advised without proper device certifications. These areas include environments where cellular radio can interfere such as explosive atmospheres, medical equipment, or any other equipment which may be susceptible to any form of radio interference. The Sierra Wireless modem can transmit signals that could interfere with this equipment. Do not operate the Sierra Wireless modem in any aircraft, whether the aircraft is on the ground or in flight. In aircraft, the Sierra Wireless modem MUST BE POWERED OFF. When operating, the Sierra Wireless modem can transmit signals that could interfere with various onboard systems.

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.

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DOCUMENT HISTORY

Version	Date	Description
15.10.Beta	November 13, 2015	initial PDF version

Contents

Welcome to Legato

This document provides important information about the Legato Beta 15.10 release.

You may also need to look at:

Upgrade Legato

Legato Beta 15.08 release notes

Legato Documentation

Downloads

These are the Legato 15.10 source packages, available at: **Legato Downloads**:

Sources package:

```
legato-15.10.0.Beta.rc5.tar.bz2
```

Toolchain for Linux PC i686 Legato 32 bits and Linux PC x86 64bits:

```
Legato-Dist-Source-mdm9x15-SWI9X15Y_07.04.06.00.tar.bz2
```

WP85 firmware package (with Legato):

```
spkgz-yocto-legato.cwe
```

Module Support

Effective the Legato 15.10 Beta, the WP71 module is no longer supported.

New Features

The following new features were included in this release:

GPIO APIs for WP85

[GPIO] A prototype GPIO interface has been added. This has only initial functionality; more features will be added in upcoming releases.

Currently known limitations include:

[Yocto] Exporting gpio6 causes ethernet connectivity to stop.

[GPIO] CF3 API:gpioCf3.c output functions not implemented.

Legato Framework

[AirVantage] le _info+le_avc / Provide versions that can be OTA-updated.

[Audio] le_audio / voicePromptMcc sample improvements.

[Clib] le_hex_StringToBinary was added.

[Def Files] Created the 'extern' section in .adef files for IPC bindings.

[Def Files] Add secure storage limit to adef.

[GNSS] Load file le_gnss_LoadExtendedEphemerisFile support added.

[GNSS] Add HOT, WARM and FACTORY restarts for GNSS engine.

[Logs] Added le_msg_TryOpenSessionSync().

[MkTool] Add app name to info.properties.

[#2568] [Modem Services] Mobile Terminated PDP (MTPDP) support added.

[Modem Services] le_antenna_GetAdc implemented.

[Sandbox] Config tool for strace usage added.

[Sample Apps] LWM2M AirVantage control sample app added.

[Tool] Improvement for json output added.

[#3006] [SMS] Enhanced error information for cm sms function fails.

Modifications

The following modifications were included in this release:

Legato Framework

[App OTA] LWM2M avcService doesn't keep track of SOTA across reboots.

[App OTA] SOTA uninstallation usability.

[App OTA] le_avc / False LE_AVC_NO_UPDATE received.

[App OTA] SOTA uninstallation usability.

[Audio] Legato API le_audio_SetPcm* return LE_BUSY.

[Audio] le_audio_Stop() returns LE_FAULT instead of LE_OK.

[Audio] audioDaemon crashes when le_audio_Play is called too close to le_audio_Stop (AMR file case).

[Audio] call le_audio_PlayFile(<..>, LE_AUDIO_NO_FD) rewind audio file when a play is already in progress.

[Audio] flush no response fixed.

[Audio] audioDaemon crashed when audio play stress test.

[Audio] modemDaemon crashed when Local Player During Two Calls.

[Builds] Fix localhost build errors.

[Build Script] virt: Internal URL to get image changed.

[eCall] le_ecall_GetTerminationReason return LE_MCC_TERM_REMOTE_ENDED when session stopped using le_ecall_End.

[Install] Legato install failure.

[#2668] [APP OTA] Application doesn't install if interrupted during download (SOTA).

[GNSS] Enable/disable the 'Extended Ephemeris' (XTRA file) doesn't work.

[Inspect Tool] JSON output misc fixes.

[Inspect Tool] Fixed minor defects discovered by coverity.

[Logs] Error messages unclear when invalid ASCII characters used in eCall MSD config.

[Logs] Fixed problem where liblegato.so failed to init when Legato not running.

[Logs] printf shouldn't require flush to write to logread.

[Low-level Messaging] Mutexes around sessionList to fix race condition in low-level messaging system.

[Modem Services] review timeout values of QMI services.

[Modem Services] Modem deamon crash when le_mcc_create called from a timer triggered thread.

[Modem Services] dcsDaemon return error when try to get DNS address for IPV6.

[Modem Services] le_mrc_SetManualRegisterMode / No error returned if too long MCC.

[Modem Services] RAT can't switch to AUTO rat when radio off/on.

[Modem Services] Fix absolute path in voicePromptMcc app.

[Modem Services] le_mcc_HangUp() returns an unexpected error code.

[Modem Services] le_mrc_SetManualRegisterMode / register failed.

[Modem Services] le_mrc_GetPreferredOperatorsList returns a List object reference on an empty list.

[SIM] le_sim_LocalSwapToXXXXXCallSubscription cause ModemService crash when SimToolkitEventHandler already registered.

[SIM] le_sim_LocalSwapToXXXXXCallSubscription cause ModemService crash when a SimToolkitEventHandler already registered.

[SMS] Some message are ignored in CreateRxMsgList and need to be manually deleted.

[SMS] SMS content returned by le_sms_GetText() is empty if contains special GSM 7bit character.

[SMS] SMS content returned by le_sms_GetText() is empty if contains special GSM 7bit character.

[unixSocket] Fixed fdleak and unterminated string in watchdog.

[Update Daemon] Removed redundancy between on-target "app" script and the Update Daemon.

Yocto

meta-swi

- o   Customer application does not compile under Yocto recipe.

- o   Add Legato application startupGpio.

- o   Provide git versions in kernel version string.

- o   Revert "Minimize startlegato.sh in Yocto build rcS.d".

- o   Minimize startlegato.sh in Yocto build rcS.d.

- o   Fixed include paths.

- o   Use SRCREV for git sources.

- o   Fixed improper ioctl parameter passing.

- o   Revert "Minimize startlegato.sh in Yocto build rcS.d".

- o   Remove s6 layer.

meta-swi-extras

- o   Remove swisync patch from Yocto (in meta-swi-extra).

- o   LK bootloader is missing in full_update_yocto.cwe.

- o   Clean up userrw partition.

- o   Duplicate ecm entries in usbmode cause console issues.

- o   Remove s6.

kernel

- o   No sound when playing a prompt on external speaker twice.

- o   Configure the GPIO 7 failed on linux side on AR7 module.

- o   YAFFS2 is using incorrect device at mount time.

- o   yaffs2 iterate function does not work properly.

- o   gpio_export() raise NULL pointer access.

Known Issues

Legato 15.10 Beta has the following known issues.

legato-af

[AirVantage] avcAppUpdate never deletes updateHandle.

[AirVantage] le_avc / secured update package / install does not end Legato.

[AirVantage] le_avc / Raise LE_AVC_*_PENDING more than once (should be resolved by, customer should retest).

[AirVantage] le_avc / Provide more detailed install result.

[AirVantage] le_avc / avcStart crash if security-unpack returns an error.

[Audio] le_audio+le_ecall / le_ecall_SendMsd failure + Default MSD transmission.

[Audio] Play pause not work.

[Audio] Unable to connect 2 playback stream on the same connector.

[Audio] PCM Configuration when only Tx or Rx is disconnected must be not possible.

[Audio] Too many open files error received when playing stress dtmf test.

[Audio] Strange behavior when sending 1 second log inband dtmf, leading to modem crash.

[Audio] on Modem RX stream, le_audio_SetGain and le_audio_GetGain disagree on gain value.

[Audio] USB delay about 3-5 seconds when call establish.

[Config Tool] le_arg config tool can't set negative node values.

[Def Files] can't add Legato application user to a Linux group.

[Doc] Legato User Doc - EXECINAPP is incorrect.

[eCall] PSAP eCall clear-down should stop the redial after the MSD is stopped.

[eCall] Configdb configuration lost after legato upgrade.

[eCall] no location update done when setting up an eCall in only mode 9x15.

[eCall] In only Mode the UE deregister just after clear down when it shall wait for T10(12h) to expire.

[eCall]:State obtained is not correct after the Ecall session is Ended using legato API.

[GDB] Inconsistent stack when debugging on WP85.

[Modem Services]Can't get remote number when incoming call.

[Modem Services] le_data - udhcpc process is launched for every le_data_Request and is not killed when le_data_Release is called.

[Modem Services] AR8652 le_mdc_SetPDP sets always IP PDP profile even if LE_MDC_PDP_IPV4V6 is set.

[Modem Services] Disconnection reason is erroneous when using LTE or GSM.

[Modem Services] le_mrc_GetRegisterMode() doesn't return mcc neither mnc in automatic registration mode.

[Modem Services] le_sms + le_mcc / Unexpected call release with SERVICE_TEMPORARILY_OUT_OF_ORDER.

[Modem Services] Legato startup fails after a series of FTM tests (pending product team testing on failed unit).

[Modem Services] event missed from legacy App: LE_MRC_REG_HOME.

[Power Management] can't enter LPM on WP85 BSP - 9x15.

[Positioning] le_gnss_ForceColdRestart has no effect.

[SIM] UICC - le_sim_LocalSwapToXXXSubscription always return LE_FAULT if a simtoolkit event handler have been registered.

[SMS] can't receive SMS Cell Broadcast.

[SMS] content returned by le_sms_GetText() is empty if contains special GSM 7bit character.

Documentation

[Doc] Sample Apps docs ".wp85".

[Doc] AirVantage install app use .update extension.

[Doc] Basic - Build App additions.

[Doc] Audio API improvements.

[Doc] RI warning removed.

[Doc] Unsandboxed app limits.

[Doc] Ascii graphic alignment error.

[Doc] Config tree transaction timeout setting.

[Doc] Remove ecall sample app unused dox file.

[Doc] UART how to customize topic.

[Doc] Removed word 'foundation' from Services topics.

[Doc] wp85 and mangOH topics ar/wp references.

[Doc] Restructure Services APIs intro topics.

[Doc] Rename and move Lang Independent topics.

[Doc] Fixed documentation for security-pack tool.

[Doc] Terminology in low-level messaging system is needs to match other documentation.

[Doc] Add LWM2MAirVantage Control sample app

[Doc] Add generic GPIO service to docs