JULY 18, 2014 V1.1

DA14580

Software Release Notes for version 3.0.4

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1.0 Introduction

1.1 Scope

This document authorizes the official software release of the DA14580 software stack from Dialog Semiconductor.

1.2 Terms and abbreviations

BTLE BlueTooth Low Energy

1.3 Release Data

PROJECT	BTLE-SDK
RELEASE DATE	18 July 2014
VERSION NR.	3.0.4 (based on v.3.0.3.270 & 3.50.1.28)
RELEASE TYPE[1]	Official Release (Appendix I)
RELEASE MASTER	Ioannis Papanikos

1.4 References

1.5 History

VERSION	RELEASE MASTER	DATE
3.0.3	Ioannis Papanikos	14 Jul 2014
3.0.2.1	Ioannis Papanikos	20 Jun 2014
3.0.2.0	Ioannis Papanikos	28 Mar 2014
3.0.1.65	Ioannis Papanikos	20 Feb 2014
2.0.4	Ioannis Papanikos	23 Dec 2013
2.0.3.115	Ioannis Papanikos	11 Dec 2013
2.0.3.111	Ioannis Papanikos	06 Dec 2013
2.0.3.102	Ioannis Papanikos	29 Nov 2013
2.0.2.92	Ioannis Papanikos	8 Nov 2013
2.0.1.39	Ioannis Papanikos	11 Oct 2013
2.0.1.38	Ioannis Papanikos	07 Oct 2013
2.0.1.25	Ioannis Papanikos	24 Sep 2013

[1] Releases can be of the following types: FULL, RELEASE CANDIDATE, ENGINEERING, PATCH or BINARY

2.0 Release Description

2.1 Major Changes

#	DESCRIPTION
FEATURES	
1	Support of UART2 port for Debug Logging
2	Add throughput evaluation application (UM-B-030)
3	Support Software Upgrade Over The Air (SUOTA)
	Support a dual image bootloader for system firmware upgrade. (UM-B-012).
4	Add a new tool, mkimage, for adding the header in the beginning of the application binary needed for the firmware update OTA.
5	Add CFG_PRF_SAMPLE128 in template project configuration
6	Support 6 connections in proximity monitor host application.
7	Minor changes in Peripheral Drivers and Examples
8	Support new Profiles: Cycling Power Profile & Location and Navigation Profile
9	Support of integrated processor mode with GTL interface. More information is given in UM-B-017.
10	DA14580 wakeup mechanism using an external GPIO (ie CTS or SPI EN). More information is given in AN-B-026.
11	PWM4 moved to P0_0 from P1_2
12	-Modify the HardFault and the NMI Handlers to output the stacked info (R0, R1, R3, R3, R12, LR, PC and PSR) to the console when an exception of this kind occurs. The flag PRODUCTION_DEBUG_OUTPUT must be included in the DA14580_config.h to enable this functionality. If it is enabled then the PRODUCTION_DEBUG_PORT and PRODUCTION_DEBUG_PIN must also be defined to set the UART Tx pin to be used. This functionality can be used only in Production Mode (DEVELOPMENT_DEBUG == 0). -Modify the HardFault handler so that, when in Production Mode, it will turn on the WDOG and set it to '1' to force an NMI interrupt after 10.24ms and an invocation of the NMI Handler (which will eventually cause a Soft Reset).
13	Add app_last_rwble_evt_get() function returning the value of the last BLE event. It can be used to synchronize application's tasks with BLE activity
14	RXRSSI to dBm conversion formula changed to dBm = 0.474 * RXRSSI - 112.4
15	Add Near Field Mode support. Set NEAR_FIELD_MODE_ENABLED flag to enable it
16	Added support for default XTAL16M trim value if it's not programmed in OTP.
BUG FIXES	
1	UART TX pending packets causing crash. When UART communication was halted or was slow related to created ADV_REPORT
2	Changed channel assessment parameters (the previous ones where creating too many channel updates)
ROM PATCHES	
1	**Kernel timer bug.** Root cause is a fault mixed 16bit/32bit arithmetic. Patched function: cmp_abs_time(). Function **app_timer_set**() must be used as wrapper of the ke_timer_set(). It ensures that the delay parameter of the call to ke_timer_set() is within limits.
2	**Rejection of Peer request bug.** SW implementation was rejecting any peer device request (read/write) when server had sent indication and was waiting for confirmation. Patched Function: l2cc_pdu_recv_ind_handler(). Changes applied also in the profiles (cscp, glp, rscp, prf_utils).
3	**Security manager bug** Reserved bits checked in Pairing PDU leads to PTS test TC_BV_04_C Failure. Patched Functions: smpc_send_pairing_req_ind(), smpc_check_pairing_feat(), smpc_pairing_cfm_handler().
4	**Channel Map update** When operating as a slave and the Slave Latency of an established connection is not 0 then upon reception of an LL_CHANNEL_MAP_UPD or LL_CONN_PARAMS_UPD message with a connInstant value set at a "latency anchor point", the connection is dropped immediately at the next wake-up. If the connInstant is set at a "connection anchor point" that the 580 has scheduled to wake-up to serve it then no problem occurs. The patched functions are: llc_con_update_req_ind() and llc_ch_map_req_ind().

5	**Enable broadcast mode for connected peripheral, Supporrt Multiple "Service Data" structures in AD** BLE 4.0 specification permits a peripheral to be connected to a central and perform non-connectable advertising at the same time (this is required by CPP tests in PTS). The stack did not allow this. BLE 4.0 specification permits multiple instances of "Service Data" structures in AD. The stack allowed only 1 instance of this AD type. The patched functions is gapm_adv_op_sanity()
PROFILES	
1	Certified Profiles: CSCP, CSCS, GLP, GLS, HTP, HTS, RSCP, RSCS, ANP, ANS, BLP, BLS, CTS, HRP, HRS, NDCS, PASP, PASS, RTUS, TIP. **CPP & LNP**
Documentation	
1	Software documentation is available on the Dialog customer support portal. New user manuals and application notes added.

2.2 Known Issues or Limitations

#	DESCRIPTION
1	Watch Dog is disabled by default in external processor solutions.
2	GATTC_WRITE_NO_RESPONSE command is not currently supported by the Connection Manager.

2.3 Comments

- AN-B-025:DA14580 Using Timer0 provides a programming guideline describing a minor limitation when using Timer0 of the DA14580 and how to overcome it.
- SmartSnippets ver..3.2 is available in the Dialog's portal
- Connection Manager ver. 3.0.4 is available in the Dialog's portal

2.4 MAJOR Release Files

File Name	Description
DA14580_SDK_v_3 0 4.zip	RELEASE FILE
DA14580_Software_Release_Notes_v_3.0.4.doc	RELEASE NOTES

3.0 Release History

3.1 Version 3.0.2.1

#	DESCRIPTION
FEATURES	
1	Replaced DEVELOPMEMT__NO-OTP with DEVELOPMENT_DEBUG Replaced DEVELOPMENT__NO_OTP configuration directive with two new directives, in order to distinguish the case where project is in development/debug phase and the case of a project that the image is not programmed in OTP. New directives are: **DEVELOPMENT_DEBUG**: If defined, project is in development and debug phase. **APP_BOOT_FROM_OTP**: If defined it is denoted that applications image is programmed in OTP memory and OTP header is copied to System RAM during boot-loader's OTP copy process. If not defined application is downloaded to System RAM from a communication interface (UART, SPI, I2C) or Debugger. OTP header is not copied in System RAM and application accesses it in OTP.
2	Addition of **READ_NVDS_STRUCT_FROM_OTP** directive. When defined NVDS structure area in OTP memory will not be initialized by application image's hardcoded values. Must be written during production procedure.
3	New test added in the Production Test tool. More information can be found in document UM-B-008
4	Support Basic Development Kit. Added support for "Basic DK" UART gpio mapping through the HW_CONFIG_BASIC_DK flag in peripheral_setup.h
5	Change the data memory area in peripheral examples project from 0x20008000 to 0x8000. This is required for booting from UART in ES5
6	XTAL32 preferred setting applied: XTAL32K_CUR = 5,XTAL32K_RBIAS = 3.In Boost mode where XTAL32K_DISABLE_AMPREG is set to 1, XTAL32K_CUR is set to 1 after initialization.
7	Added flag USE_BAT_LEVEL_ALERT in peripheral_setup.h. The flag indicates if battery level alert is used. Added flag USE_PUSH_BUTTON in periph_setup.h that decides if the application will configure and use a push button. When the application is being built for Basic DK it is disabled. Otherwise it is enabled.
8	Support OTP, SPI and EEPROM programming through JTAG interface. Fix minor issues in SPI and EEPROM flash programmer. UART pin configuration is set by SnartSnippets. Support Basic DK.
9	Updated the RSSI to dBm conversion formula according to datasheet v1.63.
10	Modified the calculation of remaining battery life for CR2032.
BUG FIXES	
1	Modified sleep entry and sleep exit to correct a problem that caused loss of synchronization to the master (by 1 slot) due to delayed wakeup. The following functions have been modified: **Function BLE_WAKEUP_LP_Handler() in file rwble.c**: moved rf_reinit() to the SLP handler after the clock correction preparation has finished to reduce the transition delay from LP to SLP ISR and, consequently, the delay of the clock correction preparation **Function BLE_SLP_Handler() in file rwble.c**: rf_reinit() has been moved in here as described above **New function lld_sleep_compensate_func_patched() in file rwble.c**. This function includes the patch of the clock correction needed to solve the problem with the loss of synch to the master. **New variable rcx_slot_duration in file arch_system.c**: This variable has been added to reduce the delay of the lld_sleep_lpcycles_2_us_rcx_func() and, consequently, the overall delay of the clock correction algorithm.
2	Bug fix in ROM function uart_flow_off_func for UART RX timeout issue.
3	Changes in scatter configuration files da14580_scatter_config.h. The RW_IRAM50 section was overlapping with OTP Header data at address 0x20007F00. The section has been moved and is not starting from 0x20008000.
4	Fixing enumeration of Task ID's. The maximum number cannot exceed 63
5	RCX bug fix. One additional slot is being used for the clock correction algorithm in case of RCX clock. Without this patch it may happen that the clock correction algorithm delays too much the arrival of the CSCNT interrupt, which comes 1 slot later resulting in losing the FINEGTIM interrupt and the servicing of the BLE event
ROM PATCHES	
1	**Kernel timer bug.** Root cause is a fault mixed 16bit/32bit arithmetic. Patched function: cmp_abs_time(). Function **app_timer_set**() must be used as wrapper of the ke_timer_set(). It ensures that the delay parameter of the call to ke_timer_set() is within limits.

2	**Rejection of Peer request bug.** SW implementation was rejecting any peer device request (read/write) when server had sent indication and was waiting for confirmation. Patched Function: l2cc_pdu_recv_ind_handler(). Changes applied also in the profiles (cscp, glp, rscp, prf_utils).
3	**Security manager bug** Reserved bits checked in Pairing PDU leads to PTS test TC_BV_04_C Failure. Patched Functions: smpc_send_pairing_req_ind(), smpc_check_pairing_feat(), smpc_pairing_cfm_handler().
4	**Channel Map update** When operating as a slave and the Slave Latency of an established connection is not 0 then upon reception of an LL_CHANNEL_MAP_UPD or LL_CONN_PARAMS_UPD message with a connInstant value set at a “latency anchor point”, the connection is dropped immediately at the next wake-up. If the connInstant is set at a “connection anchor point” that the 580 has scheduled to wake-up to serve it then no problem occurs. The patched functions are: llc_con_update_req_ind() and llc_ch_map_req_ind().
PROFILES	
1	Certified Profiles: CSCP, CSCS, GLP, GLS, HTP, HTS, RSCP, RSCS, ANP, ANS, BLP, BLS, CTS, HRP, HRS, NDCS, PASP, PASS, RTUS, TIP.
Documentation	
1	Software documentation is available on the Dialog customer support portal.

#	Known Issues or Limitations
1	Watch Dog is disabled by default in external processor solutions.
2	GATTC_WRITE_NO_RESPONSE command is not currently supported by the Connection Manager.
3	In central role, disconnections may happen if multi-peripheral devices (>4) are connected and connection interval is updated.

3.2 Version 3.0.2.0

#	DESCRIPTION
FEATURES	
1	Support DA14580-01
2	New BLE Application structure (ref. to Porting Guide and document UM-B-003)
3	New Peripherals Drivers (SPI, EEPROM, ADC, battery, etc) are supported (ref. to document UM-B-004)
4	Support Channel Assessment & L2CAP fragmentation
5	CFG configuration settings have been moved to an include file (ref. to document UM-B-015)
6	Minor changes in FE API (ref. to Porting Guide)
7	Radio preferred settings are saved in a single include file (ref. to document UM-B-015)
8	Production test has been implemented as Application project 9 dk_apps\keil_projects\prod_test\prod_test_ES5)
9	New official UUID for SPOTA (0xFEF5), SPOTA initiator is also supported. 128-bit UUIDs are supported
10	Boot-loader and flash programmer application added (under /tools) .
11	Peripherals examples have been re-written and new examples have been added. (ref. to document UM-B-005)
12	An application example to demonstrate the external processor interface over SPI has been added (ref. to document UM-B-013)
13	RCX is supported. A configuration flag is added in projects’ da14580_config.h is added for low power clock source selection. #define CFG_LP_CLK 0x00 (default setting) where: 0x00: XTAL32, 0xAA: RCX, 0xFF: Select LP clock from corresponding field in OTP Header. (More details will be provided in the software architecture document). Maximum recommended connection interval (including slave latency) for the RCX usage is 2 sec
14	Scatter files structure has been changed (ref. to document UM-B-011)
15	Function custom_nvds_get_func added in jump_table[47] instead of the ROM function nvds_get_func. It reads the BT address from OTP header
16	Max supported connections is 6
17	Linker options any_placement=best_fit --datacompressor off added in keil projects
18	New test cases added in the production test tool. Production test tool binary files have been added under binaries folder (ref. to document UM-B-008)

	Note: In test command “stop_pkt_rx_stats”, the reported nb_packets_received_correctly is the total number of received packets
19	Dice and Keyboard reference applications will be released as separate versions
BUG FIXES	
1	SDK 2.04 patches have been fixed in ROM
2	Possible double memory free issue when GATT is executing an operation and operation message has been rescheduled into kernel. Rom function ke_task_schedule() replaced in SysRam
3	Memory leaks in GLPC, ANPS, TIPS profiles are fixed
4	Set rcx_period global as retained variable
ROM PATCHES	
1	**Kernel timer bug.** Root cause is a fault mixed 16bit/32bit arithmetic. Patched function: cmp_abs_time() Function **app_timer_set**() must be used as wrapper of the ke_timer_set(). It ensures that the delay parameter of the call to ke_timer_set() is within limits.
2	**Rejection of Peer request bug.** SW implementation was rejecting any peer device request (read/write) when server had sent indication and was waiting for confirmation Patched Function: l2cc_pdu_recv_ind_handler(). Changes applied also in the profiles (cscp, glp, rscp, prf_utils).
3	**Security manager bug** Reserved bits checked in Pairing PDU leads to PTS test TC_BV_04_C Failure Patched Functions: smpc_send_pairing_req_ind(),smpc_check_pairing_feat(), smpc_pairing_cfm_handler()
PROFILES	
1	Certified Profiles: CSCP, CSCS, GLP, GLS. HTP, HTS, RSCP, RSCS, ANP, ANS, BLP, BLS, CTS, HRP, HRS, NDCS, PASP, PASS, RTUS, TIP
Documentation	
	Software documentation is available on Dialog customer support portal
2	

#	Known Issues or Limitation
1	Watch Dog is disabled by default in Fully embedded applications
2	GATTC_WRITE_NO_RESPONSE command is not currently supported by Connection Manager.
3	In central role, disconnections may happen if multi-peripheral devices (>4) are connected and connection interval is updated.

3.3 Version 2.0.4

#	DESCRIPTION
FEATURES	
1	CFG_ES4 & CFG_LUT_PATCH compilation flags added in all applications
2	UART TX/RX ports are set to P0_4/P0_5 for all configurations. Default RTS/CTS are set to P0_3/P0_2
3	Improves switching between master devices in keyboard application. Ensure that master requesting connection is not the one that keyboard just disconnected even if a failed connection to another device has happened.
4	Supports production test tool for ES4/revC2 boards. More information can be found in document DA14580_Production_Test_Tool.doc
5	Improves the application's startup sequence: Delay loops have been removed from startup code in order to reduce time from boot to first advertise message. A startup flag is added instead of the delays to prevent system from going to sleep for 2 seconds, to ensure that low power clock is properly settled. Flag is initialized at the beginning of main_func(). rwip_sleep() checks it and clears it after if two seconds has been ticked from blecnt. With this startup time reduced to < 500ms.
BUG FIXES	
1	Fixes a bug in Keyboard application where the buffers of the last report sent to the host were not cleared in case of disconnection and could happen to enter in a new connection reporting garbage constantly.
2	Fixes a bug that caused the first connection to an iOS host to fail. ROM function smpc_handle_enc_change_evt() has been patched.
3	Applied patch in ROM code functions to fix connection failure issue in peripheral role. If packet transmitted from master in first RX window was lost, connection could not be established due to wrong scheduling of subsequent events.
Minor Changes from last Release	

1	Supports key matrix for the Microsoft Wireless 800 Keyboard
2	Modifies i2c driver for use when Watchdog is on
3	Change WDOG timer value to 0xC8
4	Renames folder fh_spotar => spotar_fh
Known ISSUES	
1	Insufficient Authentication. It fixed only for the peripheral devices.
2	Direct advertising fails when it's repeated many times.
3	Watch Dog is disabled by default as corner cases are not fully tested.

3.4 Version 2.0.3.115

#	DESCRIPTION
FEATURES	
1	Supports a first version of SPOTAR profile and a demo application for patching using SPI flash
2	Applies changes in rf registers
3	`KBD scatter file changed`
4	Adds dev_bdaddr in retention and changes NVDS to check and read BD address rom OTP
BUG FIXES	
1	Fixes a bug in UART driver. Function uart_init_func() moved to application code. File uart_init.c added in all projects using rom_symdef.txt ROM symbols file
2	Fixes a bug with BLE_CONNECTION_MAX_USER (em_map_ble_user.h
#	**Known ISSUES**
1	Insufficient Authentication. When peer is successfully authenticated and sends immediately a read request to a characteristic with "authentication required" permission, it is possible to get an Insufficient Authentication error
2	Watch Dog is disabled by default as corner cases must be tested.

3.5 Version 2.0.3.111

#	DESCRIPTION
FEATURES	
1	Supports ES4 chip with new configuration option ES4_CODE. LUT patch is enabled with the configuration option LUT_PATCH_ENABLED
2	New version of the Connection Manager (v. 2.0.3). It supports new option for the Production Tests
3	Adds PLL LUT update and updates RF calibration functionality (RF related)
4	Uses alternate ports when CFG_LUT_PATCH is defined. Adding missed GPIO reservation of ports 0_6, 07 for CTS/RTS.
5	Changes dice wakeup to only happen from accelerometer interrupt and not 10s BLE timer
6	Adds Watchdog functionality in all projects. To use it CFG_WDOG must be defined in C/C++ environment settings. More information can be found in Changes.log (commit 2.0.3.110)
BUG FIXES	
1	Fixes a bug in production tests. TX command was failing after 160 attempts
2	Fixes a stability bug in keyboard application (set_row_to_low()).

#	Minor Changes from last Release
1	Sets priority of WKUP Interrupt to 1.

#	Known Issues
1	Insufficient Authentication. When peer is successfully authenticated and sends immediately a read request to a characteristic with "authentication required" permission, it is possible to get an Insufficient Authentication error
2	Watch Dog is disabled by default as corner cases must be tested.

3.6 Version 2.0.3.102

#	Major Changes from last Release
FEATURES	
1	Data compression removed. Compression cannot be used due to OTP copy in deep sleep. Global data are overwritten by compressed in OTP

2	Removes SysRAM data memory areas above 0x7F00. Cannot be used for RW and ZI data, because OTP copy will overwrite with OTP header data.
3	Adds production test tool. Command line tool is stored under tools/prod_test/prod_test_cmds and the firmware under tools/prod_test/prod_test_es3 directory.
4	Sets safety margin of Waking up the system vs the XTAL16 trimming time.
BUG FIXES	
1	Fixes a bug that forced the user to run the debugger twice after a hard reset. sysram_case23.ini has been modified, the tick box "Load application at startup" in the debugger settings is not selected
#	**Known Issues**
1	Insufficient Authentication. When peer is successfully authenticated and sends immediately a read request to a characteristic with "authentication required" permission, it is possible to get an Insufficient Authentication error

3.7 Version 2.0.2.92

#	DESCRIPTION
FEATURES	
1	Adds Dice application. It requires specific hardware which is not included in the official HW Dev. Kit. Smart Dice application for iOS is also required and it's available in Apple Store.
2	Adds keyboard demo application. Hardware requirements are described in the DA14580 Keyboard Application Guide which is available in Dialog's Customer Support portal
3	Adds engineering examples for peripherals like UART, SPI flash, I2C EEPROM, PWM timer.
4	Adds Connection Manager window application. Available in Dialog's Customer Support portal
5	Adds Smart Snippets window application. Available in Dialog's Customer Support portal
6	Maximum 4 connections can be supported
7	RSSI value is based on RSSI_AVG_RD instead of RSSI_PH_RD
8	Updates the API for setting the system in sleep mode. A document to explain the API is available in Dialog Customer portal
9	Integrates a Slave latency patch.
10	Data Information Service (DIS) added in proximity embedded applications
BUG FIXES	
1	Bug Fix for stop transmitting data after some disconnections. Tx buffers were not flushed.
2	Patch object files have been updated for fixing the Null pointer bug
3	Fixes a bug in arch_printf function (app_utils.c)
#	**Minor Changes from last Release**
1	Proximity window applications (monitor and reporter) prompts user to enter COM port if it's missing
2	Fixes a compilation error when enabling CFG_PRF_CSCPC
#	**Known Issues**
1	Insufficient Authentication. When peer is successfully authenticated and sends immediately a read request to a characteristic with "authentication required" permission, it is possible to get an Insufficient Authentication error

3.8 Version 2.0.1.39

#	Major Changes from last Release
FEATURES	
1	New project (dk_apps/keil_projects/proximity/reporter_fe_usb)added for the USB Dongle
BUG FIXES	
1	none
#	**Minor Changes from last Release**
1	Minor changes of sleep CFG flags in Keil projects
2	
#	**Known ISSUES**
1	Stability issues with short connection interval

2	Deep-Sleep mode has not been fully tested
3	RF PHY settings not fully validated. This release should not be used for hardware qualification

3.9 Version 2.0.1.38

#	Major Changes from last Release
FEATURES	
1	LDO_RET_TRIM set to 0x7 for improving the stability in short connection intervals
2	Object files of the patches functions are stored into patch_obj directory under dk_apps
3	RF preferred settings has been updated
4	Proximity application ports moved to P0_6, P0_7, P0_8
BUG FIXES	
1	CFG project flags CFG_PRF_PROXM nCFG_PRF_PROXR changed to nCFG_PRF_PROXM CFG_PRF_PROXR for fixing a compilation bug for fully embedded proximity reporter
2	prf_cleanup is patched in order to solve the GATT disconnection cleanup issue
3	The patch of the lld_restart() changed in order to avoid the call when the interrupts are disabled. This was the cause for the hard fault exception.
#	**Minor Changes from last Release**
1	Added License file
2	Binaries files for the PC applications have been added under directory host_binaries\
#	**Known ISSUES**
1	Stability issues with short connection interval
2	Deep-Sleep mode has not been fully tested
3	RF PHY settings not fully validated. This release should not be used for hardware qualification

3.10 Version 2.0.1.25

#	Major Changes from last Release
FEATURES	
1	Initial version to support DA14580 – ES3
2	RW Software Version 4.0, LL v6.7.1 and HL v6.7.3 has been ported
3	DA14580 Fully Hosted proximity reporter application
4	DA14580 Fully Embedded proximity monitor application
5	DA14580 Fully Embedded proximity reporter application
BUG FIXES	
1	
2	
#	**Minor Changes from last Release**
1	Directory structure has been changed
#	**Known ISSUES**
1	Stability issues with short connection interval (<30msec)
2	Sleep mode has not been fully tested
3	RF PHY settings not fully validated. This release should not be used for hardware qualification

3.11 Version 1.0.6

#	Major Changes from last Release
FEATURES	
1	Changes to documentation Proximity example documentation has been updated
2	Extended sleep mode is added in proximity reporter application

3	Bug fix to improve radio quality

3.12 Version 1.0.2

#	Major Changes from last Release
FEATURES	
1	Changes to documentation Proximity example documentation has been added User Guide is updated with minor changes Software architecture is updated with minor changes
2	Changes to content: Added Proximity monitor application example, including a fully embedded application example on DA14580 and an windows application as a host application

3.13 Version 1.0.1

#	Major Changes from last Release
FEATURES	
1	Initial release -BETA- Peripheral demo application -User Guide - Software Architecture documentation - References for in depth knowledge

Appendix I: Versioning Rules

Each software version number string consists of 4 numbers. MAJOR.BRANCH.MINOR. BUILD
Versioning rules:
#MAJOR: It is increased by 1 only if the project undergoes a major modification, e.g. ROM changes. It practically changes only when the project sources undergo major restructuring affecting most of the repository. It is initialized at 1.
#BRANCH: Should be used in the case of concurrent projects that for special reasons need to be spun off the major repository. It corresponds to different versions of the repository code that have to be supported concurrently. In this case each branch number corresponds to a different GIT branch. The basic project has BRANCH id 0.
#MINOR: Odd numbers indicate Engineering (or Patch) versions, even numbers indicate Full release versions. Each release increases this number by one. After the release, the number is increased by 1 again. Therefore, Project releases correspond to release numbers like 2.0.1.xxx, 2.0.2.xxx. etc. The #MINOR number is initialized at 1.
#BUILD: The # BUILD number increases by 1 at every repository update and thus indicates the total number of changes since repository initialization. The BUILD number is initialized at 1.