

# Release Notes

## DA14585/DA14531 DSPS

### SW-B-022

#### **Abstract**

*This document contains the release notes for Dialog Semiconductor's DSPS application for DA14585 and DA14531, version 6.150.3.50*

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## 1 Terms and Definitions

API	Application Programming Interface
BLE	Bluetooth Low Energy (Bluetooth Smart)
CRC	Cyclic Redundancy Check
GA	General Access
GAP	Generic Access Profile
GATT	Generic ATTRIBUTE profile
GTL	Generic Transport Layer
LA	Limited Access
MTU	Maximum Transmission Unit
RAM	Random Access Memory

## 2 Release Data

**Table 1: Information Table**

<b>Software</b>	DSPS application
<b>Device Type</b>	DA14585/DA14531
<b>SDK Version</b>	6.0.14.1114
<b>Software Release Date</b>	11-Jun-2020
<b>Software Version Number</b>	6.150.4.50
<b>Software Release Type (Note 1)</b>	FULL(GA)

**Note 1** Releases can be of the following types: FULL (GA), FULL (LA), RELEASE CANDIDATE, ENGINEERING, PATCH or BINARY

## 3 License

Licenses that cover this release of GTL over I2C external processor application are listed in the licensing.txt file

DSPS\_6.150.4.50.zip\DA145xx\_DSPS\6.150.4.50\doc

## 4 Related Documentation and References

- [1] UM-B-88, DA14585/ DA14531 Serial Port Service Reference Application, Revision 1.2, User Manual, Dialog Semiconductor.

## 5 Release Description

### 5.1 Overview

This is a FULL(GA) release of the DSPS application.

### 5.2 New and Updated Features of 6.150.4.50

**Table 2: 6.150.4.50 New Features**

Feature Number	Description
1	cli_flash_programmer added
2	DISS support
3	CRC of configuration structure data check/update

### 5.3 Fixes and Improvements Since 6.150.3.45

**Table 3: 6.150.4.50 Fixes and Improvements**

Fix Number	Description
1	Fix stability and performance issues
2	Code cleanup
3	Move RAM initialization to exchange memory

### 5.4 Known Issues of 6.150.4.50

**Table 4: 6.150.4.50 Known Issues**

Issue Number	Description
1	

### 5.5 Known Limitations of 6.150.4.50

**Table 5: 6.150.4.50 Known Limitations**

Issue Number	Description
1	
2	

### 5.6 SDK Modifications of 6.150.4.50

**Table 6: 6.150.4.50 SDK Modifications**

Issue Num	File	Description
1	/sdk/app_modules/api/app.h	<ul style="list-style-type: none"> <li>Change in append_device_name() for configurable device name</li> </ul>

Issue Num	File	Description
		<ul style="list-style-type: none"> <li>Support for BLE_SPS_SERVER and BLE_SPS_CLIENT</li> </ul>
2	/sdk/app_modules/api/app_callback.h	<ul style="list-style-type: none"> <li>Changes in app_callbacks parameters</li> </ul>
3	/sdk/app_modules/api/app_suotar.h	<ul style="list-style-type: none"> <li>Make SPI and Product header position independent of SUOTA</li> </ul>
4	/sdk/app_modules/api/app_task.h	<ul style="list-style-type: none"> <li>Using gapc_cmp_evt_handler() from RAM to avoid assertion in ROM</li> </ul>
5	/sdk/app_modules/api/app_user_config.h	<ul style="list-style-type: none"> <li>Add scan_configuration struct</li> </ul>
6	/sdk/app_modules/src/app_common/app.c	<ul style="list-style-type: none"> <li>Support for BLE_SPS_SERVER, BLE_SPS_CLIENT and REMOTE_CONFIG.</li> <li>Change in append_device_name() for configurable device name</li> </ul>
7	/sdk/app_modules/src/app_common/app_task.c	<ul style="list-style-type: none"> <li>Using gapc_cmp_evt_handler() from RAM to avoid assertion in ROM</li> <li>Minor changes in connection disconnection request handlers</li> </ul>
8	/sdk/app_modules/src/app_default_hnd/app_default_handlers.c	<ul style="list-style-type: none"> <li>Support for BLE_SPS_SERVER and BLE_SPS_CLIENT</li> <li>CFG_ADC_CALIBRATION_DISABLE support</li> </ul>
9	/sdk/app_modules/src/app_entry/app_entry_point.c	<ul style="list-style-type: none"> <li>Support for BLE_SPS_SERVER, BLE_SPS_CLIENT and REMOTE_CONFIG</li> </ul>
10	/sdk/app_modules/src/app_suotar/app_suotar.c	<ul style="list-style-type: none"> <li>Support configuration structure update in SUOTA</li> <li>Generic handling of SPI functions</li> </ul>
11	/sdk/ble_stack/profiles/prf.c	<ul style="list-style-type: none"> <li>Support for BLE_SPS_SERVER, BLE_SPS_CLIENT and REMOTE_CONFIG</li> </ul>
12	/sdk/ble_stack/profiles/prf_utils.c	<ul style="list-style-type: none"> <li>Remove unused profile related functions</li> </ul>
13	/sdk/ble_stack/profiles/prf_utils_128.c	<ul style="list-style-type: none"> <li>Remove unused profile related functions</li> </ul>
14	/sdk/ble_stack/profiles/rwprf_config.h	<ul style="list-style-type: none"> <li>Support for BLE_SPS_SERVER, BLE_SPS_CLIENT and REMOTE_CONFIG</li> </ul>
15	/sdk/ble_stack/profiles/rwble/rwble.c	<ul style="list-style-type: none"> <li>Added BLE flow control functionality in BLE ISRs</li> </ul>
16	/sdk/common_project_files/da1458x_scatter_config.h	<ul style="list-style-type: none"> <li>Tx buffers changed to 8</li> </ul>
17	/sdk/common_project_files/scatterfiles/DA14531.sct	<ul style="list-style-type: none"> <li>Reduce size of patch_new_table and patch_orig_table in library</li> </ul>

Issue Num	File	Description
18	/sdk/platform/arch/main/arch_main.c	<ul style="list-style-type: none"> <li>Support for EXTERNAL_WAKEUP</li> <li>Add BLE flow control mechanism in scheduler</li> <li>Move RAM initialization to exchange memory</li> </ul>
19	/sdk/platform/arch/main/arch_rom.c	<ul style="list-style-type: none"> <li>Decision when patch functions from system library should be included</li> <li>Create new function for moving RAM initialization to exchange memory</li> </ul>
20	/sdk/platform/arch/main/arch_system.c	<ul style="list-style-type: none"> <li>Support for EXTERNAL_WAKEUP</li> <li>Configure SPI earlier than configuration storage usage</li> <li>Changes for moving RAM initialization to exchange memory</li> </ul>
21	/sdk/platform/arch/main/arch_system.h	<ul style="list-style-type: none"> <li>Changes for moving RAM initialization to exchange memory</li> </ul>
22	/sdk/platform/arch/main/arch_rom.h	<ul style="list-style-type: none"> <li>Changes for moving RAM initialization to exchange memory</li> </ul>
23	/sdk/platform/arch/main/jump_table.c	<ul style="list-style-type: none"> <li>Change Rx interrupt threshold to 2</li> </ul>
24	/sdk/platform/arch/arch.h	<ul style="list-style-type: none"> <li>Support for BLE flow control</li> <li>Support for EXTERNAL_WAKEUP</li> </ul>
25	/sdk/platform/arch/arch_api.h	<ul style="list-style-type: none"> <li>Add members to ble_metrics struct</li> </ul>
26	/sdk/platform/core_modules/common/api/co_bt.h	<ul style="list-style-type: none"> <li>Add more members in adv_channel_map enumeration</li> </ul>
27	/sdk/platform/core_modules/rwip/api/rwip_config.h	<ul style="list-style-type: none"> <li>Support for BLE_SPS_SERVER, BLE_SPS_CLIENT and REMOTE_CONFIG</li> </ul>
28	/sdk/platform/core_modules/rwip/src/rwip.c	<ul style="list-style-type: none"> <li>Support for EXTERNAL_WAKEUP</li> </ul>
29	/sdk/platform/core_modules/rt/src/ble_arp.c	<ul style="list-style-type: none"> <li>Changes for moving RAM initialization to exchange memory</li> </ul>
30	/sdk/platform/driver/adc/adc_531.c	<ul style="list-style-type: none"> <li>CFG_ADC_CALIBRATION_DISABLE support</li> </ul>
31	/sdk/platform/driver/dma/dma.c	<ul style="list-style-type: none"> <li>Change DMA_IRQ priority from 2 to 0</li> </ul>
32	/sdk/platform/driver/gpio/gpio.c	<ul style="list-style-type: none"> <li>Changes for moving RAM initialization to exchange memory</li> </ul>
33	/sdk/platform/driver/gpio/gpio.h	<ul style="list-style-type: none"> <li>Added definition for GPIO invalid port and pin</li> </ul>
34	/sdk/platform/driver/trng/trng.c	<ul style="list-style-type: none"> <li>Changes for moving RAM initialization to exchange memory</li> </ul>

Issue Num	File	Description
35	/sdk/platform/driver/spi/spi_531.h	<ul style="list-style-type: none"> <li>Generic handling of SPI functions</li> </ul>
36	/sdk/platform/driver/spi/spi_58x.h	<ul style="list-style-type: none"> <li>Generic handling of SPI functions</li> </ul>
37	/sdk/platform/driver/spi_flash/spi_flash.c	<ul style="list-style-type: none"> <li>Add 531 module's flash to known devices</li> </ul>
38	/sdk/platform/driver/spi_flash/spi_flash.h	<ul style="list-style-type: none"> <li>Add 531 module's flash to known devices</li> </ul>
39	/sdk/platform/driver/uart/uart.h	<ul style="list-style-type: none"> <li>Added uart_fifo_error_getf()</li> </ul>
40	/sdk/platform/driver/uart/uart.c	<ul style="list-style-type: none"> <li>Added size optimizations for GPIO and ADC calibration</li> </ul>
41	/sdk/platform/system_library/include/ble_flow_control.h	<ul style="list-style-type: none"> <li>Add header file for ble flow control mechanism</li> </ul>
42	/sdk/platform/system_library/include/system_library.h	<ul style="list-style-type: none"> <li>Decision when patch functions from system library should be included</li> </ul>
43	/sdk/platform/utilities/otp_cs/otp_cs.c	<ul style="list-style-type: none"> <li>CFG_ADC_CALIBRATION_DISABLE support</li> <li>Changes for moving RAM initialization to exchange memory</li> </ul>
44	/sdk/platform/utilities/otp_hdr/otp_hdr.h	<ul style="list-style-type: none"> <li>Changes for moving RAM initialization to exchange memory</li> </ul>
45	/sdk/platform/utilities/otp_hdr/otp_hdr.c	<ul style="list-style-type: none"> <li>Delete this file , move code to otp_hdr.h , due to RAM initialization to exchange memory</li> </ul>
46	/sdk/platform/system_library/output/Keil_5/da14531.lib	<ul style="list-style-type: none"> <li>Added file for BLE flow control mechanism</li> <li>Patch kmalloc() and kfree() to support BLE flow control related to heap usage</li> <li>Add mechanism to monitor heap usage</li> <li>Changes in order to reduce size of system library</li> <li>Remove a patch in library due to memory limitation of DA14531</li> </ul>

## 6 Release History

### 6.1 6.150.3.45

Version 6.150.3.45 of DSPS application was released on 3-Apr-2020.

#### 6.1.1 New and Updated Features of 6.150.3.45

**Table 7: 6.150.3.45 New Features**

Feature Number	Description
1	Support of DA14531
2	Application configuration in SPI Flash and Remote configuration service for Run time setup and corresponding applications and utilities.
3	Support of BLE flow control in DA14531 (not supported in DA14585)

#### 6.1.2 Fixes and Improvements since 6.150.2

**Table 8: 6.150.3.45 Fixes and Improvements**

Fix Number	Description
1	
2	

#### 6.1.3 Known Issues of 6.150.3.45

**Table 9: 6.150.3.45 Known Issues**

Issue Number	Description
1	In dual path data transfer, one path may be stalled until the other is completed

#### 6.1.4 Known Limitations of 6.150.3.45

**Table 10: 6.150.3.45 Known Limitations**

Issue Number	Description
1	Wakeup external host via RTS signal is not supported
2	Not all compilation switches are verified

### 6.2 6.150.2

Version 6.150.2 of DSPS application was released on 24-Nov-2017.

#### 6.2.1 Overview

This was a FULL (GA) release of DSPS application for DA14585 device.



## 6.2.2 New and Updated Features of 6.150.2

**Table 11: 6.150.2 New Features**

Feature Number	Description
1	Initial version

## 6.2.3 Known Issues of 6.150.2

**Table 12: 6.150.2 Known Issues**

Issue Number	Description
1	For the Interrupt driven project S/W flow control method can be used with Extended Sleep mode only if the device connected on UART interface does send Xon/Xoff flow control bytes during sleep period, DA14585 flows off UART data traffic but control bytes can be sent during the flow off period. The flow off signal will be lost in this case.
2	Binary files cannot be transferred with S/W flow control method
3	DMA driven project does not support S/W flow control method

## 6.2.4 Known Limitations of 6.150.2

**Table 13: 6.150.2 Known Limitations**

Issue Number	Description

## Appendix A Software Versioning Rules

This describes the software version numbers and does not apply to documentation version numbers (as found in the footer of this document).

Each software version number string consists of four numbers: MAJOR. BRANCH. MINOR. and BUILD.

**#MAJOR:** It is increased (by one only) if the project undergoes a major modification, for example major ROM changes. It usually changes only when the project sources undergo major restructuring affecting most of the repository. It is initialized at 1.

**#BRANCH:** 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 or Binary) versions, even numbers indicate Full release versions or Release Candidates of Full versions. Each Full release increases this number by one. After the Full release, the number is increased by one 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 one at every repository update and thus indicates the total number of changes since repository initialization. The BUILD number is initialized at 1.

## Document Revision History

This section summarizes the changes made to this document and not to the Software that this document describes.

Revision	Date	Description
2.0	16-Jun_2020	FULL(GA) Release - v.6.150.4.50
1.0	3-April-2020	Initial version - v.6.150.3.45